ARCHLine.XP® 2024

Windows

PRELIMINARY COURSE

Interior Design Tutorial

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What is ARCHLine.XP®?

ARCHLine.XP[®] is CAD based architectural and interior design software. The model is created from a collection of wellknown building components such as wall, door, window, stair, roof, column, etc.

In addition to this ARCHLine.XP[®] comes with parametric interior design components such as furniture design tools, curtains, lights, sockets, switches, cornices, skirting boards, tiles, pictures on wall, etc.

Using ARCHLine.XP[®] you can design rooms with any shape – offices, reception rooms, lofts, kitchens, bathrooms and bedrooms, add furniture, appliances and finishes and develop the scheme of an entire house.

Furniture for any space can be remodeled or designed from scratch and every element of units and cabinets are individually customized.

Description

This tutorial contains step-by-step guide that show how to create stunning interior spaces in ARCHLine.XP[®]. It will teach you how to design interior space like a reception room, with furniture, lights and other accessories. You will create section and elevation scenes and dimensioned floor plan documentation drawing. You will learn how to apply manufacturer textiles and finishes and create stunning rendering for your client.

This tutorial is provided to interior designers, beginners in computer design.

Getting Started

To get the most out of this tutorial it is best to run ARCHLine.XP[®] and YouTube with the appropriate video, so that you can get experiment with the concepts that are mentioned in the tutorial.

Fundamental concept on how to create interior spaces in ARCHLine.XP®

ARCHLine.XP[®] is an accurate design software based on 2D floor plan. It means you will create the 3D multi-level interior spaces always from the 2D layout.

This new generation BIM software creates all 3D model views, section and elevation scenes, printing layouts and lists from the 2D floor plan centered information automatically.

As an example, if you draw a wall on your floor plan and place window and door into this wall, the 3D view will display the perfect 3D model without any further instruction needed. However, you can work on your wall and window in 2D floor plan or 3D view either and the project remains congruent.

First of all, download the **WORKSHOP PROJECTS - PRELIMINARY** from the website and install it. It includes all project for all preliminary workshops.

https://www.archlinexp.com/enrollments/courses/preliminary-course/downloads



Workshop 1: Foundation



1. Workshop: Foundation

1.1. Introduction

This tutorial will introduce the fundamental basics of ARCHLine.XP[®]. It aims to provide an easy-to-follow and logical course to learn the everyday tools and concepts needed for general work.

ARCHLine.XP[®] is compatible with the Windows operating system and it is using the terminology of it when talking about menus and icons, and other interface elements. It is true when we talk about how to create, select, edit items or clicking (left mouse button) to launch a command (for example by clicking on an icon or selecting one from the menu), and to print on printers installed in Windows. The tutorial goes through the basic functions of the software, the knowledge of which is necessary to solve design tasks and to use the program effectively. The software is far more powerful than what you will learn from this tutorial. You can learn about additional features by using the built-in "Help" and attending the courses and trainings or by experiencing by yourself.

In this tutorial, we will create the following layout:



 Open your internet browser and watch ARCHLine.XP Foundation video tutorials: <u>https://www.archlinexp.com/enrollments/courses/preliminary-course</u>

1.1.1. Welcome Dialog Box

When ARCHLine.XP[®] starts, you can create a new project on the Welcome dialogue box by clicking on the New Project button.



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Start a new project

- Click on the New project button in the Welcome dialogue box.
- This will create a new blank project with an empty floor plan here you can begin your work.

1.1.2. Interface

Before starting the actual work, it is worthwhile to take a look at the ARCHLine.XP[®] software interface and its main components. Thus, later in the tutorial, it will be easier to associate specific names and concepts to the appropriate parts of the interface.

The ARCHLine.XP® interface has the following main parts:

- File menu (1), Quick Access Toolbar (2), Ribbon bar (3),
- View Control bar (4),
- Side menu: Dashboard (5), Design center (6), Project navigator (7), Styles (8),
- Drawing area (9),
- Coordinate bar (Status bar) (10).

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For your convenience we suggest you to work with the default layout of ARCHLine.XP®.

If the interface is other than the default layout, click on the arrow at the end of the Toolbar. Opening the dropdown menu please use the **Toolbars / Reset interface to factory default** command. This way the default toolbar position will be restored.

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Working with ARCHLine.XP[®], the Side menu, Ribbon Menu and work area is used mostly. On Ribbon Menu can be found the most frequently used tools organized in groups such as Building, Drafting, Interior tools. The tool groups can be opened one-by-one so that way only, the most essential tools will be displayed.

The Ribbon Bar

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The Ribbon Bar is a comprehensive catalogue of commands using to create objects. They are arranged in groups. It's logical and fast.

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Dashboard

The dashboard is a clear collection of the most frequently used commands related to the given view, which can be supplemented with your own command collection.

The advantage is that any command placed on the dashboard that can be found in the ribbon menu is available here with one click. In addition, frequently used styles can also be selected and a unique icon can be assigned, thus facilitating quick recognition.



1.2. Basic Drafting tools

1.2.1. Drawing in ARCHLine.XP®

Before starting your work, familiarize yourself of drawing with the software. In this chapter, you can review all the necessary main concepts.

Next, using the Line tool, we will create two drawing elements.

The use of the mouse – * Click & Release *

Before starting, we have to clarify the meaning of a "Click" in the tutorial – and generally in the software. A click is defined as:

"Click: pushing down and releasing the left mouse button immediately."

First, learn the process of free drawing by creating some simple lines.

Drafting lines:

• Choose Line command under Ribbon bar / Drafting.



- Then move the mouse over the drawing area. You will see that the shape of the cursor is changed; this indicates that you can draw now.
- Click anywhere on the left side of the drawing area. You placed the first point of the line.
- Now move the cursor to the right and click somewhere again. You drew your first line, which appears as a solid black line.
 Now move the cursor again, and you will see that the endpoint of the previous line automatically became the starting point
- of a new line.
- Now move the cursor to the blank drawing area, and click again. The second line is ready.

You can easily create lines graphically by just "clicking". Please do it with simple clicks always: hold down the mouse button for a second and immediately release it.

There is no need to use the other mouse button for drawing; the left button is all you need, same as you browse the internet or edit a Word document.



The drawing contains two lines and a third line has started to be drawn.

Exit the tool you are currently using

The drafting up the third line automatically started in this example, we want to draw only two lines; therefore, we have to finish using the current tool. There are two solutions:

- Pressing Enter completes the line chain drawing. You can start drawing a new polyline, or press Enter again to complete the drawing. or
- Press the ESC on the keyboard. It will end the command.

Now you can see if you move the mouse over the drawing area now, the blue reference line which followed the cursor earlier is disappeared. The mouse cursor regained its original arrow shape.

Whenever you want to finish using a tool, press the ESC key on the computer keyboard.

1.2.2. Undo and Redo

The software continuously keeps track of the last 16 steps of the drawing process. Right now, we made two steps by drawing two lines. If you want to withdraw the last created line, click on the "Undo" command. The "Undo" command withdraws the last action in the order of previously executed commands.



The "Undo" command on the Quick Access Toolbar

- Click on the "Undo" command, and it will make the last created line disappeared.
- Click on the "Undo" again, and the first line will also disappear.

Please note that the color of the "Undo" button is changed to light grey, because there are no more steps that can be withdrawn. Since the software can undo only the last 16 actions, you can't get back to an earlier stage by using this tool. The opposite of the "Undo" command is the "Redo". Any withdrawn drawing step can be restored by using the Redo command.



The "Redo" command next to the "Undo" on the Toolbar

The "Undo" and "Redo" commands can be used for corrections of small mistakes, for example, when you would like to remove a previously created item which is at the wrong position. In this case, first press the ESC on your keyboard and click on "Undo" command as many times it is necessary to get what you want to see on the drawing area. If you accidentally take too many steps back, please use the "Redo" command.

 Now please use the "Undo" and "Redo" commands to remove the two lines we have drawn before and then make them reappear again.



1.2.3. Zoom in, Zoom out and Optimal zoom

The drawing can be zoomed in and out using the magnifiers on the **Dashboard**:

The first magnifier zooms the drawing out to 70%.

The second magnifier allows you to select a part of the drawing and enlarge it to the entire drawing area.

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There are quicker ways to zoom in and out of the drawing in the workspace than using Magnifiers. The software offers a very convenient tool, the mouse wheel.

Zoom out with mouse wheel

If you wish to see the drawing from further distance you can zoom in by scrolling down with your mouse wheel. This is exactly the same way when you scroll down while reading a word document.

 Move the mouse over the 2D drawing and then scroll down with your mouse wheel. Each time you scroll the drawing will be smaller.

Zooming out with mouse wheel.

• Move your mouse over the drawing and scroll upwards with the mouse wheel.

Did you notice? It looks your drawing is moving off the screen. At the first sight, this is not obvious, but scrolling back and forth, it becomes even more visible. Before understanding this aspect, let's arrange the optimal zoom of the project.

Optimal Zoom

This command is located in the Dashboard - Views section. Clicking on the icon will optimally fill the drawing area.



Optimal Zoom with mouse wheel

• Keep the mouse over the 2D drawing and double click with the wheel of the mouse.

The full 2D drawing is now visible in the drawing window, filling it optimally.

Finally, let's go back a little more to the "wander" that occurs when zooming in. This phenomenon is caused by the fact that when you start zooming in on the drawing (scrolling upwards), the program also takes into account exactly where the cursor is located, as the center of zoom is the cursor position.

In case of zooming in, the area under the mouse will move towards the center of the drawing area. Let's use this knowledge in the following step:

Zoom in a specific area:

 Hover the mouse cursor over the edge where the two lines join each other and scroll up. Notice that the software is zooming in to the corner point.

If the corner point is "slipping" out from under the mouse cursor, please move the mouse over the corner again and use the mouse wheel to zoom in again. The program will zoom in the specified area once again approaching the corner point. This way, you can entirely control the zoom function.

ARCHLine.XP Interior Tutorial – Preliminary course

• Double-click the mouse wheel again to achieve the optimal zoom.

1.2.4. Panning the drawing

You may need to move the 2D drawing frequently. As if we move the drawing sheet with our hand on a desk.

Panning with mouse wheel.

- Move the mouse over the drawing.
- Press down and keep pressing the mouse wheel.
- While you are holding down the wheel, move the drawing left to right, up and down. Look how smoothly the drawing with two lines is moving.
- When you release the wheel, the program places the drawing at the position of release.

Let's summarize:

- Scroll up with mouse wheel is zoom in, scroll down is zoom out.
- Double click with mouse wheel is Optimal zoom.
- Holding down the mouse wheel while moving the mouse is pan.

1.2.5. Simple selection and delete

It is essential to know how to delete a specific item of the drawing. In this example, we want to remove only the first line and keep the second one.

Simple selection

• Move your mouse over the first line drawn, and then click once.

The program represents the selection by highlighting the chosen element and drawing various colored icons around it. These are called **markers**. With markers, you can execute the most important commands on a selected item without having to search for these tools in menus and toolbars. There is also a so-called floating icon menu, which allows further operations to be performed, such as property modification or deletion. The properties of the item are displayed on the Dashboard.



Delete

• Click on the delete icon **X** in the floating icon menu and the line disappears.

Undo

• Click the "Undo" command, and the last executed step on the plan, which was the deletion of the line will reappear on the drawing again.



1.2.6. Select multiple items

During editing, one of the essential tools is the selection. Please note if now you select one of the lines, and then you click on another one, the previous selection disappears. To be able to select multiple items at the same time, we need to know how to use multi-selection. For this, the CTRL key is used on the keyboard.

Multiple selection

- Select one of the lines and press and hold the CTRL key on your keyboard.
- While still pressing the CTRL key, move the mouse over the other (unselected) line and click on it.
- Now you can release the CTRL key, and you will see that both of the lines are selected.

Holding down the CTRL key while an item is already selected, you will be able to add another one to the selection. The markers will appear, and you can now delete the two lines together, by using **X**.

1.2.7. Selection by rectangle

• Draw some more elements on the drawing: line, rectangle, circle, etc.

To select multiple items, you can use the rectangle selection. The rectangle selection can be performed by clicking on a blank part of the drawing area then moving the mouse to another position and clicking again on the drawing area. This way, you can specify a rectangle. There are two cases of the rectangle selection:

Selection by rectangle: from left to right

- If you are currently in a command, please press ESC to close it.
- Move the mouse to the upper left corner of the drawing area and click on the blank field.
- Move the mouse down to the right so that the resulting semi-transparent blue rectangle partially covers the elements, and make sure that there are elements which are a bit out of the blue selection box. Click again.



Selection by rectangle from left to right – we deliberately left out the bottom part of the drawing. The result: only those elements are selected which ones were entirely within the rectangle.

Selection by rectangle: from right to left

- Press ESC on the keyboard to end the previous command.
- Move the mouse to the bottom right corner of the drawing area and click on the blank field.
- Move the mouse up to the left so that the resulting semi-transparent green rectangle partially covers the elements, and
 make sure that there are elements which are a bit out of the blue selection box. Click again.



Selection from right to left. We left out the top part of the drawing. The program selected all the elements which were inside the rectangle or intersecting the contour of the rectangle.

Comparison:

Selection by rectangle from left to right:

The selection rectangle should be drawn from left to right.
 The color of the selection rectangle is BLUE.

The program selects only those elements which are completely within the selection rectangle.

Selection by rectangle from right to left:

- The selection rectangle should be drawn from right to left.
- The color of the selection rectangle is GREEN.

The program selects all the elements which are inside the rectangle or intersecting the contour of the rectangle.

Examples in a real project:

Selection by rectangle from left to right: It is much easier and faster to select all the equipment of a room by drawing a selection rectangle that includes all of the equipment. If some of the walls are partly in this area, it's okay because they will not be selected.

Selection by rectangle from right to left: In case you want to select all drawing objects, even those that stick out from the drawing area, it is sufficient to select the desired items partially.

1.2.8. Selection by type

A single click can select the same type of items. The method is the following:

• Right-click on the type of the items on the Ribbon bar you want to select, then choose **Select all** command. Now all items from the given type are selected on the drawing.



Exercise:

Select all the lines on the drawing:

- Click right-click to the Line icon on the Ribbon bar.
- Click on **Select all** command. Now all the lines on the drawing are selected.
- Finally erase all the lines, circles of the drawing by using the Delete icon.

1.2.9. Direction enforcement – Angular attraction – Shift

In a graphical editing command, Ortho Mode determines the placement of the second point relative to the first point. The second point is attracted to the nearest fixed angle.

The default directions are 0, 45, 90, 135, 180, 225, 270, 315.

The easiest way to use ortho mode is to press the Shift key. Holding down the Shift key moves the cursor to the nearest predefined direction. Once you have selected the desired direction, you can continue the command. The most common use of the Shift key is vertical, horizontal direction constraint.

1.3. Design

1.3.1. Save project

When creating a new project, there is no automatic save until we save the project ourselves. Please do the following.

Save the project

• Select the Save project command from the Quick Access Toolbar.





This is the first time we save the project; the program automatically brings up the "Save project" dialogue window, here we can name the project and specify the folder under to be saved.

By default, during the installation process, the software creates ARCHLine.XP Draw folder where projects can be saved. This can be found under the Documents folder on your computer.

- Create a new folder under the ARCHLine.XP Draw folder using the New Folder button. Name it as "Foundation".
- Open Foundation folder and type the following filename: "Foundation 01"
- Click on the Save button.

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From now on it is enough to click on Save project button on Toolbar, then the program will automatically refresh the content of "Foundation 01" with the actual state.

We suggest you to save your projects quite frequently (e.g. every 10 -15 minutes).

It is recommended to make a second copy of your project from time to time. We will discuss it later.

1.3.2. Creating walls

We will start with a simple floor plan. Similar to the way you can create simple lines, you can create much more complex drawings by using other tools. This time we will create walls with known lengths. We will create the following floor plan:

Start your work by drawing the main walls. The first wall is 7500 mm long, vertically on the drawing, which defined by its internal size. We start from the red corner is shown on the picture.



Creating wall by a known length

You can create walls by selecting Wall tool under the Ribbon bar / Building commands.

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- Move the cursor on the drawing area; the cursor shape will change, which means that you started a drawing task. Click near the drawing origin.
- Move the mouse up vertically from the first click.

In the styles, you can see that the wall drawing is made with the default **1 layered 38 wide wall**. The wall can be drawn using the blue reference line, which changes color depending on which notable direction it is facing. For verticals, it changes to a dashed green color. The green pencil at the end of the reference line represents the end point of the wall you are drawing, and the orange line represents the thickness of the wall.

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The reference line can be on both the left and the right side of the wall. To select the best position, you have several options:

- From the draw menu bar: Left Centered Right
- ✤ F5 key
- Space bar

In the example the reference line is on the right side of the wall, thus you can draw the inner side values of the wall. Try changing the reference line.

- The wall will be 7500 mm long, so type the 7500 on the keyboard. The value is also displayed on the screen.
- Press the Enter on the keyboard to accept the value.

The 7500 mm long vertical wall is created, and a new window opens up on the right side, which shows the 3D model of the created wall.

On the screen, a favored layout of ARCHLine.XP® can be seen, which is also called the Split View. When you create the first element that has an equivalent in 3D, the program automatically displays it in the 3D model window. This split layout helps continuously monitoring how your design appears in 3D view, which is created on the floor plan. The software automatically generates the 3D model. With the help of this layout, you can follow what you are creating on 2D floor plan how that appears in 3D.

Similar to drawing lines, the program the uses endpoint of the first wall as the starting point for the second wall. This way, you can draw connected walls as it was shown previously on the floor plan.

• Move the mouse horizontally to the right and type 5000, and then press Enter on your keyboard.



Now a perpendicular second wall is created linked to the first wall. It might happen that we cannot see the endpoint of the second wall. To solve this problem, use the pan and zoom techniques shown before.

Using zoom in/out and pan tool arrange that the drawing fills the quarter of upper left side, so the remaining three quarters
will remain empty. Here we will create the rest of the plan.

Continue creating walls

- Move the mouse vertically down and type **4400** and hit **Enter**. When the Enter key is pressed, the third wall is created.
- Move the mouse horizontally to the right and type 3500 and press the Enter key on your keyboard.
 Don't forget that you can zoom in / out and pan drawing at any time during drawing.
- Move the mouse vertically down and type 5200. Press the Enter on your keyboard.
 - Move the mouse horizontally to the left and type **6400** and press the **Enter** key on your keyboard.
 - Finally, move the mouse up, and when you see the Endpoint cursor, click on the starting point of the first wall. The walls form a closed shape; the room is ready.
 - Finally, press the ESC your keyboard to close the command.

If you haven't worked yet with design software, you may find it difficult at first to deal with everything, as you often need to zoom in and pan the drawing to see the correct detail. Don't worry, it's completely natural. Soon you will discover that you start combining these instructions efficiently, all you need just a little practice.

1.3.3. Wall dimensioning

Before we move forward, let's measure the inner-distance of walls.

We can continue working only if the measured values are the same as the previously entered ones.

- Select Annotate / Quick dimension command.
- Click on the inner side of any walls, then
- Move the cursor outside the wall. This way, you define where to place the dimension line.
- Repeat this action on all walls.











1.3.4. Active windows

As you noticed, when drawing the first wall, the 3D model was automatically created in a second window. The advantage of the split layout is that the changes we make on the floor plan can be seen in the 3D model too.

So far, the active window was the 2D, where we created the walls. To handle the 3D content, you have to click anywhere in the 3D window to activate it first.

You can swap the 2D and 3D windows. To do this, click the Magnify View icon on the Status bar.

Enlarge the active window

- Currently, the 2D window is active. Click on the 3D window. This way, you can make it activated.
- Press the "Magnify view" tool on the Navibar
- Repeat the previous steps to exercise a few times. Finally make the 3D to be the active, larger window.

1.3.5. Manage 3D View

Working in the 3D, just as on the 2D drawing, you can zoom in and zoom out and pan the content. Obviously, you may want to view the 3D view from different directions and rotate the model around.

Rotate the 3D view with the right mouse button in axonometry

- Move your mouse over the model in the 3D window.
- Press and hold down the mouse right button and start to move the mouse.
 The point where you press the right button will be the center of rotation. This is indicated by a small colored coordinate system.
- When you want to complete the rotation, release the mouse right button.
- Set the view so you can see the model slightly from the side and above by rotating it. So, this way you'll be able to follow the changes easily when creating the partition walls, the openings and the ceiling.

1.3.6. The 3D representation modes

When the 3D window is the active window and no item is selected, the **Dashboard** displays the instructions for that window.

We will now look at the Views and the Visual Style.

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Notable views and Axonometry

 Try the different notable views one by one: Top view, Left view, Right view, Front view, Back view



 Try one by one the axonometric views, which display the model from different directions: Southwest, Northwest, Northeast, Southeast



• Rotate the axonometric view to get a slightly better view from above.

Visual types - Styles of display

• Try the different display styles one by one and observe how the model display changes: Wireframe, Hidden line, Colored, Greyscale, Consistent color mode, Realistic, X-ray, Dynamic cutting plane



• Finally, select Realistic representation mode.

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The *Realistic representation* mode can be too dark or too light, depending on the project and the settings. You can change this in the Options by changing *Camera Light* and *Daylight*.

Graphics			~									
Open and Save	S Workspace											
	Presentation settings											
Units and angles	S *Build 3D model											
🖾 Snap and grid	*Project Navigator											
b. Common and marthem	Grouping floor plans by discipline (Architecture and MEP)											
K Cursor and marker	Display Options											
User interface	Visual Style	Consistent colour (\sim									
🚱 Item settings	X-ray transparency (%)	50	\sim									
	Texture shading (%)	100	\sim									
	Transparency with wireframe											
	Save object into OLI library using a photo-realistic preview image											
	Lights and shadows											
	Light Scheme	Exterior: Sun only	\sim									
	Show shadows	Never	\sim									
	Ambient light	240	\sim									
	Sunlight	30	\sim									
	Shadow type	Hard shadows	\sim									
	Bump / normal mapping											
	Mirroring (Realistic mode only)	Visible, with no refresh	\sim									
	Camera											
	Walk speed m/s	0.1	\sim									
	Run speed m/s	0.6	\sim									
	Scroll speed	250 mm										
	Auto rotation speed %	60.0	\sim									
	☆ *Visual effects											
	Paper model color											
	Joining Surfaces											
	Classes for Joining Surfaces	Edit										
Close	Joining Surfaces is disabled between roofs											
		<u></u>										
🔯 🔛 🔌 🖉 🔓	🖌 🖾 👁 View 1 🗠 🛉 🖡 🎽 Mér	etezés 🗡 😂	•									

1.3.7. Creating partition walls

Specifying settings

The main walls are ready. Let's continue working on the partition walls. Before starting, please activate the 2D window and enlarge its content. If we kept drawing the partition walls, then those would have the same properties as before. To draw the partition walls, we have to change the properties (e.g. wall thickness). There are two ways how to set the properties of the partition wall.

Method 1: Setting properties:

• Click on the Ribbon bar / Building / Properties / Wall / Wall command. It will bring up the Wall properties dialogue box.



- Wall × Redraw Visualization Colour Line weights 0.3 mm Simple Line Line type Fal - Teherhordó fal Layer 8- Bottom-most \sim Priority * Constrains \sim Unconnected Heigh 2700 mm Base offset from the floor 0 mm 100 mm Inclined wall section height from 1000 mm Slant angle 90° \sim Structural wall Non-bearing wall U-value 1.37 W/(m2*K) Xisibility Same materials Bright_white Finish Face: Interior Finish Face: Exterior Coffee_cream ~ Finish Face: Exterior Location line Wall status Disallow wall joins Skip this wall over room bounding Display tiling on the interior si. Display tiling on the exterior s., Off Tiling representation on 2D Visibility of sides General properties The reference line is invisible ✓ The other side is invisible Edit Compound Walls Wall Framing Show more options **BIM Parameters** 1 layered 38 wide wall ОК Cancel
- Change the wall thickness from 380 mm to 100 mm and click on the OK at the bottom of the dialogue.

We use millimeters as units, but you can use other units as well. You can modify it under File / Options and choose Units and angles page.

In the drawing, nothing has changed, but from now on, when you create a new wall, its thickness will be 100 mm.

Method 2: Using Styles

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When you click on **Ribbon bar / Building / Wall** command, the Dashboard switches to Properties on the left side. Here the *Styles* appear which contains pre-defined and previously saved wall styles. From here, you can easily choose a wall with the right properties.

 Select the "1 layered 10 wide wall" style. As soon as you select it and start drawing the wall properties will change.

Create a new wall style - Optional

- After starting the wall command, in Styles, click Manage styles - Properties.
- Set the properties of the wall in the dialogue window. E.g. Total thickness: 160 mm.
- Click on the button with the style name, in the lower-left corner.
- Next in the appearing "Styles" box click on "New" button.

In the appearing window type the name of the new style and the folder, then save it.

Dashboard	¤ ×	Alapozo_ENG Ground floor (0 mm)
1 layered 10 wide wall	Q.	
Styles	^	Activate
▲ 1 layered 06 wide wall		🖉 Create Similar
鹶 1 layered 08 wide wall		
🧆 1 layered 10 wide wall		Properties
1 layered 12 wide compact brick		😭 Make a copy
🛃 1 layered 16 wide wall		D
1 layered 25 wide compact brick		Export styles
鹶 1 layered 25 wide wall		Import
鹶 1 layered 30 wide wall		
鹶 1 layered 38 wide wall		New default style for other projects
🛃 1 rétegű 20-as fal		Mundate all instances
暑 1 rétegű 44-es fal		G opdate an instances
* Composite		Add to Dashboard
🍰 100mm Hebel		
鹶 110mm Single Brick		Replace



Redraw				1 layered 06 wide wall		
	Visualization			1 layered 08 wide wall		
	Colour	·····		1 layered 10 wide wall		
and the second se	Line weights	0.3 mm		1 layered 16 wide wall		
	Line type	Simple Line	~	1 layered 25 wide compact brick		
	Layer	Fal - Válaszfal	~	1 layered 25 wide wall		
	Priority	8- Bottom-most	~	1 layered 30 wide wall		
	* Constrains			1 layered 38 wide wall		
	Unconnected Height	2700 mm	~	1 retegu 20-as fai		
	Base offset from the floor	0 mm	~			
	Total thickness	160 mm	Chiles			
	Inclined wall section height from	1000 mm	Styles			
	Slant angle	90°	New name of style			
	Structural wall	Non-bearing wall	1 layered 16 wide wall	~		
	U-value	5.20 W/(m2*K)	Folder			
	Nisibility		Folder			
	Same materials			~		
	Finish Face: Interior	Bright_white	Subfolder			
	Finish Face: Exterior	Bright_white		~		
	Location line	Finish Face: Exterior	Folder and subfolder specification is not mand	ndatory.		
	Wall status	Disallow wall joins	If you specify these, the given style name will automatically fit into the hierarchy.			
	Skip this wall over room boundin	ng				
	Display tiling on the interior si		Scope			
	Display tiling on the exterior s		Available in this project only			
	Tiling representation on 2D	Off	Auzilable in all projects			
	× Visibility of sides		Available in all projects			
General properties	The reference line is invisible					
Edit Compound Walls	The other side is invisible			OK Cancel		
			-			
Wall Framing				New		
Show more options						

The new style also appears under Properties / Styles: "1 layered 16 wide wall".



Drawing a partition wall

- Start the Wall command again, select the 1 layered 10 wide wall from the Styles, and continue drawing the partition.
- Click on the inner corner point of the L-shaped floor plan that you have created, this will be the starting point of the partition.

When you hold the cursor on the top of a corner point, then cursor shape changes that sign is symbolizing the endpoint of the wall. This way, the software indicates that the mouse cursor is right on top of an endpoint.



Move the mouse to the left horizontally. Now check the appearing virtual wall represented by an orange and blue line.

If the wall were to be drawn as currently shown, the thickness of the wall would fall below the so-called reference line shown in blue, as shown by the orange line.

In this case, however, the wall thickness must fall above the blue reference line so that the main wall and the partition are in line. So, we have to switch the reference line. This can be accessed from the *Path editing* option menu in the Ribbon menu.





- Now click on the "Left side" command then move the mouse back to the drawing area. Now, the reference line of the wall is on the other side of the wall thickness.
- Place the wall endpoint the opposite to starting point. Press the Enter on the keyboard.

The program will not create the next partition wall starting from the previously placed wall endpoint. Now you can define a new starting point.

We draw the next partition wall at a given distance from the corner of the main wall.

To do this, we will need to place a temporary reference point in a corner and measure a distance from there.

We are in the Wall command, so the program is waiting for you to specify the starting point of the wall:

Select the "Reference" command from the Coordinate bar.

A	•	⊛	ÎR,
3			and the second sec

- Move the mouse in the corner point on the right side of the L shaped floor plan, when the program recognizes it, click once.
- Move the mouse horizontally to the left and type 2400, and press Enter. The program measured the distance of 2400 mm horizontally to the left from the previously defined reference point, and placed the starting point of the wall.
- Move the mouse vertically downwards and when the perpendicular point is recognized on the opposite wall, click once to place the endpoint. (Be careful, the Midpoint nearby can quickly grab the cursor, so you should zoom in to be able to work precisely.)
- Press ESC to close the wall tool.





1.3.8. Using T and L wall connections

If the endpoint of the wall falls into another wall, the program automatically connects them with a T connection. When the main and partition walls are ready, the connections between walls might be inadequate. Let's see examples of how to use T and L connections to join walls.



T connection

The T connection removes the unwanted wall parts or adjusts missing wall segment of the first selected item relative to the intersection with the second item. The wall is selected secondly will not be modified.

Now let's see that case when T connection adjusts the missing wall segment relative to the intersection with the second wall.

- Draw two walls in an empty part of the drawing area as it is shown below:
- Click on icon (representing T connection) on Toolbar then select with a single click the wall to be adjusted (1), then the second wall (2).



The missing part was lengthened.

 Undo this action by pressing 22 icon. Now let's see how T connection command shortens the first wall relative to the intersection with the second wall.



The wall segment which extends over the intersection will be modified.

Undo this action by pressing 2 icon.

Automatic T connection

If the end point of a wall falls into another wall, the program automatically connects them with a T-connection. Try it!





L connection

The L connection aligns the selected items to each other; shortens or extends walls. So those endpoints will be joined which are closer to the selected points join.

Click on icon (representing L connection) on Toolbar then with a single-click to select the first wall, then the second wall.



L connection is created between walls.

1.3.9. View Control Bar – Line weight

By default, the View Control Bar appears above the Drawing Area.

Here you can find e.g. the commands for Phases, Drawing representation style, Layer Groups and the field "*Click to select, press Shift to add/deselect* " to help you with the current command. It is worth paying attention to its contents while executing the commands.

File 🛅 💾		Or 🗶 🖸 🛅 🧹	1 / 🗊		+ ? ⁺ ₹	Edit	View	Buildi	ng l	Interior	Drafting	Ann	otate	Documen	tation MEP					Q	(68	? -
		🗦 Blueprint 👻		ÐÐ		Π	B			\sim		and a star	>	pp.			2	* *		\square			
Properties	Wall 6	🌶 Edit 👻	Door	Window	Curtain wall	Column	Beam	Truss	Slab	Roof	Ceiling	Stair	Ramp	Railing	Room and area	Room survey	Google Maps	Terrain	Masses	Point cloud			
Properties		Wall		Openin	g			Struc	ture				Stair		Roo	m	Massir	ng and Site		Point cloud			
> New	Constructio	n - 🖓 All			- 0	🦉 🗱 Fin	e			- 1:1	• 00	- 1:100	D -		- CI	ick to select, pres	s Shift to add/des	elect					

Click the Line weights scale list to select from a variety of lineweight scales. Adjusting the lineweight scale applies to the screen and does not affect print settings.

For example, if you want to print the plan at a scale of 1:100 later and want to see the corresponding line thickness on the screen, select a scale of 1:100.



"None" lineweight

"None" lineweight means that the line thickness is displayed on the screen with the smallest thickness of 1 pixel, i.e. the lineweight is switched off. This setting is especially useful for floor plan edits because the clear visibility of endpoints and other special points makes accurate editing easier.



None

-

We recommend the 1: 100 scale for architects and the None for interior designers.

1.3.10. Slab tool – Create floor

It is recommended that you save every 10-15 minutes, so click the Save Project icon now:



Along wall contours, you can easily create a floor by using the Slab tool. Similarly, to Wall tool, before using the Slab tool, you can check and set its properties. Please do the following:

Creating slab

- Select the Ribbon bar / Building / Properties / Structure / Slab command. The Slab properties dialogue window ٠ appears.
- Check the following properties: • Relative height: 0 mm; Slab thickness -300 mm, finally click OK.

Slab properties				\times		
Redraw	v 🗐					
		Visualization				
		Colour				
		Line weights	0 mm	\sim		
		Line type	Simple Line	~		
		Laver	Födém01			
		Priority	8- Bottom-most	~		
		The slab border doesn't display of	on the floor plan in print			
		Display 2D Fills	R:0 G:0 B:0			
		3D fixed				
		Same materials				
		Top material	Parquet wood 08			
		Side material	Coffee cream			
		Bottom material	White ceiling			
		* Constrains				
		Base offset from the floor	0 mm	~		
		Total thickness	-300 mm	~		
		Slab type	Slab			
		Cut the walls	No cutting			
		Cut by roofs	No cutting			
		Visible on the floor above.	Simple Line	~		
		Visible on the floor below	Simple Line	~		
		U-value	5.17 W/(m2*K)			
		Width of border-strip not to be h	0 mm			
General p	properties					
Slab	layers					
Beams and block	k flooring system					
BIM Parameters	1 layered 30 r.c.		ОК	Cancel		

Select the Ribbon bar / Building / Slab / Slab by walls tool. ٠





Move the mouse to the top left part of the drawing area and select the entire floor plan with the selection rectangle. To complete the selection, click and then press Enter.

The program automatically creates the slab. The result immediately can be seen in the 3D window.



Modify the contour of the slab (optional)

Later on, the entrance door will be added to the 45-degree angle main wall. Besides, it is necessary to place a stair here, which now we will create by changing the contour of the slab.

• Select the previously created slab. To do this, click on the external contour of the main walls.

Clicking on the wall contour the wall will be selected, as this item can be found here as well. If there is more than one item at the point where you clicked, the Quick selection panel appears at the right side of the floating menu, to help you choose the proper item.

• Press the "Jump to the next item" button slab is selected, you can see the selection on the floor plan and also the text "Slab" will appear on the left side of the Quick selection panel.



- Slab (ID2D:34) 0 mm ↓ 1/2 ↓ Offset Offset all Nisert node Insert node Unsert Smooth Node Turn into curved edge
- When the slab is selected, blue markers run around its edges. Click on the blue line at 45-degree angle.
- The marker menu appears. Click on the "Offset" command.
- Move the cursor down and left 45 degrees (perpendicular to the current edge) and type 1000, and then press Enter.
- Finally press the ESC key on your keyboard.

Following the previous steps, you have just created a one-step stair in front of the entrance. Using similar methods later terraces and balconies can be created.



The walls, the floor, and the front porch have been completed.

1.3.11. Floor management – Create and edit levels

The Level corresponds to the architectural meaning of the floor. Floors are horizontal planes to which the height of placed elements such as walls, columns, roofs, floors and ceilings is defined.

As in reality a building is made up of floors, the plan can be drawn up floor by floor. Opening a new project automatically creates four floors. The additional floors must be added by the designer according to the plan. Design is accelerated by copying elements from one level to another. This can be useful, for example, when creating main walls on several floors, as their layout is mostly the same on different floors.

ARCHLine.XP floors form a logical unit, not a physical boundary. Thus, an element placed on a level belongs to the level, but its geometry is not affected by the properties of the level (level height and height). This means that the element placed on the level does not have to be physically within the boundaries of the level, it can "hang out". This is necessary, for example, in the case of split-level buildings. In the example, we create a floor level.

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Create the floor of the flat roof

- Make the Floor plan window active. Click on the button labelled Ground floor at the bottom of the program. A dialog box called "Edit levels" will appear.
- The Edit levels dialog currently shows 4 levels. Of these, we will use the ground level, the other 3 virtual levels can be used later. These 4 levels are created by the program each time a new project is created, so that the designer has at least 4 levels available.
- Double click on the name of the 1st floor to make it editable. Enter the following name: Flat roof. Enter.
- Press OK.

Edit le	evels								×
•	🤹 🤹 🔹 <	\$			8	8	List of buildings	Architecture	
Nu 3 2 1 0	Name 2. floor Flat roof Ground floor Basement	Bottom ele 6000 mm 3000 mm 0 mm -3000 mm	Height 3000 mm 3000 mm 3000 mm	State Off Active Off	Split level hei 0 mm 0 mm 0 mm 0 mm	Parameters		Name FF - Finish Floor TS - Top of Structure BS - Bottom of Structure CE - False ceiling LE - Ledge FH - Floor height Copy area	Elev. Offset 50 mm 0 mm -300 mm 2600 mm -350 mm 3000 mm Paste (N+1) FF (N+1) BS (N+1) E (N) CE (N) ES (N) ES (N) LE
✓ Site	level is visible on the floo	r plan		E	Building elevation	above sea leve	el in m	1	
				[0 m			ОК	Cancel

At the moment, we can see the recently created ground floor level content such as walls, slab. The building has a flat roof, which can be drawn as usual. Right now, the "copy other floor" is a hands-on tool. Let's learn how to use it:

Copy walls, slab to another floor:

- Select the entire floor plan with the selection rectangle.
- Press the Ground floor button. The Edit levels dialogue appears.
- Press the Copy objects to another floor button
- In the appearing dialogue window select the floor named "*Flat roof*". Press the OK to copy the selected items.

In the 3D window now, you can see that the full content of the ground floor is copied to the upper floor. On this level, we will create a flat roof so we will not need the partition walls, but we need to change the height of the main walls too.



The appearance of the two levels is currently still the same

Creating the flat roof

- Select the partition walls on the Flat roof and delete them.
- Now select one of the main walls. The "Properties" will appear on the left side of the screen.
- In the property manager on the left, click on the wall Height value and change it to 1000 mm, then press Enter.
As a result of this modification, the selected wall reduced immediately on the model. With the same method, you can change the properties of more selected walls at the same time. However, it is good to know another tool which can be used to modify items and/or match their properties in a large number. Next, you can learn about the "Copy properties" command.

Copy properties - optional

- Select the 1000 mm tall main wall on the floor plan.
- Click the Copy properties ¹ icon in the Quick Access toolbar.
- The Wall properties dialogue box appears, listing the properties that can be copied to other walls. By default, all properties
 are selected. It is also possible to copy just one property between walls for example, the height of the wall, yes, but not
 the thickness.
- Press the OK button.
- By using the rectangle selection, please select the content of the entire Flat roof on the floor plan.
- Now press the Enter on the keyboard.

The result of the previous steps will be that the program will copy the properties of the selected wall (now all of them) to the selected walls. Now the height of all walls is 1000 mm. We are ready with the Flat roof.

There is an even faster solution to the previous exercise:

Select items by type:

Go back two steps in the sequence of instructions to reset the height of each wall to 2700 mm.

Task: Select all walls on the level of the Flat roof and change the walls height to 1000 mm.

• Click with the right mouse button on the Wall tool, then select the Select all option. All walls will be selected on this floor.



- Change the height of the walls to 1000 mm using the Property grid on the left side and press Enter.
- All the walls on the Flat roof floor are now changed to 1000 mm.
- Set both sides of all walls to Coffee cream color.
- Pull back the protrusion of the slab as previously described.

Switch to the Ground floor

Since we have been working above Ground Floor, it is necessary to go back down to Ground Floor to continue working there.

- Click on the arrow on the right side of the Flat roof button. In the appearing list, you can see a green checkmark next to the name of the Flat roof floor indicating that this level is currently the active one.
- Click on the name of the Ground floor, and you will see the ground floor elements appearing. We will continue here by creating the doors and windows.

Dashboard	Д	\times		
Wall (7)				
1 layered 38 wide	e wall	¢		
Property	Value	^		
🎗 General				
Layer	Fal - Teh 🗸			
Colour				
Line type	Simple Line \sim			
Line weights	0.3 mm 🗸 🗸			
Draw Order	8- Botto 🗸			
Move objects to other floor	Flat roof			
Copy objects to other floor	Flat roof			
BIM parameters	Edit			
Height	1000 mm 🛛 🗸			
Base Elevation	0 mm 🗸 🗸			
Constrains				
Absolute elevation	3000 mm			
Total thickness	380 mm			
Slant angle	90°			
Fill pattern orientation: I	Default orientat			
Same materials				
Finish Face: Interior	Coffee_cream			
Finish Face: Exterior	Coffee_cream			
Body material	Erick3			
Disallow wall joins				





ę	2. floor			
1	Flat roof			
Ŷ	Ground floor			
9	Basement			
<		>		
æ	² Flat roof	~		↓

To switch between floors, you can also use the Page Up and Page Down keys on the computer keyboard. Pressing these keys, you can jump one level up or down in the floor list. You can also use both the blue arrows next to the Floor button for this purpose.

Set both sides of all walls to Coffee cream color on the Ground floor too. The sides of the slab were also coffee cream.

Joining surfaces

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The goal is to keep the line of the slab between the levels invisible. This requires that the surfaces be in one plane, have the same material, and the *Joining Surfaces* option is turned on.

Here the first two conditions are met. Let's check the third:

- Make the 3D window active. Press the Esc key so that no item is selected. Make sure that the *Joining Surfaces* option on the Dashboard is enabled.
- Now rebuild the 3D view with the 3D hammer icon.









In case you modify any of these elements (walls, slabs), the lines separating the surfaces will appear again. You only need to rebuild the 3D model by clicking on the Quick 3D model icon.

In case you modify any of these elements (walls, slabs), the lines separating the surfaces will appear again. You only need to rebuild the 3D model by clicking on the 3D hammer icon.

1.3.12. Creating Doors

We are going to place doors on main and partition walls. The first door will be a simple door placed into the partition wall, first we have to set the properties. Proceed as follows:

- Make the Floor plan window active.
- Select the Ribbon bar / Building / Properties / Opening / Door command. Now the dialogue box Door properties appears.



 First two doors will be created with default settings. Door name: Flush; Width: 900 mm; Height: 2100 mm, Distance from the wall line: 0 mm.

arameters	Width:		900 mm	~	Redraw
entation	Height:		2100 mm	~ [
, void, niche, cavity	Thickness:		100 mm		
eometry				•	
andle	Hide opening and make a void				
ndle	Distance from wall line	0 mm			
	Sill height	0 mm			
ries	Outer sill height:	0 mm			
and exterior sills	Add level shift				
	Effective clear width	750 mm			
letails	Effective clear height	2025 mm			
tion	Colour				
	Line type	S	Simple Line	~	
	Line weights	0 mm		~	
ariant	Draw Order	8- Bottom-most		~	
/dilanc	Reference axis	Side		~	
	Distance from wall corner	0 mm			
		Lining and architrave			
		Dimension, consignment			
		Thermal parameters		-	
	Ratio (Illumination area)	100%		~	
	Material	Value		^	
	Solid	Beech			
	Wing	Beech			
	External frame material	Default material			
	Internal frame material	Default material		~	
	<			>	
				Г	Flush
BIM Parameters	Normal	loor		i i i	OK Cancel

- When the settings are ready, press OK.
- This time, select the Ribbon bar / Building / Door / Placing door command.
- Using this command now you can place the door with previously set properties.
- Move the cursor over the drawing area above the horizontally placed thin partition wall. While you are moving the cursor over a blank area the cursor will be in the shape of an exclamation mark.
- At that moment, the cursor is above the wall; it changes to an orange door symbol. With the help of this now you can define the place of the door.
- Move the cursor just above the horizontal partition wall. Now the right side of the orange door moves together with the cursor, here a green pencil appears.





- Type the value 950, then press the key Enter. By this, you specified the distance between the green pencil and the nearest wall corner, which is 950 mm according to the original drawing.
- Move the cursor around the placed door symbol. The door-opening direction changes. Move the cursor until the dooropening direction corresponds to the direction shown in the original floor plan, and click.

Now the door is ready with the appropriate door-opening direction. The first door is finished, next is to place a door on the vertically placed partition door.

Reference point of doors and windows

- Move the cursor over the partition wall shown vertically on the drawing; the cursor should be on the right side of the wall.
- The green pencil appears at the bottom of the virtual door symbol as a reference point. The reference point can be changed while drawing. It has 3 positions: the two sides of the door and its middle. The reference point can be changed 3 ways:
- On the View Control Bar Next reference point command
- ✤ F5 key
- Space bar



- Now a couple of additional options appear in the top left corner of the Work area, this helps placing doors. Select the instruction "**Next reference point**", and move the cursor over the partition wall again. This time, the green reference point appears at the middle of the door.
- Select the option "Next reference point" again, and move the cursor again over the right side of the wall. This time, the reference point appears at the top of the door.
- Set the distance between the marked reference point and the nearest wall corner similarly as you did for placing the first door. Type the value 2700 and press the key Enter. Now the door is placed on the wall.
- Set the door-opening direction by moving the cursor around the door symbol and click once. The door is now finished, and it appears in the model too.
- Press the ESC key to close the command.



1.3.13. Positioning of the entrance door

The next step is to place the entrance door. Modifying properties of an existing item can be done quickly. Now we place a "Flush" door, similarly to the internal doors, and then we modify its properties as per the original floor plan.

- Select the Door tool under the Ribbon bar / Building menu.
- Move the cursor over the angled main wall in the drawing, to the internal side of the room.
- Select "Next reference point" from the options in the top left corner, and move the cursor again on the inner side of the main wall. This time, the reference point is in the middle of the door.
- Move the cursor on the inner side of the wall towards the middle until the shape of cursor changes and the midpoint cursor appears. It means that the door reference point is grabbed and held in the middle of the wall. Click on the wall to place the door in the middle.





- Move the cursor to select the desired opening direction, then click once.
- Finally press the key ESC to close the command.

The type, width and position of the entrance door in the wall does not currently match what you see on the original floor plan. Therefore, it has to be modified. Let's do the followings:

Modification of properties

• Select the entrance door in the floor plan.

The floating menu appears as a result of the selection; the first icon looks like a pencil . It is the "**Property icon**". The properties of the selected item can be displayed and modified with its help.

- Click on the Property icon . Now the **Door** property dialogue window appears.
- You can see the Distance from wall line at the top right corner. Modify it to 100 mm.

Main parameters	Width:		900 mm	~	Redraw	
Representation	Height:		2100 mm	~		
Reveal, void, niche, cavity	Thickness:		100 mm			-71
lasic geometry						/
Outer handle	Hide opening and make a void			î		/
nner handle	Distance from wall line	100 mm				
	Sill height	0 mm				
ccessories	Outer sill height:	0 mm				
nterior and exterior sills	Effective clear width	750 mm				
nerior and exertor sits	Effective clear height	2025 mm				
Built-in details	Colour					1.
nformation	Line type	S	imple Line	~		and the local dist
	Line weights	0 mm		~		
	Draw Order	8- Bottom-most		~		
Croate variant	Reference axis	Middle		~		
	Distance from wall corner	1484.9 mm				
		Lining and architrave				10.00
		Dimension, consignment				and Street In
		Thermal parameters				
	Ratio (Illumination area)	100%				
	Ratio (Ventillation area)	100%		~		
	Material	Value		^		
	Solid	Beech				
	Wing	Beech				
	External frame material	Default material				
	Internal frame material	Default material		~		
	<			>		
					Flush	
		10.000				1
BIM Parameters	Normal d	loor			OK	Cancel

Click on the Flush button below the door preview. In the appearing dialogue click and select a double-wing door, and click on the OK button.
 Don't keep the previously set dimensions of the door.

Doors	Doors
[Search in all items] Q 2	[Search in all items] Q
A Doors Indoor Double	f Doors
< <back 16="" brands<="" elements="" models="" td="" =""><td><<back 4="" brands<="" elements="" models="" td="" =""></back></td></back>	< <back 4="" brands<="" elements="" models="" td="" =""></back>
INDOOR Arched(39) Double(16) Olass(3) Hole(8) Jafholz(4) Paneled(43) Single(15) Sliding(24) Multiple Multiple Panel Panel Panel OUTDOOR OUTDOOR Door 01	INDOOR Arched(39) Double(16) 1500x21 1800x21 2100x21 Glass(3) Image: Constraint of the sector
OK Cancel	OK Cancel

- Modify the width to 1400 mm.
- Click on the OK button. The modification is done.
- Press the key ESC.



1.3.14. Creating Windows

The next task is to place windows as it is shown in the original plan. We can set windows properties and place them as we described in the section "Creating Door". Here we will use another method:

• Click on the menu item Ribbon bar / Building / Window / Single casement.

			+? ⁺ ₹	Edit	View	Buildi	ng
Γ	ÐÐ				Ð		
	Window -	Curtain T	wall	Column	Beam T	Truss	Slab T
3	Single					*	ture
					+		2] [
ſ	Double Sir	ngle case	ment				Alap

On the left side under styles will appear the single casement window.

Right-click the window style and select Properties , and the Window Properties dialog box appears. ٠

Dashboard		₽ × 🦯
1200 mm x 1500 mm v	vindow	¢.
Styles		
鹷 1200 mm x 1200 mm window		
🍰 1200 mm x 1500 mm window		
鹶 1200 mm x 600 mm window	\checkmark	Activate
鹶 600 mm x 1500 mm window		Create Similar
鹷 600 mm x 2400 mm window	V	ereate birnia
鹶 900 mm x 1500 mm window		Properties
🔅 Velux	5	Make a copy
鹶 МК04	_	
鹶 МКО6		Export styles

- In the appearing dialogue window, check the "Sill height" value: 900 mm. ٠
- Set the Width and Height to 1500 mm. •
- Click on the OK button to accept changes. ٠

in parameters	Width:		1500 mm	~	Redraw
presentation	Height:		1500 mm	~	
veal, void, niche, cavity	Thickness:		100 mm		
sic geometry]				
er handle	Hide opening and make a void				7
r handlo	Distance from wall line	100 mm			
a nunule	Sill height	900 mm			\searrow / \land
ssories	Outer sill height:	900 mm			
ior and exterior sills	Add level shift				$\wedge \land$
for and exterior and	Colour				
in details	Line type	Sir	nple Line	~	
mation	Line weights	0 mm		~	
	Draw Order	8- Bottom-most		~	
	Reference axis	Side		~	
the constraints	Distance from wall corner	4581.2 mm			
		Lining and architrave			
		Dimension, consignment			
		Thermal parameters			
	Ratio (Illumination area)	100%			
	Ratio (Ventillation area)	100%			
	Material	Value		^	
	Solid	Beech			THE R. LEWIS CO.
	Glass material	Glass26			
	External frame material	Default material			
	Internal frame material	Default material		\sim	
	<			>	
					Flush
BIM Parameters	x 1500 mm	window			OK Cancel

1. placing a window

In the previous few steps, you have determined the size of the new windows that will be created. Place the window on the inside of the upper room on the left main wall of the floor plan, 1000 mm from the upper wall corner:

- Move the cursor to the inside of the wall.
- Adjust the window reference point so that the green pencil is in the upper left corner. This means a change of two reference points. We recommend that you press the *Space* key twice now.
- On the keyboard, type 1000 and press Enter. This specifies that the distance between the reference point and the nearest corner point is 1000 millimeters. The window will appear in the wall accordingly.

Placing new windows

• Now move the cursor to the bottom of the left main wall.

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- With the same method place the next window. The window reference point should be placed from the corner point of the main wall and partition wall. The distance should be 900 mm.
- Position the last 2 windows on the wall of the right-hand room, so that the first window is 1000 mm from the corner of the wall. The second window should be directly connected to the first. The latter can be achieved by clicking on the connected corner point of the first window when placing it.
- When you finished, press the key ESC.

By following these steps, you have learned how to place a window with a specific property in the desired wall section and how to place several windows in a row without having to restart the window command. This method of working can be applied in the same way to most of the tools offered by ARCHLine.XP®, i.e. you can set the appropriate properties, then use the appropriate drawing tool to draw more and more

ARCHLine.XP®, i.e. you can set the appropriate properties, then use the appropriate drawing tool to draw more and more elements (walls, doors, windows, lines, etc.) without interruption, and finally exit the drawing mode by pressing ESC.









1.4. Furnishing and representation

1.4.1. Setting up the perspective

In this chapter, we deal with the furnishing of the rooms. Therefore, it is necessary to set up one or more perspectives besides the axonometric view of the model. Now we show how the model looks like from the inside to our clients.

Setting up and saving the perspective views

- Activate and enlarge the 3D window by using the
- No item should be selected.
- In the Dashboard, click the Perspective icon representing the eye.

Dashboard	ņ	×
☆ Perspective view		^
* +		

The "Perspective dialog" window appears.

- Click on the button of 2D View. As a result, the floor plan of the Ground level appears at the left instead of the 3D top view.
- Press the Fit to view button in the last position. As a result, the blue camera tool and the floor plan is displayed.
- With the help of **left button of the mouse** click on the blue marker representing a camera point and hold the mouse button down, and move it to the bottom right corner of the hall within the room. In this dialogue box, the left mouse button should be held down!
- Left-click and hold the purple marker representing the point you are looking at, while dragging it to a point near the connection between the window of the entrance room and the partition wall near it.
- Set the camera and target height to e.g. 1200 mm. With these you defined a perspective view.
- Let's save this perspective. Click on the green cross at the top right corner of the dialogue box. Now the program saves the view under the name "View_00".
- Click twice on it, and in the appearing dialogue box type the name of the view without quotation marks: "Hall_01" instead of "View 0", then click on the button OK. This way you have renamed the previously saved view.
- Create a second view by using the steps above. This view now depicts the upper right corner of this room from the entrance door. Finally, rename it to "Hall_02".

Magnify view tool in the Status bar.



• Select the saved view named "Hall_01", then click on the button OK to close the dialogue box.

You can create and save additional views by following the previous method. A preferred view with precisely the same settings can be selected and displayed later with a single click.

When you have more than one saved view, you can also use the "PageUp" and "PageDown" buttons to switch between views, or the blue arrows from the Status bar

Please note: switching only works when the 3D window is the active window!

🖝 Hall_01	~	1 +	
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1.4.2. Furniture items – Design Center

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Working as an open system, the software ARCHLine.XP[®] is capable of handling furniture items having different formats (.skp, .obj, .3DS) and from various sources without complicated file operations, and can read and place these items into the project with a single click.

You can access many additional furniture items:

- from the program's library, which is available from the Design Center and contains a limited number of items,
- from the ARCHLine.XP® Warehouse for free,
- with the help of the browser of the free service of 3D Warehouse,
- from other websites that allow downloading freely or by payment. It is recommended to type "3D model free download" in the search bar of your browser. Here you need to pay attention to the file format. Most recommended formats: .skp, .obj, .3DS

From here on, we will refer to furniture items as objects.

Let's start by discussing the locations of the objects that can be accessed right after installing the program, which are ready to use. The objects can be found in the ARCHLine.XP[®] Design Center. Please do the following:

In the left side menu, click on the "Design Center".

Now the main page of the Design Center has appeared. Within a large number of objects, you can browse, so you can find the objects that you want to work with.

The Design Center contains the items available in the program in groups.

Make sure that the main page of the Design Center is active. Click on the Home button

Design center		₽	×
[Search in all items]			Q
ff -			
Door	w	indow	
Stair	Profile	ල Grou	ıp
H Objects	🛟 м	aterials	
3D Warehouse	AL	. Warehou	ıse
HQ materials	Re	nder style	es
☆ Other			
Light	sources		
Recently cre	eated cont	ent	
Recent	t models		
Favo	ourites		
Н	elp		
Dashboa Design c	Styles	Project	n



You will find the objects within the **Objects** category sorted into 22 main groups. The name and the number of these main groups cannot be changed. Each main category has subcategories. You can create as many new subcategories as you like at any time.

Within these groups, you can search and find those objects very quickly, which names contain the given phrase.

Placing an armchair

In this example we will search the "armchair" named object and place it on the floor plan.

- Click on the search field of the Design Center. Type in the word *armchair*, then press the Enter key on your keyboard. The program finds and lists all the objects immediately, which name contains the previously entered word.
- Now you can look through the listed objects, and place any of them in the currently active 2D drawing.
- Click on the object "KARE Armchair", and when the large image appears, click on it and keep the mouse button down.
- Holding the mouse button down move the cursor over the 2D drawing area, and release the mouse button.
- Move the cursor, and now you can see that the top view of the object "KARE Armchair" is displayed with orange color, and it follows the movement of the cursor.
- Move the armchair into the room where the entrance door is in the drawing. Place the armchair in front of the partition wall with a single click.
- Now the program offers to place another copy of the selected armchair. Press the key ESC to finish placing objects.



If the object is not in the right direction, you can now rotate it by using markers.

1.4.3. Move and rotate

The easiest way to move or rotate elements already placed on the drawing, such as lines, walls, openings or an armchair, is to use markers, which appear immediately after selecting the element you want to move, rotate or modify, as we have already seen. Please do the following:

- Zoom in the area of the drawing, where the armchair is.
- Select the armchair on the 2D drawing.
- From the colored markers that appear, click on the Rotate marker (1).
- You will also see a so-called Free Rotation marker (2). This tool allows you to define the angle at which you want to move the object by rotating it around its axis.



- If the rotation marker does not appear during the selection, then the component is too small in the drawing. In such a case, zoom in to this part of the drawing until the rotation marker appears.
- The Rotation menu appears after you click on the Rotation marker. Select "Rotate 90 cw". Now the armchair is rotated, it faces towards the entrance door.

The armchair faces in the appropriate direction. Place a second copy of this armchair next to the previous one. You could use the Design Centre again to do this, from where you could again select and place it, then rotate it to the right direction, but there is a faster way to do this, to copy an already placed drawing element and place it in the new location in one step.

- If the armchair is not selected on the drawing, then select it now.
- Now markers appear, select the one is depicted by an arrow pointing in four directions. This is the Movement marker.
- In the appearing menu, select "Move a copy" command.

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• Move the cursor, to position the virtual copy of the armchair in orange color to the right side of the original armchair, then click to place it. Finally hit the ESC key. Now we can see two identical armchairs in the floor plan as well as in the 3D model.







If you study the Rotation and Movement tools, and you will notice the program offers various possibilities to move and rotate the selected items. Try these tools, and you will see that you can use them efficiently under different situations.



1.4.4. Downloading furniture items from the 3D Warehouse

Attention: An internet connection is necessary to complete tasks in the chapter below.

We place a coffee table in front of the two armchairs in the hall. This time, we will search online for a specific coffee table from the 3D Warehouse library.

Please note that the 3D Warehouse site is not a product of CadLine Ltd., but is owned by Trimble, a US company, which requires registration to use the site.

Therefore, we unfortunately have no control over the problems on the 3D Warehouse site. ARCHLine.XP provides the ability to place models directly into the project as an extra feature compared to other CAD programs, but Trimble makes no guarantee that this availability will be maintained. Availability changes frequently without notification. Also, registration does not always work properly.

The 3D Warehouse object library contains a very large number of 3D models, which can be furniture, lamps, accessories, etc., which can be used for free after registration.

You have two options to download items:

- 1. **Direct download** and placing items on the floor plan through the built-in web browser of ARCHLine.XP®.
- 2. Indirect download from an external web browser: the items (.skp) are saved into an external file, then you can import them.
 - Open the Design Center. Select Catalog / 3D Warehouse command and select the Direct download option.

☆ Catalogue	3D Warehouse
Objects Materials	Direct download Attention, you can't use a Google ID to sign into the 3D Warehouse.
3D Warehouse	Direct download - mutiple objects
HQ materials	Source of the external Browser

Direct download

The window of the 3D Warehouse appears.

Trimble® requires a registration to use the page. The built-in browser of ARCHLine.XP[®] the registration can be created only with your e-mail address and password. (Do not use the Sign in with Google option, because Google does not support this kind of registration.)

• After registering and logging in, type the word "table" without quotation mark in the search field, then click on the button Search.

The browser of 3D Warehouse search through all the objects in the database very quickly, then sorts and offers the ones for which the given expression "table" is true.

⊕ 3D Warehouse ← → Ω								×
All Model Filters	×	table			×	Q		⚠ 🛆 Renâta N. ∽
Result Types	Catalogs	Collections 🔀 Material	5			S Fil	ters Reset	
All Results Products Models	odels					Releva	ince 🗸	
Category					·			
All Categories	5	1h		👗 -			1	
All Poly Counts		table	1	table		Table		
Up to 10K		🗅 3.5 MB 🖾 72,214		D 265 KB C 2,611		🗅 336 КВ 🖾 188		
10K to 50K 50K to 100K	⊠ ±	С КО914	⊠ ±	Alise R.	8 th	suradech E.	8 d	
-100K to 250K			States and p					
0К 50К	ĩ	15 -	22		T	1		
Up to 50K		AL			1			
Specialty Filters		table		Table		table		
Certified Content @	-	□ 614 KB □ 2,451		🖾 380 KB 🖾 659		L3 252 KB 🕰 274		
Dynamic Component Live Component	2 4	goldtitan6	⊠ ±	🐻 Thien Phan	2 4	Abdelhamide E.	⊠ ±	
Geolocated						_	_	
Clear								
				SAL SAL		Y		

Guide to 3D warehouse

It might happen the downloaded objects from 3D Warehouse are too large or contain too many materials. These objects can significantly slow down the software, so the work becomes even more difficult. The software warns us in three different cases.

- The object is too large, contains more than 50,000 polygons (surfaces)
- The object contains too many materials: there are more than 50 materials on the object
- The object physical extension is over 100 m.

The 3D Warehouse also provides help filtering objects as well. When you turn on filtering, the filtering criteria are displayed on the left.

It is recommended that you set All Poly Counts to 50K. The website will only display objects doesn't exceed the maximum 50,000 polygons. This way, unwanted too large objects which are not supported by ARCHLine.XP will not be offered to be downloaded.

The hits can be refined, if the former simple search word is supplemented with another expression.

- Now write the expression "coffee table" in the search field instead of the word "table", then press the Search button again. Now you can see that the search result lists different types of coffee tables.
- Now try to find a product of certain manufacturer. Type the expression "kare coffee table" without quotation marks, and
 press the button Search.
- Select one of the tables from the results, e.g. KARE 81005 Coffee Table Montana.
- Now another page appears showing the selected object with a large image.

3D Warehouse			×
3D Warehouse Get Sketchu	p kare coffee table	>	く 🛄 🔍 ① 名 Harosi E. 🗸
		Test Account-SE KARE 81005 Coff 120x60 cm (Cour Furniture Moderne Eleganz. Edler Cour Reduziertes, klares Design. F goldfarbene Details. Tischpla Read more View In AR	fee Table Montana chtisch Montana chtisch aus der Serie Montana. iligrane Gestaltung. Feine Itte: MDF mit Walnuss Furnier
Model Overview Relate	d Content Comments (0)	♡ 27	USDZ File GLB File Collada File
Polygon Count	32 File Size	268 KB Material Count	> 3
Tag Count	1 Bounds	60 x 120 x 43 Distance from Or	igin 21,6 🗸

- Click on the Download button and select SketchUp File from the download list. The program offers to save the object with the name associated with the object (usually Untitledxxxx) to the *3D Warehouse - Other* category.
- It is recommended that you change it to the Appropriate name and category:

Create new item in the library	×
Name of the new item in the library: untitled1717424246	✓♥…
Category: 3D WAREHOUSE	~
Sub category:	
Other	~
Producer:	
3D Warehouse	~
Product line	
	~
BIM parameters	OK Cancel

Create new item in the library	×
Name of the new item in the library:	
Kare coffee table Montana	~
Category:	
LIVING ROOM	~
Sub category:	
Coffee Tables	~
Producer:	
3D Warehouse	~
Product line	
	~
BIM parameters	OK Cancel

- The program will download the selected coffee table and offer to place it on the plan.
- Move the cursor until the orange-colored virtual top view appears, and place the table in front of the two armchairs.

The downloaded model is saved to the specified library: in the *Design Center*, in the *Objects – Living room – Coffee Tables* library. If the category does not match, you can move it to another category by categorizing it. In the future, you can place the table directly from the library.



Multiple downloads

By enabling this option, you can download multiple items from the 3D Warehouse at once. Then, after the download, the selected item cannot be placed on the plan, but another item can be downloaded from the 3D Warehouse.

In this case, the items are saved one after the other in the Design Center. They can later be selected individually to be placed here.

Indirect download from external browser

3D Warehouse may not support direct download, or you may not be able to access the 3D Warehouse from ARCHLine.XP. Then we recommend the following:

 Open the Design Center. Select Catalog / 3D Warehouse command and select the Download from External Browser option.

The 3D Warehouse page opens in the external browser.

- Register on the page and sign in. Here you can use your Google account to register too.
- Select the model (.skp) and download it to your computer e.g. ARCHLineXP.Draw\SKP folder.
- Import the file with File menu Import SketchUp command.

3D Warehouse ×
Direct download Attention, you can't use a Google ID to sign into the 3D Warehouse.
Direct download - mutiple objects
Q Download with External Browser



• After import, the model is saved in the directory and can be placed in the plan.

1.4.5. Sketch mode - Modifying downloaded objects - optional

When we search for models on the web, we often face the fact that the downloaded model contains more items than we need, for example, chair collections, beds with extra small cushions on them, etc.

In the following example, we'll show you how to edit a downloaded item if it is made up of multiple independent items. (If it consists of only one item that the designer has uploaded as a group of multiple items, it cannot be edited.) Download the following armchair from 3D Warehouse:

- Type in the search field: "Marthcool". Select from the one which is on the picture below.
- Place it on the floor plan.



There is a smaller cushion on the armchair. The armchair and the cushion compose one single item. We aim is to save the armchair in the library without the cushion.

We are going to use the *Sketch mode* for this task. Before using it, it is recommended to save the project.

In *Sketch mode*, you can save only the selected items and then continue saving by saving another selected item or items. In the meantime, you can delete items or move and rotate them if necessary.

- Choose on the Ribbon bar / Interior / Sketch mode / Open Sketch Mode command.
- Select the chair.

 Sketch Mode

 Open Sketch Mode

 Image: Sketch Mod

Now the program closes the project and enters the Sketch mode, where only the

selected element is shown. This way, the object is separated into parts: armchair and cushion. These items can be separately moved or deleted.

- Edit: Click on the cushion and move it away from the armchair.
- Save to the Design Center: Interior Sketch mode New object command. Select the Select one by one option and mark the whole armchair without the pillow. Enter.



• Enter the name and category of the new armchair: Living room category, Armchairs subcategory. The selected armchair has been saved and deleted from edit mode.



- Do not close the Sketch mode.
- Now save the pillow repeating the previous process.
- Close the sketch mode:

Message		\times
?	Would you like to go back to the saved project and close Sketch mode?	
	Igen Nem	

• Now delete the old object on the floor plan and find the new under Objects / Living room / Armchair folder and place it on the floor plan.









Complex projects and Sketch mode

For complex projects, we recommend that you do not start the sketch mode from within the project to save time. Proceed as follows:

- Start the second instance of ARCHLine.XP with a New project.
- Place the object.
- Start the sketch mode.
- Finish editing, save the object, exit the Sketch mode.
- Close the 2nd copy of ARCHLine.XP.
- Restart ARCHLine.XP instance 1 after saving the project, open the project, move the edited object from the library.

We will not use this armchair any longer so we can delete it from the floor plan.

1.5. Layer management

It is a common task to present a floor plan in several different ways: as a furnishing plan, an electrical plan or to illustrate different pre-designed alternatives to a furnished floor plan. Most design software usually facilitates the execution of this task with the help of the so-called layers.

If you did not meet the term "layer" yet, then read the explanation below to understand the idea.

1.5.1. What are the layers?

Imagine layer as the frequently used tracing paper. You can draft various figures on this tracing paper, including walls or armchairs and coffee tables.

Name the tracing papers as **"Walls"** and **"Indoor – Hallway – Furniture 1"**. If you place the tracing papers on the top of each another, then you can see the walls, as well as the furniture items placed at the hall. If you pull out the tracing paper named "Indoor – Hallway – Furniture 1" under "Walls" layer, then only the walls are displayed.

You may also place another tracing paper such as "**Indoor – Hallway – Furniture 2**", and you can create a second alternative arrangement for the hall. Then you can change the tracing papers showing the 1st or the 2nd alternatives depending on what you like to display.

1.5.2. Layer Management

It is important to mention that layer structures of the floor plan and 3D view are not necessarily the same. Therefore, working with layers ALWAYS has to be started from the floor plan.

- Activate the 2D window.
- Click on the Layer icon at the bottom toolbar.

Interior - Li	~		•
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The "Layer Properties Management" dialogue appears.

Used Layers

• Click on the Used layer group under All layers.

It is evident from the above description that the program automatically sorts the various drawing components to different layers depending on their type. Accordingly, the walls are arranged on the layer "**Wall – Load – bearing wall**", the floor slabs are on the layer **Slab**, dimensions are on the layer "**Dimension – Length**", while the objects are arranged on the layer "**Interior - Living room - Furnishing**".



All Layers

Now turn on "All layers" option.

Then all the layers in the program will appear. We have prepared layers for both architectural items (these are automatically assigned to the item types) and for furniture so the designer can easily place furniture, decorative elements, lamps on a separate layer for each room. If you need an additional room that is not on the list, it's worth creating it as a new layer.

Layer Properties Management ×									
🐟 🐟 The name of current	layer:	Interi	or - Livi	ing room	- Furnishing				Show visible layers only
Name	On	L	P	Ele	C Line-typ	e Line	Description	^	Filters
Interior - Bedroom - Lighting	9	F	4	0	Simple	0 mm			
Interior - Kitchen - Decoration	9	<u> </u>	ā	0	Simple	0 mm			- All layers
Interior - Kitchen - Furnishing	9	<u> </u>	ā	0	Simple	0 mm			
Interior - Kitchen - Lighting	9	<u> </u>	4	0	Simple	0 mm			
Interior - Living room - Decoration	9		4	0	Simple	0 mm			
Interior - Living room - Furnishing	9		8	53	Simple I	- 0 mm -	•		
Interior - Living room - Lighting	9	dî 🕹	4	0	Simple	0 mm		- 1	
Lighting	° 💡	<u> </u>	4	0	Simple	0 mm			
Lighting - Exterior	0		4	0	Simple	0 mm			
Lighting - Interior	9	<u> </u>	4	0	Simple	0 mm			
✓ Line	9		4	0	Simple	0 mm			
Object	9	<u> </u>	4	0	Simple	0 mm			
Object - Exterior	9		4	0	Simple	0 mm			Layer filter restricts the layers displayed in the
Object - Interior	9		4	0	Simple	0 mm			Layer list to the selected layers. Drag and drop
Point	9	<u> </u>	4	0	Simple	0 mm			the selected layers onto the layer linter
Polygon	9		4	0	Simple	0 mm			Variations
Railing	0		4	0	Simple	0 mm			
Raster image	9	<u> </u>	ā	0	Simple	0 mm			
Roof	9		4	0	Simple	0 mm			Available variations
Room survey	0		4	0	Simple	0 mm			- All layers
In Slab	9	<u> </u>	4	16	Simple	0 mm			
Solid model	9		4	0	Simple	0 mm			
Space	9	<u> </u>	4	0	Simple	0 mm			
Stair	9		4	0	Simple	0 mm			
Terrain	0		4	0	Simple	0 mm			
✓ Text	9	<u> </u>	4	0	Simple	0 mm			
Text - Annotation	9		4	0	Simple	0 mm			
Text - Notes	0		4	0	Simple	0 mm			
Title box	9	<u> </u>	ā	0	Simple	0 mm			A law and the answer all the law an with the
🗢 Wall - Load-bearing wall	9		ā	257	Simple	0 mm			A layer variation saves all the layers with the current states. It helps switching between
Wall - Partition wall	0	Ē	4	0	Simple	0 mm	>	~	possible layer variations in one step.
Do not delete used layers	~	C	opy to (clipboard	Protocol	or Layer Na	ming		OK Cancel

Create New Layer

According to the task, we have to make two alternatives for arranging furniture in the room. It is advisable to create new layers for each option. New layer can be created only if all layers are visible.

- To create a new layer, click on Add new layer size icon. Now the "Layer : 1" is created.
- Double-click on the recently created new layer and rename "Interior Hallway Furniture 1".
- Now create another layer by using "Add new layer" command.
- Double-click on the recently created new layer and rename "Interior Hallway Furniture 2".

Layer Properties Management

A The name of curr	ent lay	/er: Inte	erior - Li	ving room	- Furnis	hing			[
Name	On	Lock	Pr	Elem	с	Line-type	Line-w	Description	^
Interior - Bathroom - Lighting	9	<u> </u>	6	0		Simple Line	0 mm		
Interior - Bedroom - Decoration	?	<u> </u>	9	0		Simple Line	0 mm		
Interior - Bedroom - Furnishing	?	<u> </u>	4	0		Simple Line	0 mm		
Interior - Bedroom - Liahtina	9	<u> </u>	8	0		Simple Line	0 mm		
Interior - Hallway - Furniture 1	9	dî 👘	6	0		Simple Line 💌	0 mm 💌]	
Interior - Hallway - Furniture 2	9	Ē	9	0		Simple Line	0 mm		

• Close the dialogue window by pressing "OK".

1.5.3. Remove items to another layer

Select two armchairs and the coffee table on the floor plan, then on the left side in Properties dialogue window, by pressing the arrow icon you can scroll down in the layer list.



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These three items are on "Interior - Living room - Furniture" layer.

Now click on the "Interior – Hallway – Furniture 1" layer on top of the list. The objects have been moved.

Checking the layer properties of furniture

After completing the removal, now check these items are on layer "Interior - Hallway - Furniture 1"

• Click on any armchairs on the floor plan.



The properties on the left side shows Layer: "Interior – Hallway – Furniture 1". So, we successfully placed all three items to a new layer.

1.5.4. Drafting the second alternative arrangement

Let's turn the visibility off the layer "Indoor - Hallway - Furniture 1", so we could work on an empty room.

Switching off the visibility of layers

- Activate the floor plan window.
- Open the Layer Manager.
- Turn on "Used layers" option.
- Click on "Interior Hallway Furniture 1", then click on the yellow bulb icon to turn the visibility off. Now the padlock is locked.

Interior - Hallway - Furniture 1		<u> </u>	4	20	Simple Line 🔽 0 mm 🔍
Interior - Hallway - Furniture 2	9	<u> </u>	5	0	Simple Line 0 mm

• Close the dialogue window. On floor plan, we can see an empty room.



Placing furniture – 2nd version

- In the Design Center click on Catalog / Objects / Living room / Armchair folder, and select items from the Living divan family as you like. Place them.
- Select the new furniture and move them to layer "Interior Hallway Furniture 2" by using the previously described method.



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Updating 3D model

At this moment, the floor plan reflects the second furniture arrangement while the 3D view shows both alternatives simultaneously. It is time now for you to learn how to display the 3D model with the content corresponding to the current floor plan.

The simplest way is to rebuild the 3D model, if you click on the hammer icon on the View Control Bar. This tool is the **Quick 3D model** tool. Using this tool quickly builds up the 3D model based on the content of the floor plan.





Two armchairs and coffee table disappeared, as the visibility of layer representing them had been turned off (this is same as that if we pull out tracing paper of this furniture under the other drawings).

Switching between alternatives by turning on and off layers

Activate floor plan window.

To see the first alternative arrangement in Layer Properties Management, turn on "Indoor – Hallway – Furniture 1" layer unlocking the padlock, while "Indoor – Hallway – Furniture 2" turn off the visibility by clicking on the yellow light bulb icon.

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ŀ	🧼 Interior - Hallway - Furniture 1	🕴 💣	9	20	Simple Line 💌 0 mm 🔍
ŀ	Interior - Hallway - Furniture 2	🕈 🔒	9	70	Simple Line 0 mm

If you click on the 3D hammer icon, the first alternative furniture arrangement will appear on floor plan and 3D view as well.



1.5.5. Playing with the model – The "3D hammer" tool

In most cases, the ARCHLine.XP[®] takes off the burden from the shoulder of the designer by updating the model regularly. You may have seen several examples for this feature, starting from the drawing wall, through copying the already placed walls, up to the modification of properties, and you were able to follow the changes also in the 3D screen. In some cases, the content of the 3D view doesn't update, such as the previously mentioned example turn on / off layers.

Using basic tools on the floor plan is not followed by an update on 3D view then you have to check: File menu / Options / Graphics / Build 3D model / Keep 3D of this project updated dialogue window. This option should be activated.

Updating the 3D model

The simplest way to rebuild the 3D model if you click on the hammer icon on the View Control Bar. This tool is the Quick 3D model tool. In essence, using this tool quickly builds up the 3D model based on the content of the floor plan.

Displaying the active level only

- Click on the black arrow next to "Quick 3D model" (3D hammer) icon located in the bottom toolbar of the program. The dropdown menu shows all tools for 3D building.
- Click on Build 3D model command.

Now the Build 3D model dialogue window appears.

- In the "Selecting floor plans by storey for 3D model construction", select Custom
- Select only the Ground level. OK.

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Content Selecting Custom Element All	of 3D model g floor plans by storeys for 3D model construction types	~ ~		٢	
Surfaces 8206	OK	Cancel			

Upon pressing the button OK, the program starts working and soon displays the model. Now only those items are visible, which are on the Ground floor layer on the floor plan. This representation could be an excellent tool to create a semi top view, a so-called dollhouse view of the floor plan.



Re(building) the entire 3D model

• Select the Build 3D model - Level of Geometry settings, and select all.

Level of Geometry settings		×
Views - View - View 2	Level of Geometry Symbolic Schematic Detailed Documentation Construction Construction Content of 3D model Selecting floor plans by storeys for 3D model construction Custom All Custom All	Others
Surfaces 8155	ОК	Cancel

• The full model will be displayed again.

Cut-away 3D

The Cut-away 3D view allows you to reduce the complex 3D view to the model space you are currently editing. In the case of a large model, this function is advisable if the design is concentrated on a relatively small part.

The function allows you to display the entire model in one 3D view and the model narrowed down to the desired detail in the other view.

A Cut-away 3D view can be created by using a rectangle or a cutting profile.

- Arrange the 2D drawing so that the entire floor plan is visible.
- Click on the black arrow next to the 3D hammer icon and on the "Cut-away 3D" command.
- Move the cursor to the upper left corner of the drawing area, and click. This way, you have placed the first corner point of the rectangle.
- Now move the mouse so that the bottom edge of the drawn rectangle cuts the model roughly in half, so that the armchairs and coffee table are in the selection rectangle. Then click again.







The model that has been cut along the edges of the rectangle appears within a short period in a new view.

- In this view, you can edit elements in the same way as in the full 3D view.
- Use the Magnify View command in the Navibar to place this cropped view among the others.



You can modify the selected area at any time in 2D view:

• Click on the rectangle, select Offset, set the new cut-out and press Enter. Answer Yes to the message that appears automatically.

The remaining selection rectangle on the floor plan can be deleted, the cutaway view will not disappear.

Finally, you may learn the use of 3D filtering of selected objects, which is also very useful during the design process. In this case, the program represents only the components that are selected in the floor plan.

Display the selected components only

- In the floor plan, select the two armchairs and the coffee table placed in front of them.
- Click on the first 3D hammer.



Message



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As a result of the previous steps, this time the program only displays the 3 selected objects in the model. This option can be particularly useful when you want to focus on a small, well-defined part of a complex drawing during the design process and want to temporarily isolate/emphasize it in the model. Rebuild the entire model as you have learned.

1.6. The importance of "Save as" function

Finally, you can see exactly what the project contains and you can save it in a new project file. First, let's look at why this is even necessary.

Just like when working with other software, you may need to save different phases of your work with ARCHLine.XP® for different reasons. Among these reasons, one of the most important is the principle of "one file is not a file", which means nothing more than that if you only have your work in a single file, and if for some reason it is lost, e.g. deleted or damaged, then without a duplicate, all your work is lost!

 Save your work under the recently used project file by clicking on Save command. This way the Foundation 01 file is overwritten. We recommend saving every 10-15 minutes.



Save project under different name

- Select the menu item "File / Save project as".
- The appearing dialogue box indicates that the project presently contains three drawings, the floor plan, the model and the cut-away view. Click on the button Save at the bottom of the dialogue box.
- Type the new name "Foundation 02" in the appearing box, and save it by clicking on the button Save.

So, we have two backups of the same state.

Congratulations!

You did an excellent job by meeting a serious and very useful milestone, and you have completed the training session of ARCHLine.XP dealing with the foundations!

Now you may review your work to realize that you have learnt the use of tools that can facilitate the resolution of quite complex tasks starting from the use of simple but also important and necessary tools. With the help of this training material, you made acquaintance with the methods of the accurate and precise drafting.

With the knowledge you acquired so far you will be able to process complicated floor plans for your designing efforts, or you may redraw printed drawings too.

	File	> E ₽ ₽ ? (?)
		New project
		Open project
-		Save project
I	₿	Save project as

Workshop 2: Reception room



2. Workshop: Reception Room

In this workshop we will show you the steps to design a typical living room.

We will extend the editing method already learned in the Foundation workshop by using Pre-defined rooms and the Room maker.

We will cover the following topics:

- Fundamentals of CAD design: Interface and Drawing tools Repeat
- Basic architectural design: Wall drawing using the Room maker, flooring, suspended ceiling.
- New method for placing openings in Room maker.
- In Room maker, dressing up a room: curtains, molding, skirting board, electric switch, picture on the wall, wall lamp, wallpapering, painting.
- From the Design Center, placing furniture and lighting.
- Download new textiles from the Internet.
- Visual design: shadows, lights, photorealistic/rendered images.

We will be creating the next living room design:





The project created by Berta Fias.

Open your browser and watch the living room design tutorial video:

Preliminary Course – Interior design – Reception Room Download from our website the Workshop Projects 2024 installer, used during the Preliminary Course, and install it if you have not already done so.

Starting

Start ARCHLine.XP^{®.} Your screen should look similar as follows: ٠

ite a new project or open an existing one	
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	ARCHLine.XP 2023 - Developer v230519 Build

ARCHLine.XP Interior Tutorial – Preliminary course

• Click on New Project to start.

2.1. Saving the project

• Select Save Project from the Quick Access toolbar.

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		-
\checkmark	Save project	
Properties	Save project simply saves your work by updating the last saved version of the project	uss
• Decembra	to match the current version you see on your screen.	C

Since we have not yet given the project a name, the program now asks where and under what name we want to save our work. By default, the program will create a work folder named ARCHLine.XP Draw during installation, where projects can be saved. You can find this folder under Documents on your computer.

• Use the New Folder button to create a folder called *Reception_Room* under the ARCHLineXP Draw folder. If you have already installed the Preliminary Course workshop installation file, go to the appropriate folder: ...2024\ *Workshop_Preliminary\2_Reception_Room*

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- Go to the 2_Reception_Room folder and enter the project file name "Reception_Room".
- Press the Save button.

From now on, it is enough to simply press the Save Project button on the toolbar and the program will update the contents of the "Reception_Room" project with the current state without prompting.

We recommend saving every 10-15 minutes!

To ensure the security of your work, you should make a duplicate copy of your projects at regular intervals.

2.2. Pre-defined rooms

In the Foundation workshop, we learned how to set up a floor plan. Now we'll explore a new possibility. Later, you can choose which method is easier and faster for you.

Click on Ribbon Bar / Interior / Room maker / Pre-defined rooms command.



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In the appearing dialogue box choose: Rectangle.

Bay window Diagonal T Thickness 380 mm Wall height	Rotate with A 0 90 180 270 Redraw B t: 2700 mm	7160 mm 3900 mm	
Choose a layout and create your room with the exact measurements			Close

- Create a room with exact room internal measurements: A: 7160 mm, B: 3900 mm. The values represent the internal wall lengths.
- Set wall properties: Thickness: 380 mm, Wall height: 2700 mm.
- Press the Close button and place the room on the drawing area near to the origin using the mouse left click.

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You should see the above layout on the screen: if you can only see part of the positioned room, select the 🛄 Optimal

zoom icon in the *Dashboard*. If you want to see the layout of the drawings, select the **Magnify view** icon, which you can also access from the *Status bar*.

Displaying Side Panels

The Dashboard, Design center, Styles, and Project navigator are located on the left side of the screen, and can be activated by clicking on the different tabs.

To hide/show the contents, click on the drawing pin icon in the top right corner of the tab. Then, hover the cursor over the desired tab name to reveal its content.



2.3. Editing wall

We aim to make the following adjustments, let's draw room extensions as it is shown below:



• The wall editing commands are located in the Ribbon Bar / Building / Wall panel.



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Wall add-ons and other wall extensions are most easily created in the floor plan window.

2.3.1. Add Rectangle extension to the room

Create a rectangle-shaped room extension, as shown in the illustration above; length: 3000 mm, depth: 2240 mm. The values represent the internal wall lengths.

Click on Ribbon Bar / Building / Edit / Insert / Insert square add-on command

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• Choose the room extension type: Rectangular.

The room extension sizes can be defined by graphically or numerically. We choose the numerical way.

- In case of using numerical values, enter A and B values and hit the "OK" button.
- Move the cursor over the wall (1) you want to insert the rectangle extension and click on the starting point of the wall addon. Now the extension is created.
- If you do not want to add more extension hit ESC to close the command.





Wall add-on		×								
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Rectangular										
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Specifying sizes graphically										
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2.3.2. Add next Rectangle extension

Create another rectangle-shaped extension on the left side of the room, which is at 1400 mm away from the room left corner. The length is 1400 mm, and depth is 500 mm. The values represent the internal wall lengths.

- Click on Ribbon Bar / Building / Edit / Insert / Insert square add-on command.
- Choose the room extension type: Rectangular.
- We choose the numerical way and type the value of A: 1400 mm and B: 500 mm. Then hit "OK" button.
- Moving the cursor over the selected wall, you can read the distance between the wall corners and the wall extension's endpoints.
- Type the room extension distance from the wall corner point: 1400, then hit "Enter".



2.4. The slab

2.4.1. Slab parameters

- Define floor properties: Ribbon Bar / Building / Properties / Structure /Slab
- Set up these values in the dialogue window: Base offset from the floor: 0 mm; Total thickness: -300 mm (as the floor is extended downwards from 0 mm).





Redraw				
	Visualization			
	Colour			
	Line weights	0 mm		
	Line type	Simple Line		
	Layer	Födém01		
	Priority	8- Bottom-most		
	The slab border doesn't display o	on the floor plan in print		
	Display 2D Fills	R:0 G:0 B:0		
	3D fixed			
	Same materials			
	Top material	Parquet_wood_08		
	Side material	Coffee_cream		
	Bottom material	White ceiling		
	Constrains			
	Base offset from the floor	0 mm		
	Total thickness	-300 mm		
	Slab type	Slab		
Floor level: 0mm	Cut the walls	No cutting		
	Cut by roofs	No cutting		
	Visible on the floor above.	Simple Line		
	Visible on the floor below	Simple Line		
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2.4.2. Create slab

- Select the command: Ribbon Bar / Building / Slab / Slab by walls.
- Click on the two opposite corner points of the selection rectangle (1,2) and hit Enter to finish and close the command.
- The program creates the floor and generates it in 3D view as well.

The slab is placed under the walls. Now check it in the 3D view as well. Left-click in the 3D window, then rotate the model by holding down the right mouse button:

- Move the mouse near the corner point shown in the image.
- Here press the right button, hold it down and move the mouse. The point where you press the right button will be the center of rotation. This is indicated by a small colored coordinate system.
- Release the right mouse button to end the rotation.



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2.5. Add ceiling

Activate the floorplan window by clicking inside with left-mouse button. Before placing the ceiling, first of all, set the Plain ceiling properties.

2.5.1. Plain ceiling properties

Set the ceiling properties: Ribbon bar / Building / Properties / Structure / Plain ceiling







Set the following values in the dialogue window:

- Enter the ceiling color on the first tab: "Bright white"
- Go to the General settings tab.

•

• Change the Relative elevation to **2680 mm** and Representation in 2D to **Top View** (so that the suspended ceiling symbol will not be visible in the floor plan).

2.5.2. Placing the Plain ceiling

Select the command: Ribbon Bar / Building / Ceiling / Plain auto ceiling



- Click inside the room.
- The program automatically recognizes the room contour and places the ceiling that appears in 3D view as well.



2.6. Setting up the perspective view

Click in the 3D model window, then click on the Magnify view icon in the Status bar to display the model in the left window.

- Click the *Magnify view* icon again to display the model in full screen.
- Click again and the model will return to its original size.
- So, the Magnify view icon can be used to toggle the contents of the windows.

Like 2D content, the 3D model can be zoomed in, out, and moved using the mouse wheel. As we have already seen, you can rotate it in space with the right mouse button. The next step is to set four different perspective views. These views will help you see the room faster later.

- Activate and then enlarge the 3D window by clicking on the Handling Magnify view icon in the Status bar.
- No item should be selected.
- In the Dashboard, click the Perspective icon representing the eye.

Dashboard			ņ	×
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The Perspective dialog box appears.

Perspective dialog

Open the Perspective dialog box. The model is displayed in top view. We recommend that you select the floor plan view:

- Click on the 2D View (1) button. On the left side, the 3D top view is replaced by a drawing of the floor plan at Ground floor.
- Press the *Fit to view* button (2) in the last position. The blue camera tool and the floor plan will be displayed.
- Click and hold the left mouse button on the blue point (3) representing the camera and move it towards the bottom left corner of the model.
- Now click and hold on the purple dot (4) representing the point (object) you are looking at and move it towards the top right corner of the model.
- Adjust the height of the camera and object to 1200 mm.
- This defines a perspective.
- Save this perspective setting by clicking on the green plus. The program saves the view as View_00.
- Double click on the view name and in the appearing dialog box, type the new view name: Living_room_1, then press OK. This renames the view you just saved.



Create 3 more perspectives going clockwise around the room. Press OK to close the dialogue window.



Perspective dialog			×
	Saved vi Image: Saved vi	ews room_1 room_2 room_3 room_4 1200 mm 1200 mm 60°	OK Cancel

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- The views can be selected as follows:
- from the Dashboard by name or by using the blue arrows,
- from the bottom Status bar by name or by using the blue arrows,
- using the PageUp and PageDown keys on the keyboard.

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Quick perspective views

After creating the perspective views and closing the Perspective dialog box, you will see that another icon appears on the floor plan. This allows you to set up quick perspective views.

The camera icon allows you to see exactly as if you were in the location marked with the camera icon on the floor plan.

You can move the camera icon by clicking on the circle, and you can rotate it by clicking on the triangle, which means you can change the field of view.

2.7. Placement of openings - optional

Here you can choose the *independent work* or move on. In this case, in the next chapter we will use a new method from the Room maker to place the doors and windows together.

Independent work:

In the *Preliminary Workshop - Design* section, we learned how to attach the openings to the floor plan. Accordingly, place 2 doors and 3 windows as shown in the image.

Before placement, set the Openings property:



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Ð	Structu	re		×	€€	Wind	dow		eption		crou				R
1 1	Stair, R	amp, Ra	iling	•		Curta	ain wall								

Door's type: Doors/Indoor/Sliding: Double sided sliding door

				_	
Door					×
Main parameters	Width:		3000 mm	~	Redraw 🔂 🖉
Representation	Height:		2400 mm	~	
Reveal, void, niche, cavity	Thickness:		130 mm		
Basic geometry				•	
Outer handle	Hide opening and make a void				
Inner handle	Distance from wall line	100 mm			arnal
	Sill height	0 mm			
Accessories	Outer sill height:	0 mm			
Interior and exterior sills	Add level shift				arna
	Effective clear width	3000 mm			
Built-in details	Effective clear height	2380 mm			
Information	Colour				
	Line type	Simple Line		~	
	Line weights	0 mm		~	
Croato variant	Draw Order	8- Bottom-most		~	
	Reference axis	Side		~	
	Distance from wall corner	0 mm			
		Lining and architrave			
	D	imension, consignment			
		Thermal parameters			
	Ratio (Illumination area)	100%		~	
	Material	Value			
	Solid	Beech			
	Frame material	Beech			
	Glass material	Glass26			
					Single sided sliding door
BIM Parameters	No style				OK Cancel



Windows type: Windows/Standard/Single: Default win

Window					×
Main parameters Representation Reveal, void, niche, cavity	Width: Height: Thickness:		2000 mm 2100 mm 114 mm	~	Redraw
Basic geometry Outer handle	Hide opening and make a void				
Inner handle Accessories	Distance from wall line Sill height Outer sill height:	100 mm 300 mm 900 mm			
Interior and exterior sills	Add level shift Colour				
Information	Line type Line weights Draw Order	Simple Line 0 mm 8- Bottom-most	~		External
Create variant	Reference axis Distance from wall corner	Side 4581.2 mm	~		Internal
		Lining and architrave Dimension, consignment			
	Ratio (Illumination area) Ratio (Ventillation area)	100% 100%			
	Material Solid Glass material External frame material Internal frame material	Value Beech Glass26 Default material Default material	>	^	
BIM Parameters	x 1500 mm 1	window		[Default win OK Cancel

2.8. Room Maker

Room Maker is an all-in-one design tool that helps to speed up and simplify the design process. Start designing by placing doors and windows, then decorate the room with your choice of accessories.

• Start the command: Ribbon Bar / Interior / Room Maker

1	$\square \cap \cap \chi$	🕛 🗋 🥜	1 1	· ━━━ ┥ ┐ + ?	⁺	View Buildi	ing Interior
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	Room maker	Material T	Single object	3D warehouse	AL Warehouse	BIM libraries	Tiling Sweep ▼ ▼
	Room maker			Place			Decora
			-	🔗 i ី 🕅 🛞 Fine		▼ 1:10	
Pre-defined rooms			× Recept	ion Room Gro	ound floor (0 m	m) View 2 [Ir	magel +

• Click inside the room on the floor plan.



• The dialogue window of the Room maker will appear on your screen.

Room maker – Interface overview

- 1. **Wall finder:** Clicking on the icon the room will move to left or right and show the selected wall which can be modified. There you have an option to work on the ceiling or the slab as well.
- 2. **Toolbar:** Contains all tools for interior designers. One command is always active. The room maker always uses the selected command.
- 3. Design center: An integrated version of the Object Center for selecting objects/items.
- 4. Properties: You can define these parameters, when you insert or modify a new item or material.
- 5. Modify: Additional properties of the element can be accessed.
- 6. Insert new: You can insert a new item by clicking on the green tick.
- 7. Zoom in/out: Zoom in or out on the 3D view.
- 8. Undo/Redo: Withdraw the last changes on the floor plan and set the previous status. You can undo and redo up to 16 actions.
- 9. Floor plan: The floor plan is presenting the selected item.
- 10. 3D view: 3-dimensional view of the selected wall/floor/ceiling

Appears for additional items:

- 11. Texture finder: Here, you can find the last used textures.
- 12. Add new / modify material: Choose other materials from Design Center, modify the parameters of the selected item.



If you have already added the openings in the Independent work chapter, go on to chapter 2.8.3 Add curtains.



2.8.1. Add doors

1st door

With Wall finder, you can switch from wall to wall. We always work on the opposite wall.

• Use the wall finder arrows (1) to choose the 7160 mm long wall on which you want to place the front door.

i√Q.↓Ž ∨

0

<<Back | 25 Elements

Double(16)

Glass(3)

Hole(8)

Jafholz(4)

Paneled(43)

Single(15)

Toló(2)

INDUSTRIAL
 OUTDOOR
 OTHER

□ INDOOR Arched(39)

Select the door: Back button, then Door / Indoor / Sliding.

Select the door type "Single sided sliding door" (2). It is necessary to change the properties of the selected door:

- Width: **3140** mm, Height: **2400** mm (3),
- then Green tick (4). The door is placed in the middle of the wall.



Next, change the distance from the wall corner:

- Modify the previously created door "Distance from right" to 0 mm.
- Click on the Update button.



2nd door

• Place a door of the same type on a 3000 mm long wall with the following parameters: Select the desired wall with the wall finder.

Width: 3000 mm (1) Height: 2400mm (2) Use the green tick (3) to create it.

	f 🔲 🕿 🝐	👂 🖾 😻 📂	با الله الله الله الله الله الله الله ال	Close-up	9 (24	8
f	Width 3000 mm ~ Height 2400 mm ~	Distance from left 0 mm Distance from right 0 mm V	Orientation Right Left Outside Inside		8 / 10	
	Sill height 0 mm v	Distance from wall line		۵ 🗸		
Green Tick -	place new item, Gre	een Plus - prepare next item, Black C	ircle - Refresh			Close

2.8.2. Add windows

1st window

Place two windows on the wall with the length 3900 mm.

- Select the window icon (1) on the Toolbar. Please navigate to the indicated wall with Wall finder (2).
- Choose "Default win" type from the favorites (3) and change properties: Width: 2000 mm (4), Height: 2100 mm (5), Sill height 300 mm (6).

Styling the room - Add/Edit Windows	×
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element 4 2000 mm 🗸 0 mm 🗸	
exist. Height Distance from right	1 / 10
5 2100 mm V 0 mm	
Cill beight Distance from wall line	
Green Tick - place new item, Green Plus - prepare next item, Black Circle - Refresh	Close

- Click on Green tick (7) the window is placed in the wall center point.
- Set the distance from the left wall corner to 800 mm.
- Now place another window on the same wall following the steps above.
- To create the new window, click on the Green cross icon.
- Set the window parameters: width 1100 mm, heights 2100 mm, sill height 300 mm, then place it by clicking on the Green tick.



3rd window

Place a window of the same type but different dimensions on the 7160 mm wall.

- Select this wall.
- Choose "Default win" type from the favorites and change properties: Width: 1200 mm, Height: 2100 mm, Sill height 300 mm.



- Click on Green tick, to place the window in the wall center point.
- Change left distance to 0 mm and press Enter or Refresh button.



2.8.3. Add curtains

ARCHLine.XP offers a wide variety of blinds, shades, curtains. First select the window, then find a curtain and customize it. There are many ways to choose textiles and other materials. You can use the built-in materials or create customized ones. You can download materials from the ARCHLine.XP Warehouse or import them directly from the manufacturer's website.

1st curtain

- Place a curtain on the largest window first.
- Click the Curtain icon in the toolbar (1).
- Click on the window where you want to place the curtain first (2).
- Select the fourth curtain-type from the favorites (3) and change its properties: Pleats: high (60) (4), Retraction in the middle: no (0) (5), Without pelmet (6),

Top height: 2680 mm (7), Bottom height: 20 mm (8).

- Click on the Edit material (9), then on the blue plus button 📩 and select "Curtain 002" from the library.
 - Click on Green tick (10) it will place the curtain in front of the window.



2nd curtain

Place a curtain with previously set properties on the wall of 7160 mm the length.

- Select the wall.
- Click on the Green tick, to place the curtain.

Curtain material modification* – Optional

*This editing task requires Internet access.

We are going to modify the fabric of the curtain on the wide window, thus select the curtain with the previously described method. Then:



ARCHLine.XP Interior Tutorial – Preliminary course

- Click on the Curtain icon on the toolbar (1).
- Click on the curtain (2).
- Click on the Edit material button (3).
- Click on the ARCHLine Warehouse icon (4).

Download material from the ARCHLine.XP Warehouse

The ARCHLine.XP Warehouse is a collection of fabrics, lamps, furniture and more.

Click on the AL Warehouse button to browse the virtual collection of ARCHLine.XP.

Find material by type, manufacturer, product family or product group. You can download more than one material at a time. Select the desired material and click "Download". The downloaded material will be created as a new material, and you can find it in Favorites.



• Within AL Warehouse, under **Brands / Material / Rovitex / Montreal**, select the material "*Montreal_F_105_x*" and download it.





The new downloaded material will be applied immediately on the curtain.



Material from the manufacturer's website

More often the desired fabric is only available on the manufacturer's website. In this case, type the link to the manufacturer's website into your Internet browser.

In our example, we go to the https://www.designersguild.com/ website to select the Calozzo fino viridian fabric.

OUR PRODUCTS CONTRACTS STOCKISTS INSPIRATION BRANDS
DESIGNERS GUILD FABRIC > CALOZZO FINO VIRIDIAN

Linder and Milling Street	



- Click on the fabric to enlarge it.
- Now right click on the image and choose "Copy image" command
- Return to Room Maker and select Create new material icon.



- Click on the preview and press the Paste button.
 The image will appear in the window. In the *Appearance*, you can change the properties of the photo-realistic representation, lighten the material, and change other settings.
- From Render Styles, select the Fabric render style.
- In *Physical properties*, adjust the position of the texture from tile to stretch.



Material properties		×
	Copy material properties Paste material prope	rties
Texture(albedo)	Render styles Fabric	× ^
	☆ Texture / Color	
	Colour	
	Texture BF50316D-5CBD-480D-A14D-EB49C69A4896.p	ng
Render	1024 x 1024	
Colour	Make seamless pattern	
Texture	Merge with color	
Copy to clipboard	Brightness	75
Paste		
Import HQ material package	Physical properties Position: Stretch Stretch	~
	Basic settings	0%
		0%
Appearance	Metalic (Reflection)	0%
Thermal parameters		
BIM parameters	Roughness(Blurry Reflection(Visually indistinct mirroring))	0%
Hatch on section		
Hatch in 3D	Ambient Occlusion (AO)	0
	Rumn / normal manning	5
	Неір ОК	Cancel

Click OK. In the pop-up window, save the material to the library. Select the category in which you want to place the ٠ material, and set the manufacturer.

Create new item in the library		×
Name of the new item in the library:		
calozzo_fino_virdian		~
Category:		
FABRICS (TEXTILE, CURTAIN, LEATHER)		\sim
Sub category:		
Curtain		\sim
Producer:		
Designers Guild		\sim
	ОК С	ancel

The new fabric is applied to the curtain immediately. Step to the next wall. Change the curtain material here to Calozzo fino virdian.



2.8.4. Add Light Switches and Sockets

Create a 3-way switch and a 3-way socket on the 7160 mm long wall as follows:



- Select "Electrical Accessory" on the toolbar.
- Select the 7160 mm long wall with Wall finder.
- In the Design Center select Plate switches and select the "1 gang light switch" and set the properties: Base offset from the floor: 1200 mm Grouping 3 Horizontal.



- Click on Green tick, to place the socket on the wall.
- Click on the right arrow below Manual move to move the switches to the right position.

Click on the green plus sign to add a 3-socket to the model from the Socket outlets:

• Repeat the previous steps, this time inserting a "1 gang standard socket". Place the socket 400 mm from the floor.



2.8.5. Add Profiles

Crown molding

Install decorative moldings: crown molding running around the entire room where the ceiling meets the walls.

- Click on Profiles on the Toolbar (1).
- Choose the profile option (2).
- Select the "px-022" profile from Favorites (3) and change its properties (4): Width: 50 mm, Height: 50 mm,

Base offset from the floor: 2680 mm.

	14 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		-	
2 = px-01	px-016 px-018	px-022 3	+ 2 3 0 0	Width 50 mm Height 50 mm Base offset from the floor 2680 mm
Green Tick - place new iter	n, Black Circle - Refresh			

• Select a material for the profile: Click on the Edit material (5) and select "LIGHT GRAY 17" (6). Click on the Blue cross button to display the Materials Library. Find the material by typing its name in the search box. Click on Green tick (7) and it will place the crown molding around the room.

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Skirting Board

- Change the position of the Profile (1).
- Select the "skirting_board_006" profile from Favorites (2) and change properties (3): Width: 20 mm, Height: 150 mm,
 - Distance from the floor: 0 mm.
- Click on the Edit material (4) and select "LIGHT GRAY 17" (5), click on the Green tick (6) to apply changes.



2.8.6. Add wall lamps

- Click on the Wall lamps icon (1) on the Toolbar.
- Select the 4160 mm long wall using Wall finder (2).
- Choose" Wall Lamp" (3) from the favorites and change properties: Distance from left: 400 mm, Base offset from floor: 1500 mm (4).
- Click on Green tick (5) it is placed on the wall.



- Press the Green plus to place the next light: Set the "Distance from right" to 400 mm.
- Click on Green tick- it will place the next lamp on the wall.



2.8.7. Add Painting

1st painting:

Now place a poster between wall lamps.

- Click on the *Picture on wall* icon on the toolbar.
- Choose "LONDON 1832" (1) from the library and change properties:
- Turn OFF the Frame and Matting (2)
- Leave the proportional magnification icon on and set the size (3): width: 2.45 m, so the height will be the same.
- Change the "Base offset from" value to 150 mm (4)
- The distance does not need to be set separately, as the program automatically places the image in the center of the wall. The left and right distance is 0.855 m (5).
- Finally click on the "Green tick" button to place it on the wall (6).



2nd painting:

Place a picture on the recess of the wall extension.

- Select the image "Arunas Zilys" from Favorites or from the Materials library (2).
- Change properties: Frame: ON, Matting: OFF (3).
- Change the "Base offset from" value to 1200 mm (4).
- Finally click on the "Green tick" button to place it on the wall (5).



To select the frame material, click on Frame material (1), select "Bronze - Black" (2) and press Update (3)

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• • • • • • • • • • • • • • • • • • •								>	_
Green Tick - place new item,	Green Plus - prepare nex	t item, Blac	k Circle - Refr	resh					



2.8.8. Floor covering

- You can choose from a wide range of materials to cover the floor. Click on the Add/Edit Floor finish icon (1) on the Toolbar.
- Choose "KAHRS OAK TRUFFLE" from the library (2). After selection, it will be applied on the floor.



2.8.9. Wall covering

Walls can be changed one by one or all of them at the same time. You can choose colors or wallpapers from the Library. Also, you can download wallpapers from the AL Warehouse or import from the Producer's website.

- Press on the Toolbar Add/Edit Wall finish icon (1).
- Select "LIGHT GRAY 17" color (2).



Enable the "All walls" option to apply the selected color on all walls in one step and then click on "LIGHT GRAY 17" again.



• Now switch off "All walls" option.

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• Set "BLACK BLUE 95" color, now this will be applied on the selected wall only.



Switch to the wall on which the wall lights are placed. Change the color to "BLACK BLUE 95".



• Finally, close the Room maker dialogue window.

2.9. Add ceiling lamps

We put a pendant lamp in the dining room and spotlights in the living room.

Keep the floor plan window active. The Design Center is on the left.

In the Design Center you will find building elements, groups, symbols, objects, furniture, lamps, materials and much more. You can browse the libraries or search for items using the search box.

Positioning of a pendant light

- Click the **Design Center** tab, select the Catalogue / Objects folder. All the folders in the Design Library will then be displayed
- Select Lighting / Pendant lights / Deltalight lamp or enter the name of the pendant light in the search field: Delta



• To place an item, simply grab it and drop it on the drawing. Move the mouse and click to place it in the center of the dining area.

Click on the lamp and change its Base elevation: 2030 mm.

BIM parameters	Edit	KA STA
Base Elevation	2030 mm 🗸 🗸	278.9 mm
Classification	Edit	
Visible on other floor?		65 <mark>7,07</mark> g
All floors of the building	Edit	
Geometry		
Object selection -> Del	talight pendant lamp	
Edit ma	terial	2030 mm
Model complexity (surfaces)	Medium	Inter 😁 in % - 2009
Keep original graphical attrib	utes	
Enable 2D Fills		\oplus
Display 2D Fills	R:255 G:255 B:255	
Absolute elevation	2030 mm	

Place lamps on the ceiling. You can select pre-defined lamps from the built-in library, or you can import from 3D warehouse.

Spotlights

We continue with the placement of the lamps with a spot lamp

- In the Design Center, select Lighting / Spot lights / Grid in 2 Reo lamp.
- Click on the lamp and enter its Base offset from the floor: 2600 mm.
- Place it near the first wall lamp.





Now we set the exact distance from the wall.

- First select the wall by clicking on the wall hatching, then select the spot by pressing CTRL.
- The first item selected will be highlighted in red, the second item in blue. The red element always remains in place and the blue element is moved in relation to it. The direction of the movement is also indicated by a small blue arrow, which can be clicked to change the distance: 1400 mm.

Next, the ceiling spotlight will be multiplied into a 3x2 matrix. When you click on any drawing element, it is highlighted. The selected element will be displayed in a different color and will be surrounded by an icon menu and some so-called markers.

- Select the spotlight already placed on the floor plan.
- Select the Ribbon Bar / Edit / Duplicate menu and then the Matrix command.



- Click on any point of the spot lamp.
- In the dialogue window, select the Value option.
- Set the No. horizontal: 3, and No. of vertical: 2
- and the distance between the lamps: 1500 mm, -850 m.
- Position the lamps horizontally.

See the images for the floor plan and 3D representation:

Matrix	×
Single Graphical Columns and rows are perpe Value	ndicular
No. Horizontal: No. Vertical:	3 2
Shift horizontal Shift vertical	1500 mm 850 mm
ОК	Cancel





2.10. Editing curtain

In the previous example, we demonstrated that a selected item is represented with different color and also appear the floating menu bar and a few makers around it.

These markers are assigned to a selected item and situation. In case of a curtain, you can change the width with these markers.

- In the floor plan window, zoom in on one of the curtains, then click on the curtain in the floor plan.
- The curtain is highlighted with a light blue color. Click on the blue dot marker at the bottom. Select the "Change length" command from the appearing menu.
- Place the selected point in the top corner of the wall.
- Repeat the previous step on the bottom of the curtain, aligning the end point with the edge of the window.



• Repeat these steps on other curtains.

2.11. Modification of the molding

Curtains are currently not covered, so we move the molding on the ceiling in front of the curtains to create an elegant effect.

- Select the ceiling molding on the floor plan with a base elevation of 2680 mm.
- Click on the blue line on the right side of the room and use the Offset function to move it 150 mm towards the room.



- At the bottom, select Insert node and place the node close to the edge of the curtain.
- Set an offset of 150 mm for the section in front of the window.



After the modifications are made, the molding hides the meeting point of the curtains and the ceiling, creating an aesthetically pleasing effect.

🚸 A R C H 🛛 I N E. 🕏



2.12. Change materials by using the Drag and Drop method

Next task is to change materials on all openings. Activate the 3D view.

- Select the Living_room_2 perspective to make the window visible.
- Select the Materials from the Design Center on the left.
- In the search box at the top, type the name of the material you want to search for: Black, then click on it.

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M)		Design cente	er	
		black		
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Stair Profile C. Gro	up		DEL	
Catalogue		BUILDIN	NG	Asphalt
A Objects Materials		E COLOR	CARD	
3D Warehouse		⊞ COLOU	RS	
	~	⊞ ELECTR	ICAL ACCESSO	DR
The materials Render styles	5	⊞ FABRIC	S (TEXTILE, CU	RT
tother		⊞ GARDE	N	Black

• Now drag the Black material and move it over to any window frames in the 3D window, while you are holding down the mouse left button.

The Drag and drop method is the following:

Press and hold the left mouse button to "grab" the item. Move the mouse to drag the object to the desired position on the drawing area and release the button.

This method was also used to place the pendant lamp.

- Release the mouse button up and choose from the appearing options *Replacing one material with another*. This way, you can replace all the same material to a new one in the given project in one single step.
- Click on the surface of the window frame.



All window frames in the project that had the modified color were framed in black.



2.13. Windows on wall corner

Now join the two windows on the wall corner to create a corner window.

• Use the Join two openings on wall corner command from the Ribbon bar / Building / Window / Windows on wall corner menu.



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Singl	e					-	ture	1(Stair
]				+		View	• 1:1	* +	- 1:100) -
Dout	ble							Receptio	n_Room	Ground	floor (0 i
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\blacksquare	Placin	ig windo	w								
\blacksquare	Wind	ow by tw	o points								
<u> </u>	Wind	ow not h	osted by	wall							
	Roof	window									
	Wind	ows on w	all corne	r		•		Join two o	penings on	wall corn	er
m²	Area	of openir	ngs				\square	Resize Voi	d		

• Select the two windows in the corner with a single click and the program will automatically connect them.



- Finally, click on the 1100 mm wide window and click on one of the top handle points of the pop-up markers.
- From the menu that appears, select Change size and then align the top edge with the bottom edge of the larger window.



The final result is shown below.



2.14. Repainting of wall surfaces around openings

To achieve a uniform color throughout, the wall areas around the windows need to be re-colored. The following is a stepby-step guide on how to do this.

- Right-click on a wall surface where the LIGH GRAY 17 material is located.
- Select the Find Material function from the pop-up menu.



- Use the "drag and drop" method to apply the new color to the white wall surface around the windows.
- In the menu that appears, select Like painting or grounting, then click on all the white surfaces you want to recolor.



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black		Q. ↓Ž. ✓	View 2 [image] *	¤ X
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LIGHT GRAY 17		î	Like painting or grouting	
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Texture	LIGHT GRAY 17.jpg			
280 x 420				
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Dashboa Design c.	. System b Styles	Project n	i Move V	



2.15. Placement of furniture from the Design Center

Keep the floor plan window active.

In the Design Center, you can find building elements, groups, symbols, objects, furniture, lamps, materials and many more for your design.

You can browse the libraries or search an item by using the search field.

• Click on the **Design Center** tab. Choose Catalog – Objects folder. Now all subfolders appear.
Design center	ņ	×
[Search in all items]		Q,
ń		
Door Window		
Stair Profile CD Group	c	
Dbjects Materials		
3D Warehouse AL Warehouse		
HQ materials		
☆ Other		
Light sources		
Recently created content		
Recent models		
Favourites		
Help		
Dashboa Design c System b Styles Proj	ect	n

The Furniture list to be placed:

Husk-Sofa-BB-Italia, Puff 001, Mesina 2, Mesina 3, WALL TV OK, Cerona Buffet 240x50x75, rug, table, Industrial table lamp, Modern planters, table BoConcept-Milano-table-black, chair 001, vaso, DWR_Photon Rug_Cream, commode 001, candles, deco, Parna 001

- Select an item, e.g. sofa. Type in the search field: Husk
- Click on the sofa and check the Base offset from the floor: 0 mm.
- Drag and drop it to the floor plan. Move the mouse and click to place it.



Place other furniture as well.



Moving furniture

Next step is to rotate the sofa by 180 degrees:

- Click on the sofa. The selected item is highlighted in light blue. Click on the rotation marker. Select the appropriate Rotate 180 degrees command from the pop-up menu.
- The sofa will be positioned according to the selected command.



There is another method to rotate items. Now rotate the decorative element in front of the TV.

Click on the item, and select "Free rotation marker". This way, you can rotate an object around its own axis and define the angle you want to move.



If you want to select multiple items, hold down CTRL key and simultaneously click on other items. Now we move the sofa away from the wall by 100 mm.

- First select the wall, then the sofa by holding CTRL key down. If accidentally the slab is selected, click on the black arrow and choose the wall from the list.
- The first selected item is marked in red and the second item in blue. The red element always stays in place and we move the blue element relative to it. The direction of movement is indicated by a small blue arrow, which can be changed by clicking on it.



• To modify the distance value, click on it and type the new figure.



You can resize objects on the floor plan graphically by using the arrows or by clicking on the values:



Place Objects in 3D:

Let's place candles on the table on the 3D model.

- Activate the 3D window.
- Find the candle ("*candles*") and drag and drop it into the 3D view. ARCHLine.XP recognizes the 3D surfaces.
- Click on a surface where you would like to place the object.





Repeat these steps to bring even more objects into the 3D interior.





2.16. Visualization

In the 3D window, there are lots of ways to display the model. So far, we used the *Consistent color* mode. Activate the 3D window. In the Dashboard, select *Realistic representation* to get a more realistic look in the 3D model.



Now we define a "Centre view" in the Perspective dialogue, so the camera will be in the middle of the room.





• To look around click on Ribbon bar / View / Animation / Walk and Fly and choose "Look around" command.



By pressing ESC command, you can stop the animation any time.

2.16.1. Shadows

You can visualize the 3D model with shadow effects.

• First activate the Sun setting tool from the Ribbon bar / View / Sun / Sun position option.

Vie	ew Building	g Interior	Drafting	Annotate	Docum	nentation	MEP	
ront Back	A				☆	lacksquare	360	
Axon	Perspective •	3D model	Visual styles	Rendering •	Sun T	Shadow •	Panorama 360 🔻	1
iews		Rebuild 3D				lorth directi	on	
ine	v2 [lmage] t	1:100 -	<u> </u>	•	S C	un position		

• The exact shadow calculations will be given after setting the location, the date, the time and the north direction.

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ocation		
-H- Budapest V	t.	
atitude		hud.
47.5000		I This Count-1
ongitude		
19.0700	Line and the second second	
Add Delete		
Add Delete	Local time Azimuth: 315.2	North
Add Delete Date Nonth Day	Local time Azimuth: 315.2	28 North

• From the Dashboard, click on: Display shadow on. The 3D model will look like this:



• Choosing from the View menu / Sun and Shadow simulation command the date and time can be selected by the slider, which will be followed by the model.





When a time interval is given, then a shadow simulation can be done. This command can be found under the **Ribbon** menu/ View / Shadow simulation.



Turn off the shadow by clicking the same button.

2.16.2. Rendering

Finally, we create photorealistic renderings.

To get the best quality photorealistic rendering, we might have to create up to 20-25 images. It is recommended that you first render in low resolution, without lights, in "Q1 - Quick preview image" mode.

• Click on the Status bar / Rendering icon, then click on the "Standalone rendering" command.



• Set values as it is shown on the diagram:

Photorealistic Kendering		
Resolution	1280x720 (Widescreen 16:9 - HD)	\sim
Render presets	Q1 - Quick preview image	\sim
Samples per pixel (anti-aliasing)	2	\sim
Renderpass count	30	\sim
Sharper details	\checkmark	
Enable artificial lights		
Scaling of artificial lighting	100 %	\sim
Sunlight	Cloudy daylight	~
Use IES Light in all spotlights.		
Choose IES	Edit	
Date and time	22 March 09:25 (Daylight)	
Background	Image	\sim
Print Raster	O'bu alay i olayaha	
	City sky - Cloudy	
Specify a folder to save render i	C:\Users\renata.nagy\Documents\ARCH	ine
Specify a folder to save render i Background brightness	C:\Users\renata.nagy\Documents\ARCH 100 Brighter, daytime scenes	line
Specify a folder to save render i Background brightness	C:\Users\renata.nagy\Documents\ARCH 100 Brighter, daytime scenes	Vine
Specify a folder to save render i Background brightness	C:\Users\renata.nagy\Documents\ARCH 100 Brighter, daytime scenes	model
Specify a folder to save render i Background brightness	C:\Users\renata.nagy\Documents\ARCH 100 Brighter, daytime scenes IOD Brighter, daytime scenes Inherit background from 3D Rendered Frame on/o	model
Specify a folder to save render i Background brightness	C:\Users\renata.nagy\Documents\ARCH 100 Brighter, daytime scenes Inherit background from 3E Rendered Frame on/o Change to the defaul	model ff

ARCH IN E.\$



Based on the rendering result make changes on the model and repeat the rendering. When you are satisfied with the rendering image, change the rendering settings to "Qx - Custom settings". Only now set values to high quality and resolution, do rendering again to get the final result. Please expect longer rendering time in this case.

Using this method, you can save time.

When the rendering is complete, save it.

Modify the effects if those are needed and then save the image again. This way, you can compare the different versions.



Workshop 3: Bathroom - Tiling



3. Workshop: Bathroom - Tiling

In this tutorial you will learn how to create and visualize tiling, particularly the placement of bathroom tiles in ARCHLine.XP®.

This course goes through the design of a bathroom project and provides you the following principles and basic skills both in 2D and 3D:

- Simple tiling design: Wall and floor tiling in 3D
- Modify the tiling in 3D
- Create and place Tiling style
- Create Mosaic tiling
- Tiling design in 2D layout
- Creating a built-in mirror
- Creating wall elevation views
- Tiling consignation: preparing listings of used tiling

As an example, we use Eva Ferenczi's bathroom project, and we choose from Tubadzin - House of Tones tile product family.

- Open your browser and watch the bathroom design video: <u>https://www.archlinexp.com/enrollments/courses/preliminary-course</u>
- Download the <u>Preliminary Course Workshop Projects 2024</u> installer from our website and install it if you have not already done so.

Our goal is to achieve a result similar to the picture below:



3.1. Open and Save the project

Let's start by opening and working on the project, which for the moment, does not include any tiling. We will continue to work with this project.

- Start ARCHLine.XP[®].
- Click on the "Open Project".

and choose the:

 ..\Documents\ARCHLine.XP Draw\2024\Workshop_Preliminary/3_Bathroom_Tiling\ 1_Ferenczi_Eva_Bathroom_workshop_Start.pro project.



Save project as ...

Before starting to design, it is recommended to save your project under another project name in order to avoid overwriting the original.

- Clicking on the File menu/ "Save project as.." command.
- Click on the Save button and give the project another name, and Save.



3.2. Tiling on the layout

ARCHITECT_GRANIT_30_30_2 will be installed on the wall surface.

3.2.1. Wall tiling

- Make the 3D window active (the frame of the active window will turn blue). To activate the 3D window, just click in the 3D window.
- Make the "View 5" active, and set the viewpoint according to the image.
- Switch to the floor plan window.
- Left-click on the wall and select Tiling, Tiling on wall side from the local menu.
- Place the displayed wall layout on the floor plan.



The tiling command consists of three parts: the Background area (1), the Tiling (2) and the Editor (3).



- Choose Add new command, then choose Rectangle Iw command.
- Click on the bottom left corner of the tiling and enter the height to be tiled: 1800 mm.
- Draw the rectangle to be tiled (1).
- From the pop-up dialogue menu select White from the library. This will be the color of the tile grout (2).





- Click Add tiles and select the area you have already drawn.
- In the pop-up dialogue click on the material name and select the tile **ARCHITECT_GRANIT_30_30_2** from the **Materials / Tile / Indoor** (1).
- Tile width: 600 mm (2)
- Tile height: 200 mm (3)
- Tile grout: 2 mm (4)
- Tile orientation: Original (5)
- Click OK to place the tiling.

Thing properties		×
Tiling pattern Rectangular ~	Whole area Given row/column	Update
Width: 2 600 mm Height: 3 200 mm Random rotation of tiles Material: 1	Distribution Tile grout 4 2 mm Vertical tile grout: 2 mm Orientation 5 Original:	
ARCHITECT_GRANIT_30_30_2		
Compute tipping angle	Path resolution Path finding: Sort:	,Dx
Gap between tile bottom and wall/slab 0 mm Tipping angle 0 0° Minimum ratio to display the whole tile (95-100%)	Background area Thickness: 0 mm Material: White	

- In the floating menu, select the reference point of the tiling so that it is in the bottom left corner, then place the tiling in the top left corner of the background area.
- Enter the orientation of the tiling: 0°

The results are immediately visible. The next step is to prepare the painted part of the wall.

- Select Add new, then Closed loop, Point of profile and islands.
- Click on the 2D layout inside the area not yet tiled.
- In the pop-up dialogue select PANTONE-S325-3 from the library. Click OK.
- Click Finish to close the command.

<	*
Finish	Close and remove layout
	Editor

The result is immediately visible. The bathroom wall is now tiled.

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			B B

3.2.2. Delete tiling

We delete the existing tiling to show the tiling method in 3D.

- Make the 3D window active.
- Right-click on the wall that was previously tiled and select Delete All Tiling from the local menu.

3.3. Tiling in 3D

The 3D tiling allows you to speed up the tiling style placement.

The surface can be selected with one click, a wide range of tiles can be selected and placed quickly on walls and floors.

3.3.1. Wall tiling

We are going to place **Tubadzin House-of-tones-White 898x328.jpg** tiles on the whole surface of the walls (from floor up to ceiling).

- Activate the 3D window (the active window's frame turns blue). To activate the 3D window just click inside it.
- Activate the view named Bathroom_1 and choose Consistent color as the 3D preview mode.
- Right click on the wall in the back, and select from the Local menu Tiling / Tiling on wall side / All walls command.





- In the appearing dialogue, click on the name of the material and select from Library: Material / Tile / Indoor / House-oftones-White 898x328. (1) The tile grout is 2 mm.
- Change the orientation of the tiles to the "Rotate Left" option. (2)
- Enable row shifting and set the value to 200 mm. (3)
- The thickness of the background area is 2 mm. (4)
- The material of the background area which gives the material of the grout is: Bronze. (5)

Tiling properties			x
Tiling pattern Rectangle	() Whole area	⊖ Given row/column	Update
Width: 898 mm Height: 328 mm Random rotation of tiles Material: House-of-tones-White E 1	Distribution Tile grout Orientation Shift: Column shift (Dy) Row shift (Dx): Path resolution Path finding:	2 mm Rotate left 0 mm 3 mm 200 mm 4 mm 4 mm 4 mm 2 mm 0 mm 3 mm 2 mm 0 mm 4	
Compute tipping angle Thickness: Image: 5 mm Grout depth: Image: 5 mm Tipping angle 0° Minimum ratio to display the whole 100 % tile (95-100%) Image: 100 %	Background area Thickness: Material:	4 2 mm 5 Bronze	

- To place the tiles, click on the OK button.
- The result can be seen immediately.



All walls of the bathroom will be tiled entirely from floor to ceiling with the chosen tile.

3.3.2. Floor tiling

In the next step we are going to tile the floor with House-of-tones-White-STR 598x598 tiles.

• Right click on the floor in the 3D window. Select from the Local menu the Tiling / Tiling - full area command.

Tiling properties			×
Tiling pattern Rectangle V	() Whole area	⊖ Given row/column	Update
Width: 598 mm Height: 598 mm Random rotation of tiles Material: House-of-tones-White-5	Distribution Tile grout Orientation Shift:	2 mm Rotate left v	
Compute tipping angle Thickness:	Path resolution Path finding: Sort:		
Grout depth: 5 mm Tipping angle 0° Minimum ratio to display the whole 100 % tile (95-100%) 100 %	Background area Thickness: Material:	2 mm Bronze	OK Cancel

 In the appearing dialogue, click on the name of the material and select from Library / Material / Tile / Indoor / House-oftones-White-STR 598x598.



- Turn off the row shift. The dimensions of the grout and its color remain the same.
- Click OK.

Before the program places the tiles on the floor, you should determine the direction of the tiles with the help of the orange squares. In order to position them to the exact location, place the first point on one of the blue corner points (the program finds it automatically) and then place the second point, which defines the rotation, hit ENTER so the tiling will be placed horizontally.



• After this the program creates the tiling.



3.4. Creating a tiling pattern - Tiling Style

Previously we showed how to use the 3D tiling for placing the tiling quickly and easily. In the next example we would like to place the tiling up to 2650 mm height, using 4 tiles, and between 2650 mm and the ceiling we leave the white paint. To get this result we will create a Tiling style.

Click on the **Ribbon bar / Interior / Properties / Tiling** command. You can define a Tiling style in the appearing dialogue.

Define style: Tubadzin

Our Tiling style will include 5 rows:

Row 1: Height from 0 mm to 600 mm: **House-of-tones-White-STR 598x598** Row 2: Height from 600 mm in a 330 mm high area: **House-of-tones-White 898x328** Row 3: Height from 930 mm in a 23 mm high area: **steel-gold-pol-898x23_0** Row 4: Height from 953 mm in a 1650 mm high area: **House-of-tones-White A 898x328** Row 5: White paint from 2600 mm to the ceiling.

Row 1: Tile

Enter the following parameters in the appearing dialog:



• Click on the name of the tile (1) to select the tile you wish to apply; in our case it is the **House-of-tones-White-STR 598x598** tile.

The Tiling properties window appears:

- Choose the House-of-tones-White-STR 598x598 tile from the Library.
- Set the grout: 2 mm.
- Click on the OK button.





Tiling pattern				
Rectangle	~	Whole area	◯ Given row/column	Update
Width: Height: Random rotation of tiles Material:	598 mm 598 mm House-of-tones-White-S	Distribution Tile grout Orientation Shift:	2 mm Original: V	
G ¹² ⊡ rt1 rt1 □ Compute tipping angle		Path resolution Path finding: Sort:		
Grout depth:	5 mm 5 mm 0 0° 0° 0hole	Background area Thickness: Material:	0 mm	OK Cancel

Now enter the values in the Tiling properties window:

- Total height: 600 mm (2).
- Grout: white (3).
- Rows are Horizontal and start from the bottom (4).

Row 2: Tile

- Click on the Insert new button to copy the first row. (1)
- The height of Row 2 is 330 mm. (2)
- The material of the tiles is House-of-tones-White 898x328. (3)

Tiling	I								x
				Total: 930 mm					
Ind	ex Displaye	Height 2	Elevation	Visibility	Tiles 3	Placement from	Tile gro	out Thickn	ess of backgro
2	🗹 On	330 mm	600 mm	🗹 Tiling e	House-of-tones-Whit	L	∼ Wh	iite 0 mm	
1	🗹 On	600 mm	0 mm	🗹 Tiling e	House-of-tones-White	L	Wh	ite 0 mm	
	1								
	Insert new	Horizontal	~					Redraw	
	Delete	From Botto	m ~						
	Move up]							
	Move down]							
				[
	E	Black					C	ж	Cancel

Row 3: Decor strip

- Click on the Insert new button to copy the second row.
- The height of Row 3 is 23 mm.
 The material of the tiles is steel-gold-pol-898x23_0

Index Displaye Height Elevation Visibility Tit 3 On 23 mm 930 mm Titing e 1 2 On 330 mm 600 mm Tiling e Filing e 1 On 600 mm 0 mm Tiling e Filing e 1 On 600 mm 0 mm Tiling e Filing e Insert new Horizontal Move up Move down Move down	iles steel-gold-pol-898x23_0 House-of-tones-White House-of-tones-White	Placement fr L L L	rom V	Tile grout White White White	Thickness of back 0 mm 0 mm 0 mm	gro
Index Displaye Height Elevation Visibility Ti 3 On 23 mm 930 mm Tiing e 5 2 On 330 mm 600 mm Tiling e F 1 On 600 mm 0 mm Tiling e F Insert new Horizontal Move up Move down	iles steel-gold-pol-898x23_0 House-of-tones-White House-of-tones-White	Placement fr	rom V	Tile grout White White White	Thickness of back 0 mm 0 mm 0 mm 0 mm	gro
B On 23 mm 930 mm Tiling e 5 2 On 330 mm 600 mm Tiling e F 1 On 600 mm 0 mm Tiling e F Insert new Horizontal Delete From Bottom Move up Move down	steel-gold-pol-898x23_0 House-of-tones-White House-of-tones-White	L L	~	White White White	0 mm 0 mm 0 mm	
2 ☑ On 330 mm 600 mm ☑ Tiling e Ⅰ 1 ☑ On 600 mm 0 mm ☑ Tiling e Ⅰ Insert new Horizontal ✓ ☑ ☑ Delete From Bottom ✓ ☑ Move up ✓ ☑ ☑	House-of-tones-White House-of-tones-White	L		White White	0 mm 0 mm	
1 ☑ On 600 mm 0 mm ☑ Tiling e H Insert new Horizontal ✓ Delete From Bottom ✓ Move up Move down	House-of-tones-White	L		White	0 mm	
Insert new Horizontal Delete From Bottom Move up Move down						
Move up Move down					Redraw	
Move down						
Black						

Row 4: Tile

- Click on the Insert new button to copy the third row.
- The height of the Row 4 is 1650 mm.
- The material of the tiles is House-of-Tones-White A 898x.328. Orientation: Rotate left.

Tiling								x
				Total: 2603 mm				
Index	Displaye	Height	Elevation	Visibility	Tiles	Placement from	Tile grout	Thickness of backgro
4	🗹 On	1650 mm	953 mm	✓ Tiling e	House-of-Tones-White A	L 🗸	White	0 mm
3	🗹 On	23 mm	930 mm	🗹 Tiling e	steel-gold-pol-898x23_0	L	White	0 mm
2	🗸 On	330 mm	600 mm	🗹 Tiling e	House-of-tones-White 89	L	White	0 mm
1	1 🗹 On 600 mm 0 mm			🗹 Tiling e	House-of-tones-White-ST	L	White	0 mm
In	sert new Delete	Horizontal From Botto	~ m ~				Redra	w
M	love up]						
Mo	ve down E	llack					ОК	Cancel

Row 5: Paint

- Click on the Insert new button to copy the fourth row.
- The height of Row 5 is 1000 mm. So, the total height of our tiling style is 3600 mm which means that we can use it on any wall that is not higher than 3600 mm.
- The material of the tile can remain the tile from the 4th row but turn off its visibility so the paint appears with the material of the grout.
- Click on the Redraw button to visualize the paint.



Tiling									x
				Total: 3603 mm					
Index	Displaye	Height	Elevation	Visibility	Tiles	Placement from		Tile grout	Thickness of backgro
5	🗹 On	1000 mm	2603 mm	Tiling e	House-of-Tones-White A	L	\sim	White	0 mm
4	🗹 On	1650 mm	953 mm	🗹 Tiling e	House-of-Tones-White A	L		White	0 mm
3	🗸 On	23 mm	930 mm	🗹 Tiling e	steel-gold-pol-898x23_0	L		White	0 mm
2	🗸 On	330 mm	600 mm	🗹 Tiling e	House-of-tones-White 89	L		White	0 mm
1	🗹 On	600 mm	0 mm	🗹 Tiling e	House-of-tones-White-ST	L		White	0 mm
	Delete Move up love down	Horizontal From Botto	~ m ~					Redra	W
	E	Black						ОК	Cancel

Finally, we need to save the new tiling style under the *Tubadzin* name.

• Click on the Style name button (1).

Tiling			Styles				
Index	Displaye	Height	Elevation	Visibility	Tiles		
5	🗹 On	1000 mm	2603 mm	Tiling e	House-of-Tones-White A	L	
4	🗹 On	1650 mm	953 mm	🗹 Tiling e	House-of-Tones-White A	L	
3	🗹 On	23 mm	930 mm	🗹 Tiling e	steel-gold-pol-898x23_0	L	
2	🗹 On	330 mm	600 mm	🗹 Tiling e	House-of-tones-White 89	L	
1	🗹 On	600 mm	0 mm	🗹 Tiling e	House-of-tones-White-ST	L	
Ins	sertnew	Horizontal	~			[
I	Delete	From Botto	m ~				
Μ	love up]					
Mo	ve down]	New 2				
	1			Activate Modify			
	E	llack				[Rename Delete

• Click on the New button.(2)

- Type in the name of the new style: "Tubadzin".
- Select the Available in all projects option, so that we can use it in other projects as well.

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Styles		×
New name of style		
Tubadzin		~
Folder		
		~
Subfolder		
		~
Folder and subfolder specification is not mandato If you specify these, the given style name will au	ory. utomatically fit into the hiera	rchy.
Scope		
O Available in this project only		
Available in all projects		
	OV	Concel

Your screen should look as the following:

1	Tiling										Styles	×
					Black							
	Index	Displaye	Height	Elevation	Visibility	Tiles	Placement from	Tile grout	Thickness of backgro	L	Classic	
	5	🗹 On	1000 mm	2603 mm	Tiling e	House-of-Tones-White A	L V	White	0 mm	-		
	4	🗸 On	1650 mm	953 mm	🗹 Tiling e	House-of-Tones-White A	L	White	0 mm			
	3	🗹 On	23 mm	930 mm	🗹 Tiling e	steel-gold-pol-898x23_0	L	White	0 mm			
	2	🗸 On	330 mm	600 mm	🗹 Tiling e	House-of-tones-White 89	L	White	0 mm	-		
	1	🗹 On	600 mm	0 mm	🗹 Tiling e	House-of-tones-White-ST	L	White	0 mm			
										_		
	Ins	sert new	Horizontal	~				Redr	aw	L		
		Delete	From Botto	om v						1		
	M	love up										
	Mo	ve down]							1	New	
					[Activate	Modify
	Tubadzin OK Cancel									Rename	Delete	

• Click on the OK button.

3.5. Placing Tiling Style in 3D

The created Tiling style can be placed on the walls with a few clicks.

- Right click on the wall in the back in the 3D window.
- Choose the Delete All Tiling command.



• Right click on one of the bare walls, and select the Tiling / Select place tiling style / All walls command.



• In the appearing dialogue you need to make sure that the style Tubadzin is activated, and accept with OK.



3.6. Modifying the tiling on the floor

Let's create a more exciting final picture by shifting the floor tiles.

• Click on the floor with right mouse button and select the Edit tiles option.



- Select the middle-left reference point for the tile (1). We will place the tiling with the selected reference point.
- The orientation should remain original. (2)
- Set the row shift to 200 mm. (3, 4)



Tiling properties			2
Tiling pattern Rectangle V	() Whole area	◯ Given row/column	Update
Width: 598 mm Height: 598 mm Random rotation of tiles Material: House-of-tones-White-S	Distribution Tile grout Orientation	2 mm 2 Original: ~	
1 6 13	Column shift (Dy)	• • • • • • • • • • • • • • • • • • •	
shs	Path resolution Path finding: Sort:	□ ₩	
Compute tipping angle Thickness: 5 mm			
Grout depth: 5 mm Tipping angle 0° Minimum patie to display the whole 100 %	Background area Thickness:	2 mm	
tile (95-100%)	Material:	Bronze	OK Cancel

Place the first point in the same corner point we used for the first time, then place the second point, which defines the rotation, hit ENTER so the tiling will be placed horizontally.



Tiling the slab under the bath tub - Optional

We have not tiled the slab under the bath tub. Select the "Bathroom_3" view to do so.

• Tile the slab as we did it before.

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Pay attention that the reference point of the tile should be in the upper left corner point. The orientation should remain original. When placing it, you can adjust the reference point to the corner point of the tile on the previously tiled slab so the grouts will be continuous, even though the second slab is 120 mm higher.





3.7. Mosaic tiling

In the next step we are going to create the Mosaic tiling on the wall behind the shower. The mosaic consists of 50 mm hexagon tiles. It has four colors and they are distributed evenly to the 2600 mm height. Above white painting. For this, we will also create a tiling style.

- Let's find the "Bathroom_6" view with the help of the blue arrows, from where we see the wall behind the shower clearly.
- Right click on the wall behind the shower and select the Change tiling style option.



• The Tiling style dialogue appears with the Tubadzin style.

Tiling									x				
				Total: 3603 mm									
Index	Displaye	Height	Elevation	Visibility	Tiles	Placeme	ent from	Tile grout	Thickness of backgro				
5	🗹 On	1000 mm	2603 mm	Tiling e	House-of-Tones-Whit	L	~	White	0 mm				
4	🗹 On	1650 mm	953 mm	🗹 Tiling e	House-of-Tones-White	L		White	0 mm				
3	🗹 On	23 mm	930 mm	🗹 Tiling e	steel-gold-pol-898x23_0	L		White	0 mm				
2	🗹 On	330 mm	600 mm	🗹 Tiling e	House-of-tones-White	L		White	0 mm				
1	🗸 On	600 mm	0 mm	🗹 Tiling e	House-of-tones-White	L		White	0 mm				
		-											
Ins	sert new	Horizontal	\sim	-					Redraw				
	Delete	From Botto	m v										
Mo	iove up ive down]											
	Tul	oadzin						ОК	Cancel				

- Delete the row from 2 to 5. Rewrite the height to 2600 mm.
- Click on the tile name. We will set the mosaic tiling here.

Tiling	9											2
					Total: 2600 mm							
Ind	ex	Displaye	Height	Elevation	Visibility	Tiles	Placement	from	Tile grout	Thickne	ss of backgro	o
1		🗹 On	2600 mm	0 mm	🗹 Tiling e	House-of-tones-Whit	L	\sim	White	0 mm		
	Inse	ertnew	Horizontal	~	r.		l			Redraw		
	D	elete	From Botto	n v								
	Ma											
	PIC	we up										
	Mov	e down										
		Tub	adzin						ОК		Ca	ancel

In the Tiling properties dialogue select the mosaic tiling. ٠

Tiling properties
Tiling pattern
Rectangle 🗸
Rectangle Built-in patterns
Mosaic tiling
Use profile Select object Tiling pattern
Random rotation of tiles

						×
Refresh preview						
e materials:	Apply	Lock	Fill rate:		Dimensions	
Blue glass matt 02	🗹 Yes	Yes	25		Hexagon size:	50 mm
Integrally_Light_Grey_S	√ Yes	Yes	25			
House-of-tones-White {		Yes	25			
House-of-Tones-White		Ves	25			
			Equal ratios			
			Г	ОК	Cancel	
	Refresh preview materials: Blue glass matt 02 Integrally_Light_Grey_S House-of-tones-White { House-of-Tones-White	Refresh preview materials: Apply Blue glass matt 02 Yes Integrally_Light_Grey_s Yes House-of-tones-White i House-of-Tones-White i	Refresh preview materials: Apply Lock Blue glass matt 02 Yes Yes Integrally_Light_Grey_S Yes Yes House-of-tones-White Yes Yes House-of-Tones-White Yes	Refresh preview materials: Apply Lock Fill rate: Blue glass matt 02 Yes Yes 25 Integrally_Light_Grey_1 Yes Yes 25 House-of-tones-White Yes 25 House-of-Tones-White Yes 25 Equal ratios	Refresh preview materials: Apply Lock Blue glass matt 02 Yes Yes 25 Integrally_Light_Grey_ Yes Yes Yes Yes Yes 25 House-of-Tones-White Yes Yes Equal ratios OK	Refresh preview materials: Apply Lock Fill rate: Blue glass matt 02 Yes Yes 25 Integrally_Light_Grey_5 Yes Yes 25 House-of-tones-White (Yes Yes 25 House-of-Tones-White (Yes Yes 25 Equal ratios

- The mosaic pattern should be Mosaic tiling with hexagons. •
- Select the elements of the mosaic: House-of-tones-White A 898x328, House-of-tones-White 898x328, Integrally_Light_Grey, Blue glass matt 02
- Hit OK. Then OK again.

The new tiling style is ready. Let's save it under the name of Tubadzin_mosaic.

Click on the button with the Tubadzin button. Then the New button and give the name: Tubadzin_mosaic, then hit OK. ٠



Tiling											× Styles	-		-	×	
				Total: 2600 mm						Styles	1					
Inde	Displaye	Height	Elevation	Visibility	Tiles	Placement fro	m	Tile grout	Thickness of	Styles .	C.1.1.					^
1	🗹 On	2600 mm	0 mm	🗹 Tiling e	House-of-tones-Whit	L	\sim	White	0 mm	Tubadzin r	nosaic					~
										Folder						
																~
										Subfolder						
																~
										Folder and s	subfolder speci	fication	is not mandato	ry. Itomatically fit int	o the hierar	chy
	nsert new	Horizontal	~	L N					Redraw	in you speci	ry alese, ale g	processo;	ic name viir da	contracting include	o and mercan	ury.
	Delete	From Bott	om 🗸							Scope						
	Move up									Availab	le in this proje	ct only				
										Availab	ole in all projec	ts				
	love down														~	Consul
											_			0	R.	Cancer
	Tul	adzin						ОК		Cancel		Renar	ne	Delete		
															11	
Tiling													Styles			x
	,			Total: 260	0 mm							-				
Ind	ev Displaye	Height	Elevati	on Visibility	Tiles	Plac	ement f	from 1	File grout	Thickness of h	ackoro		Black	k sic		
. 1		2600 mr	n 0 mm	Tiling e	House-of-tones-	Whit	cincinci		White) mm	dengro		Tuba	adzin		
														keramia adzin mosaic		
														-		
	Insert new	Horizo	intal	\sim					Red	aw						
	Delete	From 8	Bottom	~												
	Move up															
	Maria dani					14 1										
	Move down												Ne	2W		
							_ Activate				N	lodify				
	Tub	adzin_mosaio	:			-			ОК		Cancel		Ren	ame	D	elete

After hitting OK, the first random mosaic tiling appears on the wall.



Each click displays another variation. This can be repeated until the desired allocation is obtained. Enter.

Later on, we can have other random variations if we drag and drop the *Tubadzin_mosaic* tiling style to the mosaic wall.

- Click on the Interior menu Tiling command. The tiling styles will appear on the left.
- Drag and drop the *Tubadzin_mozaic* tiling style to the mosaic wall.



After every click a new variation will appear. This can be repeated until we get the desired layout.

3.8. Mixing tiles - Optional

When tiling the tiler often mix the same tiles in the tiling pattern. By doing so the tiles are randomly rotated and the result will be more natural.

Let's see an example. Change the House-of-tones-White A 898x328 tiles behind the bath tub to Calacatta marble.

- Choose the "Bath 3" perspective view and approach the wall.
- Drag the Calacatta material from the Design Center to the wall, selecting the Place as Tiling option.
- Click on a tile.





We get this regular result.

٠

Click on the tile with right mouse button and select the Edit tiles option.



• In the Tiling properties dialogue turn on the Random rotation of tiles option.

1	Filing properties	
	Tiling pattern	
	Rectangle	
	Width:	400 mm
	Height:	400 mm

•	After hitting the OK but	ton, place the ti	iles starting from	the lower left corner
		,		

Calacatta

We get this random result.

Random rotation of tiles

Material:



 \sim

If we drag and drop the Calacatta material form the Design Center to the wall again, we will get a different result with each click. We can do it over and over again until we get the desired result.





Let's restore the original tiles:

- Click on the tiles with right mouse button, the select the Change tiling style option. •
- Select the Tubadzin style then OK. •

3.9. Placing mirrors as tiling

We will place a mirror above the washbasins to the left side of the door, and another one above the dressing table opposite of the shower.

Mirror above the washbasins 3.9.1.

Create a wall layout

- Activate the 2D layout. •
- Click on the Ribbon bar / Interior / Tiling / Tiling in 2D command.
- When the dialogue opens, choose the "Tiling on wall side" option. •





Now, click on the internal side of the wall on the 2D plan (1) (which needs to be modified) and place the tiling layout somewhere close to the actual floor plan (2).
"Tiling on the layout" command can be found in 3D window, right click on the wall and choose it from the appearing *"Tiling on the layout"* menu. As the result, the program automatically will take us back to the floor plan, and now we can position the layout to the right place with one click.



2

• Choose the Add new (3) option from the drop-down Ribbon bar. And the Rectangle option.



- According to the image above (4), draw the rectangle with its opposite corner points, which is 2x4 tile in this case. ENTER
- From the appearing material library select the White material, which is the material of the grout.
- Click on the Add tiles command on the Ribbon Bar. Then select the previously created new area, because we will place a mirror on this.

In the Tiling properties dialogue select the "Mirror 03" material and set its dimensions: 1800 x 1320 mm. Then change the settings to one column, one row because we will place the mirror in one piece.

Tiling pattern			
Rectangular	~	○ Whole area	Given row/column
		Columns:	1
Tile width	1800 mm	Rows:	1
Tile height	1320 mm	Distribution	
Random rotation of tiles		Grout material	2 mm
Material:	Mirror 03	Vertical tile grout:	2 mm
		Orientation	Original: ~
		Shift:	
Mirror 03	φ		
₫ ²	⊡ d¹ ³		
l (40)	<u></u>		



• Close the dialogue by pressing OK and place the first point of orange mirror on the new area. Then set its angle of rotation by defining the second point. Place the mirror horizontally. You can do so by pressing ENTER.

Closing the Tiling command

Close the Tiling command by pressing ENTER. ENTER has two meanings:

- Closes the command and keeps the layout or
- Closes the command and deletes the layout.

Depending on which mode did we choose in the *Tiling – Editor* menu. When running ARCHLine.XP the program remembers to these settings.



• Select the Finish option. This will keep the layout.



3.9.2. Mirror above the dressing table

The second mirror will be placed above the dressing table opposite to the shower. To do this you do not need a new layout, you can work on your existing one. This mirror will be created with the same method as the previous one. You can start the Tiling command from the layout.

• Right click on the layout and select Continue tiling.



- Select Add new command from the Ribbon bar. Then the Rectangle option.
- Draw the rectangle according to the image below (1). ENTER.



- From the appearing material library select the White material, which is the material of the grout.
- Click on the Add tiles command on the Ribbon Bar. Then select the previously created new area, because we will place a
 mirror on this.
- In the Tiling properties dialogue select the "Mirror 03" material and set its dimensions: 1960 x 1320 mm. Then change the settings to 1 column, 1 row because we will place the mirror in one piece.
- Close the dialogue by pressing OK and place the first point of orange mirror on the new area. Then set its angle of rotation
 by defining the second point. Place the mirror horizontally. You can do so by pressing ENTER.





3.10. Deleting tiles on the layout

In order to have a right consignation at the end we need to delete the tiles behind the parapet wall of the toilets. To simplify it, we will only delete the whole tiles in this example.

- Activate the 3D window and select the "Bathrooom_5" view.
- Click on the wall behind the toilet with right mouse button and select the Tiling on the layout command.
- The program activates the 2D window. Place the layout so that the corner points align to the vertical projection of the wall corners. (1). Enter.
- Draw the two vertical lines symbolizing the parapet wall (2) so we will be able to determine the whole tiles behind the parapet wall.
- Right click on the layout, and select the Continue tiling option.



• Click on the Delete button on the Ribbon Bar.





• Select the tiles to delete. Enter.



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3.11. Tiling Layouts

We can easily create tiling distributions if we place the tiling layouts of the walls and the floor on the floor plan. The tiling layouts can be dimensioned.

We can start the command:

- From the 2D window using Ribbon Bar / Interior / Tiling / Tiling in 2D command or
- The 3D window by clicking on the wall or floor with right mouse button and selecting the *Tiling on the layout* command.

We can place the layout anywhere; we can move them later. In the case of the slab, if we press ENTER, the layout will be placed exactly on the slab. Use the dimensioning commands to dimension the layouts. Use generated the following tiling layouts. It is advised to turn off the *Bathroom* layers.





3.12. Wall elevation view

The tiling layout offers you a line drawing visualization of the tiles. If you need a colored visualization of the tiling, we suggest you to use the wall elevation view.

- Activate the floor plan window.
- Click on the Ribbon bar / Documentation / Wall elevation / Settings command.

	-		┤ ┐ ₊ ⁺ ऱ	Edit	View Bu	uilding	Interior	Drafting	Ar	nnotate	Documentation
	E H		1		Ą	→B	Ó			125	хI
	Wall	view	Callout	Numbering	Drawing o	comparisor •	n Snapsh	ot Scher	dule	Tags	Quantity take-off
_	ł۲	Setting	js			Docu	mentation				
ľ		Cinela					- 1:10	• 00	- 1:1	00	-
Ę	-Tio	single	wall view		(-250 mm) *	View 2 [l	Image] *	+			
		Room	with all wall	views			Floor pla	an Grou	nd flo	or (-250 r	mm) *
	0	Updat	e all wall vie	ws							

- Here you set the Image representation mode and the Realistic with edges visual style.
- Turn off the Create dimensions for cabinets option.

Parameters	Value	
General		
Layer	00_Fólia 0	~
Draw Order	8- Bottom-most	~
Representation in 3D	········	
If section upper and lower limit options are turned off, the elements on the le	evel will be displayed at full height, regardless of	level h
Section upper limit (>0: meaning from the top of the level upwards)	0 mm	
Section lower limit (>0: down from the bottom of the level)	0 mm	
Show objects in front of wall. Region width:	0 mm	
Enable grid lines		
Hatch on section	\checkmark	
Item types for applying section Line weight	Edit	
Section Line weight	0.03 mm	
Display Options		
Representation mode	Image	\sim
Visual Style	Realistic (with edges)	~
Snapshot / Wallview resolution	2048	~
Snapshot / Wall view file format	.jpg	~
Types to colour/shadow	Edit	
Other parameters		
Create dimensions for cabinets		
Opening direction symbol properties	Edit	
Cabinet Door	Closed	~
Horizontal dimension style	Bearing and length from North	\sim
Vertical dimension style		
Length dimension	Bearing and length from North	~
Elevation on section	Szintméretezés	<u> </u>
Symbol visible at wall	Wall marker symbol	
. Cymbol visible at elevation view	View marker symbol	
Skip cutting objects above complexity		

- Start the Ribbon bar / Documentation / Wall view / Single wall view command.
- Click on the internal part of the wall. (2)
- Move the orange arrow and click on the desired point (3). A blue rectangle will appear, indicating the area to be displayed by the wall view. Enter.
- The wall view is ready. Move it to the desired place in the project.

- Repeat the previous method for all walls.
- Use the dimension command to measure them.





3.13. Tiling consignation

In the next example we show how to create *Tiling consignation* which is a list of the total number of tiles used in the project.

The tiling consignation is a quantity take off report which helps you to order the required quantities from the manufacturers.



• Click on the Ribbon bar / Documentation / Quantity take-off / Excel list command than choose Tiling option.

Make Excel report x
Building calculation
H Interior Calculation
Tiling
m² Rooms
* Terrain calculation
List by manufacturers

• In the appearing "Dimension, consignment" window click on OK.

Dimension, consignment		×
Options Walls		
 ✓ Rooms ✓ Roofs 		
☑ Other		
Element type	OK	Cancel

Name the Excel file.

An Excel file opens, in which all tiles are listed by type, size, the area they cover, total number of pieces, number of full tiles and fragments.

	А	В	С	D	E	F	G	н	1
1	Tile summarv								
2									
3	Image	Name of the product *	Producer	Size [mm]	Area [m2]	Total (pc)	Full/Part/Fragment	Price	Value
4		House-of-tones-White-STR 598x598	tubadzin	598x598	45.83	165	(94/32/39)	0	
5									
6									
7									
8									
9		House-of-tones-White 898x328	tubadzin	898x328	8.61	40	(24/3/13)	0	
10									
11									
12									
13									
14		steel-gold-pol-898x23_0	Tubadzin	898x23	0.6	40	(24/3/13)	0	
15									
16									
17									
18									
19	14	House-of-Tones-White A 898x.328	tubadzin	328x898	33.58	163	(87/16/60)	0	
20	74								
21	1.7.								
22									
23									
24		Blue glass matt 02	generic	598x598	0.55	318	(281/2/35)	0	
25									
26									
27									
28									
29		Integrally_Light_Grey_STR_32_8x89_8_csemp	tubadzin	598x598	0.56	315	(293/4/18)	0	
30									
31									
32									
33									
34		House-of-tones-White 898x328	tubadzin	598x598	0.54	315	(280/2/33)	0	

Renderings





Workshop 4: Kitchen Design



4. Workshop 4: Kitchen Design

During this workshop you can learn how to use the Kitchen and Cabinet design tool through the steps of a typical kitchen design. Using these new design techniques, you will get instant impressive results! Provides a modern, fast, pleasant solution for all designers.

- Kitchen and Cabinet design tool helps to create and modify bottom and top cabinets quickly.
- The countertop can be easily created including a cut-out sink and hob.
- Accessories can be downloaded from Trimble 3D Warehouse® make the kitchen feel homey.

As an example, we will be using Andrea Nagy's completed kitchen project. The goal will be to come up with the same result as shown in the example.

Open your web browser and watch the video of creating this kitchen: https://www.archlinexp.com/enrollments/courses/preliminary-course/kitchen-design/1



4.1. Open and Save the Project

If you have not downloaded the <u>Preliminary Course - Workshop Projects</u> yet, please download it from the website and install it. It includes all project for all preliminary workshops.

Open project

- Start ARCHLine.XP® Professional.
- Click on the Open Project:
- and choose the:
 - ...\Documents\ARCHLine.XP Draw\2024\Workshop_Preliminary\4_Kitchen_design\ 1_Nagy_Andrea_Kitchen_workshop_Start

Save project as ...

Before starting to design it is recommended to save your project with another project name. This way we can avoid to overwrite the original one.

- Clicking on the File menu / Save project as command.
- Click on the **Save** button and give another name.

Furniture Library

You will find the furniture to be used in this project here: Design center: Objects \ Kitchen.

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4.2. Base cabinets

The location of the base cabinets is marked with orange lines on the floor plan:



4.2.1. Creating base cabinet

• Click on the Ribbon bar / Interior / KBB / Cabinet icon.

C	Interior	Drafting An	notate	Documentation	MEP				Search	Q	N
	$\langle \rangle$		₩	ol [®]					-		
ng	Sweep	Soft furnishing	Lighting T	Lighting Plan	Electric	al accessory	KBB	Smart Objects	Sketch Mode		
	Decor	ation		Lightin	g		Cabin	iet			*
	- 1:1	00 - 1:1	-	All layers	•	Click to select		EB A			
[In	nage]	+							Ē	+	Ŧ
	Hoor	plan Ground fl	oor (0 mm)					Cabinet			٦
								Cabinet door			
							Ð	Countertop			ŀ
							P	KBB plinth			ŀ

Setting the global properties



Set the *depth* to 550 mm and the width to 600 mm. Set *Carcass height* to 760 mm and lock it by pressing the button. Decrease *Space for legs* to 100 mm. The program calculates the total height.

Cabinet	
	© Bottom G Front © Core © Core © Top
Width Total height Unit type 600 mm 860 mm Base unit Depth Carcass height 760 mm 550 mm Space for legs 100 mm	Closed Sightly open fronts
Sizes	Automatic refresh on page OK Cancel

General unit door properties page

Select the "Anthracite panel" cabinet door family.

	🖉 🎯 💓 🔛 🕢 🖬	€ 🔁	A 2
Default door front and handle selection. You can also apply custom drawers, shelves and legs.	400 nun 700 nun 790 grid soli grig soli corpus e panel Anthracit Anthracit Artesia Ash front Basic decor pi	Basic Beech il decor pil corpus p	+ \$ @ /
	Rotate X Rotate Y Rotate Z 0° ✓ 0° ✓		
General unit door properties	Automatic refresh on page	Э ок	Cancel

Select the "Bar handle simple 120" handle.

I ₽		6666			¢	A A
	Default door front and handle selection. You can also apply custom drawers, shelves and legs.	Bedford shelf dad	Debba_c Debba_c Gilmore abinet_h abinet_h TV leg	Handle 6790 e handle handle si	 ★ ↓ ↓	Offset left/right (red) Imm Imm Offset front/back (green) Imm Imm Imm Offset down/up (blue) Imm
Gene	Hide handles	Rotate X	Rotate Y Rotate	Z		
					•	



Default side properties

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Select the Default side properties tab and select Side corpus panel side panel.

	e	6								+∎+ ₫	R) (51	RR
Default side panel. You can apply sides separately on the 'Custom side properties' page.	Egzot top corp	feher lakk 1	hhh	Ivory leader 2	Metal side pan	panel	panel	Rustic side corp	Side Corpus A	Side Corpus A	Side Corpus P	
Default side properties	Rotate X	~	Rotate 0°	Y ~	Rotate 0°	z V A	Mir	ror resh on page	C	>	ок	Cancel

On the *Back*-tab switch "Use side panel settings for back panels" off and select "Back corpus panel" as the default back panel.

Image: Default side panel. You can apply sides separately on the 'Custom side properties' page. Image: Back Back Back Corpus P Image: Default side panel settings for back panels Image: Back Back Corpus P Image: Default side panel settings for back panels Rustic Uveg Side top corp front Corpus P Image: Default side panel settings for back panels Rotate X Rotate Y Image: Default side panel settings for back panels Image: Default side panel settings for back panels Rotate Y Image: Default side panel settings for back panels Image: Default side panel settings for back panels Rotate Y Rotate Y Image: Default side panel settings for back panels Image: Default side panel settings for back panels Rotate Y Rotate Z		🦉 🌍 🥙 🖗 🕢 🖬	A R
ipanels Rotate X Rotate Y Rotate Z 0° 0° 0° 0°	Default side panel. You can apply sides separately on the 'Custom side properties' page.	Back Back Wr Corpus P top corp front Corpus P	 ★ ★ ★ ★
	panels	Rotate X Rotate Y Rotate Z 0° 0° 0°	

On the Top tab switch "Apply side panel properties for top panels" off and select "Top corpus panel".

	🦉 🎯 💓 🔛 🕗 🖬	+ i +	A R
Default side panel. You can apply sides separately on the 'Custom side properties' page.	Ebon Egzot Sink Side horizont top corp Corpus P Corpus F Corpus P		
panels	Rotate X Rotate Y Rotate Z 0° 0° 0° 0° Mirror		
Default side properties	Automatic refresh on page	ОК	Cancel

Add items - local settings

P Doors page

First add a new default door by pressing the 🛃 button, which opens to the right side and fully overlays the cabinet.

			8	₽_				↓ ∂ ≥	A 2
Left or Right	Flip up de	Flip own Fix	2, 3 or 4 sided	Sliding	Multiple side	Bifold	Full Overlay Full Overlay Left Right Opening (%)	100	
									~
Doors							Automatic refresh on page	ОК	Cancel

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On the next tab don't change anything, we use the previously set anthracite front panel.

Ī <u> </u>	1		6	e	(ϕ)							••••	Rð (51	RR
		Apply the default	400 nun grid soli	700 nun grig soli	790 corpus d	anthracit e panel	Anthracit e_Gey	Anthracit e_Gey	Artesia solid fam	Ash front	Basic decor pil	Basic decor pil	Beech corpus p	+ \$
Doors			Rotate X 0°	~	Rotate Y 0°		Rotate 2 0°	2 V Aut	Mirror	esh on page	Ð	0	К	Cancel

Go to the *Handle* tab. Here we use the same handle as in the global setting, but we change its placement and size: Turn on the *Use custom position* option and move the handle to the top of the door panel. Also select the *Stretched* option.

Cabinet		
		 i Bottom i Front i Door - Left or Right i Core i Back i Core i Top
19 o o o o o	S S S S S S S S S S S S S S S S S S S	🕂 🗗 💆 🖗 🔒 🔎
 Apply the default Use original handle Hide object Use custom position O O Stretched 	Bedford dad Debba_c Debba_c Gilmore Handle Frectangi Bar handle si Bar handle si Rotate X Rotate Y Rotate Z O° Mirror	Offset left/right (red)
Doors	☑ Automatic refresh on page	OK Cancel

General settings

At the "Representation in 2D" select the "With closed doors" option.



Relative elevation 0 mm Absolute elevation 0 mm	Beltér - Konyha - Bútorozás v 🕄 8 - Bottom-r v	Representation in 2D With closed doors Simplified With closed doors With opened doors Symbol Top View	
General settings		Automatic refresh on page	OK Cancel

B

Save page

Click on "Save as" command and save the base cabinet under "KITCHEN" category, and "Base Cabinets" sub-category named "Anthracite base cabinet 1".

Cabinet	
	 Bottom Front Core Back Core Top
Create new item in the library	×
Name of the new item in the library:	
Anthracite base cabinet 1	×
Category:	
KITCHEN	~
Sub category: Base Cabinets	~
Producer:	
generic	~
BIM parameters OK	Cancel
Save the current item into the library, or select a new one to edit	_
1 door 2 door 2 door 2 door 2 door 2 front + 3 door 600 1 600 2 Anthracit Anthracit Anthracit 1 door 2 door 2 door 2 door 2 drawer 2 front + 3 door 600 1 600 2 Anthracit Anthracit Anthracit Anthracit curved b curved cl curved cl curved w 1 door b 4 drawer curved hi door hor built in a base cab base cab base cab base cab	Save as
Description	Restore default from:
Save Automatic refresh on page	OK Cancel

Finally close the window by pressing the OK button.

Place 5 copies of the cabinet onto the drawing next to each other, starting from the top-left corner of the room. While placing items the software pulls them to the wall and next to each other. The pre-drawn orange lines also help with placement.



Select the 3D window and choose the "Kitchen_2" view. We will convert the No. 1 base cabinet into a corner cabinet:



The corpus window appears.

Sizes tab

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Change the width of the element to 1200 mm, then on the right side select the Front - Door - Left or Right option.

You can also select the Door settings by pressing Alt while clicking on the door.





Dividers tab

On the dividers tab select the "Single vertical" divider and set it to "Only division". Set the left side distance to 600 mm, then place it by pressing the solution.



We divided the front of the cabinet into two sections. We will place a non-opening door on the left side and an opening door on the right side: In the preview, click on the right button in the empty zone.



When the door is ready, select the *Handle* tab and activate the Use custom position. Place the handle on the top center part of the door and stretch it.

1/1 Bedford Debba c Debba c Gilmore Handle rectangl Bar	Offset left/right (red)
Image: Second stress Image: Second stress </th <th>Offset tront/back (green)</th>	Offset tront/back (green)
Doors Rotate X Rotate Y Rotate Z 0° 0° 0° 0°	OK Cancel

On the cabinet preview click on the left side button.



Select the Fix door and place it by pressing the solution.



R	6			66	8 🖉 [⋪>					¢ ∎ ↓	6 6	RR
	Left or Right	Flip up	Flip down	Fix	2, 3 or 4 sided	Sliding	Multiple side	Bifold		 Full Overlay Traditional 			
Doors									Automatic	refresh on page	Ð	ОК	Cancel

Save tab

Click on the Save as button and save this new cabinet in the *KITCHEN* category, Base Cabinets subcategory named *Anthracite corner base cabinet*. OK.

Cabinet		
		Bottom Front Front Divider - Single vertical Door - Fix Door - Left or Right Core Back Core
	Create new item in the library	× .
	Name of the new item in the library:	
	Anthracite corner base cabinet	✓
	Category:	
	KITCHEN	~
	Sub category: Base Cabinets	
	Producer:	
	generic	~
	BIM parameters OK	Cancel
		÷ 🗗 🅫 🍳 🗛 🔎
Save the current item into the library, or select a new one to edit		
2 door 2 door 2 drawer 2 front + 3 door 600 1 600 2 A	Anthracit Anthracit Anthracit Anthracit Anthracit	Save
Description		Restore default from:
Save	Automatic refresh on page	OK Cancel

Close the window by clicking on OK.



4.2.3. Placing the oven

In the No. 3 cabinet place the oven with a drawer under it.

Select the No. 3 cabinet and click on the properties button. The corpus window appears. With Alt + left click select the door and delete it.

Divider tab – placing a shelf

Select the *Single horizontal* divider and click on the *Shelf* option. Set the Right side distance to 150 mm and place it by clicking on the *solution*.

		÷ 8 % % & &
Single borizont Shelf Only division	78% 556 mm 150 mm Ali From unit top: 574 mm 168 mm	Divide on front Divide on front Divide on front Divide on front Custom offset O mm
Dividers	Automatic refresh on page	OK Cancel
On the cabinet preview click on the lower Select the Drawers tab and place a single of On the Handle tab hide the handle.	button. drawer with a front by pressing the 🛃 bu	itton.
Image: Single with from with sing	Apply the default	
Drawers	Drawers	



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Place the oven by pressing the statement button. Switch on the Use original item size option and change the offset values (as in the picture below) to fit exactly the oven into the cabinet.



Save tab

Click on the Save as button and save it in the Kitchen category, Base Cabinets subcategory with the name "Anthracite base cabinet with oven".

Close the window by clicking on OK.

4.2.4. Drawer cabinet

Now we will modify the No. 4 cabinet to a drawer cabinet.

• Select the cabinet and click on the properties:



• Select the door: ALT + Click on it (or turn to the Toors page). Delete the selected door clicking on the marker.



170	Workshop 4: Kitchen design		
			- ‡ - ₿ \$ \$ \$ £ £
	1/1 Left or Right Flip up Hip down Fix 2, 3 or 4 Sliding Multiple Bit	Image: Second system Image: Second system Image: Second	100
	Doors	Automatic refresh on page	OK Cancel
•	On the drawer page select the option "Multiple with single f drawers by pressing the button.	ront", set the number of draw	ers to 3, finally insert the
	14 o s o s o s s s s s s s s s s s s s s		- → 🗗 🎽 🖗 😣
	Image: Single Multiple Single Multiple Multiple	Full Overlay Traditional	Iumber of items 📴 🗸 🗳 Distance 241 mm 🗸 🗳 First distance 241 mm 🗸 🗳
		Opening (%)	Last distance 241 mm ✓ ▲ Way of By number of ele ✓
	Drawers	Automatic refresh on page	OK Cancel

- On the Handle tab, turn on the Use custom position option, and reposition the handle by stretching it over the top of the door panel.
- tab and select the "Totally open" option in the 3D representation window, To view the drawers, click on the Sizes • then set it back to "Closed" for placement.



Save tab

Click on Save as command and save the base cabinet under Kitchen category, and "Base Cabinets" subcategory named "Anthracite base cabinet with hidden drawers".

4.2.5. Wide drawer cabinet

On the left-hand side wall place 3 base cabinets with white fronts. The first cabinet in the corner has drawers.

Click on the Ribbon bar / Interior / KBB / Cabinet icon. •

Save tab – load the previously saved hidden drawer cabinet. Į

Sizes tab - Set the width to 900 mm.

Select the drawer: ALT+Click the drawer (or turn to the Drawers page). Change the type of the drawer to Multiple ٠ with front and set the height of the lowest drawer to 400 mm.

Cabinet		×
		Front Toron Core Back Core Top
I II		4 0 0 0 A A
1/1 Single Multiple Single Multiple	Full Overlay	Number of items 3 V a Distance 162 mm V 2 First distance 162 mm V 2
with from with sing	Opening (%)	Last distance 400 mm Vay of By number of ele V
Drawers	100	OK Cancel

Save tab

Click the Save As button and save the item to the Kitchen category, then to the Base Cabinet subcategory as Anthracite Base Cabinet with Drawer.

Close the dialogue and place the wide drawer cabinet onto the wall on the left side, next to the corner cabinet. Move the • cabinet 50 mm downwards, making space for opening the doors and drawers. You can move it to the orange line too.



Open the Objects / Kitchen / Base cabinets category in the Design center. Write the word "anthracite" in the search bar. Drag and drop the Anthracite base cabinet 1 on the two remaining places marked by orange lines.





4.3. Creating new front panel

Create a 20 mm thick matte white front panel, and change the existing (Antracite) ones with it.

• Click on the Ribbon bar / Interior / KBB / Cabinet door option.



Set the thickness to 20 mm.

Click on the Front material tab and select the Matte white 2 material.

			RR
	antracit White White szurke plastic plastic 2 White Wood- paldao Beech		+ /
Material direction	0° V Automatic refresh on page	ОК	Cancel

Save tab – Click on the Save as button and save this item to the Kitchen category, Cabinet doors subcategory with the name *WS matte white front*.

Click on OK to close the window.

Don't place the front door, only press Enter.



Create new item in the library		
Name of the new item in the library: WS matte white front Category:		
KITCHEN	~	
Cabinet doors	~]
generic	~	
BIM parameters	OK Cancel	

Search the front panel in the **Design center / Objects / Kitchen / Cabinet doors** and drag and drop it on the first cabinet from the left side. Select the *Use as carcass front* option. Repeat it with the other two cabinets on this side.



4.3.1. Dishwasher

Replace the left edge element for a dishwasher:

Open the **Design center / Objects / Kitchen / WS_Kitchen** category. Drag and drop the *White dishwasher* on the outermost cabinet and select the *Replace unit with same dimensions* option in the pop-up menu. Change the front panel of the dishwaswher to WS matte white front.



We need to check that the front of the dishwasher matches the front of the other cabinets.

 Right-click on the cabinet next to the dishwasher and select Find Material. In the Design Center, the material Matte White <u>2</u> will appear. Click on the Gear icon and select the Find Material command.

1	Create similar		_	
	Delete	Design center P >		Floor plan Ground floor (0 mm) *
	Delete	[Cased in all iteraal		
	Phase	[Search in all items] Q Brands		
	Find material	Materials In Model		
	Locate item in Design Center	< <back< th=""><th>6</th><th></th></back<>	6	
	3D Representation		IN	Material properties
	Save >	Matt fehér 2		material properties
	Cabinet exploded view	Previous Next Jump to category	Y	Add to favorites
	Workplane	Tevious Next Jump to category	(Sort in categories
The second se	Hide this object		×	Delete
2	Show on floor plan		•	Export
	Isolate >		Ð	Export to Live
Cabi	Group parameters			Create a copy as a color card
	Luyer		☆	Make a copy
			i	Copy Image
			Q	Find material
	X		Ē	Properties
				Save icon
		Render styles Matte		Element identifier

You can see that the front of the dishwasher is not made of Matt White 2.

 In the Design Centre, in the Objects - Kitchen - Cabinet doors category, select the WS matt white front and drag it onto the dishwasher.



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4.4. Create Countertop

You can set the contour of the countertop two ways: you can select the corpuses or you can draw its back side with a polyline where it connects to the wall. Here we choose the first solution.

• Click on the Ribbon bar / Interior / KBB / Countertop / Countertop by cabinets icon.



• Select the corpora. It is enough to select corpora on the ends and the one in the corner as in the picture: 1, 2, 3. Hit Enter when finished.

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Set the following properties:



Sizes and materials page

The width of the countertop is 600 mm, the thickness is 40 mm. Activate the left side panel and set its height to 900 mm.

Select the *walnut light wood* material. If you can't find the selected material within Favorites then click on icon and find it in the Material Library.





Click on OK to close the window.



On the picture above you can see that the countertop is interfering with the corpus. Extend the countertop with 40 mm.

Select the countertop in 2D view (1). Click on the endpoint (2) then select the Change length option. Pull the cursor downward and type in: 40 mm.



Placing the sink and the hob

Further modifications:

Sink unit tab

Click on the countertop above the dishwasher.

Select the sink called *Kennon one-basin sink*, set the distance from the left side to 940 mm, finally create the sink by pressing the button.

	0														
		88 🗹												Ø	× ₽
		940 mm	1760 mm	15 Roud	15 Rowl	800	Plance D	Classic	1	Konnon	Pound		1	Offs Offs Offs	et left/right (red) 0 mm
<u>)</u>	Jı	Hole distant	ce from s side	sink 760	sink with	Front Sin	alago	kitchen s	K-6437- Kennon	one-basi	sink 450	Bowl sin		offs	0 mm V
		690 mm	1530 mm	Rotate X	~	Rotate Y	~	Rotate Z	~					Mirror	5 mm 🗸 🕨
Sink unit										🗸 Automati	c refresh on	page	Ð	ОК	Cancel

Click on the "Tap" tab , select Cotterman tap and move it to the appropriate position: Offset front/back +10 mm.

		R R 🕫 🕫
□ □ Hide tap	Cotterm an Hendrik- Modern- Tap	Offset left/right (red)
	Rotate X Rotate Y Rotate Z 0° 0° 0°	
Sink unit	✓ Automatic	crefresh on page OK Cancel

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Hob unit tab

Click on the other side of the kitchen furniture. We will place the hob over the oven.

Select "Induction hob 580x510", set the distance from the left side to 1500 mm, Offset front/back +10 mm and then create

the hob by pressing the **Second** button.



Countertop




4.5. Adding Cabinets

4.5.1. Add high cabinets

We are placing the rest of the cabinets from the Design center. These cabinets were made the same way we just created the base cabinets.

- Open the Objects / Kitchen / WS Kitchen category in the Design Center.
- Drag the Anthracite tall cabinet for fridge and drop it next to the last piece on the right side.



- Drag and drop the "Anthracite tall cabinet" (1) and place it in the corner onto the base cabinet. There is already an element here a corner cabinet so the program offers a choice. Select the *Object placement* option from the pop-up menu. The relative height of the cabinet is 900 mm so the tall cabinet will be on the top of the base cabinet.
- Place the "Anthracite wall cabinet" (2) and the "the same way as the tall cabinet.
- Move the last one 20 mm to the right side to be in the center.



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When placing an object, the program automatically monitors their placement, this way we can place them precisely. When an issue occurs, it alerts you: "!".

This function can be switched off with the Place menu / Free option.



The result is the following:



4.5.2. Creating the "box" with countertop

Now we are creating a box around the previously placed cabinet with countertop.



- Open the Interior / KBB / Countertop / Countertop by profile category. Enter the start and endpoints of the piece: (1), (2), Enter. ٠
- •



In the countertop window select the Save tab and select the previously created WS countertop. Now it appears with the already set parameters.



Countertop Ø 10 AP 🔳 👪 🔟 item into the library, or select a new one to edit Save Save as Worktop WS . Duropal countert Description \sim Restore default from: Save Automatic refresh on page Ð ок Cancel

• In the General settings set the relative elevation to 1800 mm:

፻₊₁ 📐 🔲 🛤	2					
Relative elevation						
1800 mm 🗸	Ū			=	0 mm	\sim
Absolute elevation	5	Objektum - Beltér	\sim	<mark>ر</mark> ې	8 - Bottom-r	\sim
1800 mm		Simple Line				

• In the Sizes and materials tab set its width to 570 mm, the thickness to 20 mm and activate the right-side panel.

			d a a
1/1	Width 570 mm V Thickness 20 mm V	Image: Second state of the second s	
	Getter width	Material direction	
Sizes and m	naterials	Automatic refresh on page	OK Cancel

On the Wall strip tab activate the back and select the rectangular profile. Width: 5 mm, height: 920 mm, *settings (gear icon)*: reference point is the upper left corner. Select the Walnut light wood fine material.

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4.6. Edit Plinth

- Select Ribbon bar / Interior / KBB / KBB plinth / KBB plinth by profile.
- Draw the reference line of the plinth: (1, 2, 3), then hit Enter.

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Set the plinth properties:



On the first page set the Section Profile properties - rectangle.

Clicking on the gear icon first set the reference point of the profile which the bottom right corner will be.



Set the width of the rectangle to 20 mm, the height to 100 mm. Material: Aluminium.

Press OK to quit the settings.

Move the plinth 50 mm closer to the walls.

- Select the plinth on the floor plan.
- Now click on "Offset All" command and move it towards the wall by 50 mm.

In case you couldn't follow all the steps, save your progress and load the 4_Nagy_Andrea_Kitchen_workshop_FINAL.pro file. This project contains the finished kitchen.

4.7. Creating the documentation

4.7.1. Creating a scaled wall view of the cabinets

There are two ways to create a wall view: as a raster graphic image or as a vector drawing. The graphic image is faster and more versatile, but the vector drawing is more accurate.

It is possible to display the storage furniture scaled in the wall view. This applies to both the horizontal and vertical directions. Storage furniture can be displayed with or without a front, even in one step, so two wall views are made at the same time. Wall views are assigned to the wall by the linked symbol.

In this example, there are two types of wall views of the created furniture:

- scaled pictorial wall view with front, and
- scaled vector wall view without front.

Scaled wall view with front

- Activate the floor plan
- Click on the Ribbon bar / Documentation / Wall view / Settings option.



C			
`		//	Offset
			Offset all
		占	Insert node
5		r.	Insert Smooth Node
			Turn into curved edge
	Edg	=% =	Delete part



arameters	Value	
& General		
Layer	00_Fólia 0	~
Draw Order	8- Bottom-most	~
Representation in 3D		
If section upper and lower limit options are turned off, the elements on the le	evel will be displayed at full height, regardless	of level h
Section upper limit (>0: meaning from the top of the level upwards)	0 mm	
Section lower limit (>0: down from the bottom of the level)	0 mm	
Show objects in front of wall. Region width:	0 mm	
Enable grid lines		
Hatch on section		
Item types for applying section Line weight	Edit	
Section Line weight	0.03 mm	
Cisplay Options		
Representation mode	Image	~
Visual Style	Consistent colour (with edges)	
Snapshot / Wallview resolution	2048	
Snapshot / Wall view file format	.jpg	
Types to colour/shadow	Edit	
Other parameters		
✓ Create dimensions for cabinets		
Opening direction symbol properties	Edit	
Cabinet Door	Closed	\sim
Horizontal dimension style	Bearing and length from North	\sim
Vertical dimension style		
OLength dimension	Bearing and length from North	~
Elevation on section	Elevation dimension	~
Symbol visible at wall	Wall marker symbol	
Symbol visible at elevation view	View marker symbol	
Skip cutting objects above complexity		
Maximum value of object complexity (number of faces)	100000	

- Turn off Hatch on section.
- Here, set the Representation mode to Image and the Visual Style to Consistent color (with edges).
- Turn on the Create dimensions for cabinets option.
- The Cabinet doors should be closed.
- Turn on Elevation on section for Vertical Dimension style.
- Turn on Symbol displays.
- Start the Ribbon bar / Documentation / Wall view / Single wall view command.
- Click on the side of the wall facing the kitchen furniture (1).
- Move the orange arrow and click on the desired point (2). A blue rectangle appears, indicating the area to be displayed by the wall view. It is advisable to include the full form of the furniture. The boundaries of the enclosure can be further edited as desired. Enter.



- Place the wall view in the desired location.
- Also take a wall view of the kitchen furniture on the other wall. The balcony door is not displayed in the wall view, so change the size of the blue rectangle that appears by clicking on the side below and then selecting the offset.



The resulting wall views are groups. By entering the group from the group local menu, the items in the group can be edited. In the picture, we thus corrected the congested dimension lines. After editing, be sure to close the group.

[0]	Edit group			Draw Order	►
	Scale group		[#]	Close group	
	Draw Order	►		Close one level up	
	Group parameters	•		Group parameters	►
	Layer	►		Layer	►

If you change the plan, the wall views can be updated manually. You can also do this in the wall view local menu:

Group (413) [1/1] >>>
Update wall frontal view
Edit region border of frontal view
Modify and update wall frontal view
Update all wall frontal view
Properties

Scaled vectorial wall view without front panels

 \square

Click on the Ribbon bar / Documentation / Wall view / Settings option.



Parameters	Value		
General			
Layer	00_Fólia 0	\sim	
Draw Order	8- Bottom-most	\sim	
Representation in 3D	······		
If section upper and lower limit options are turned off, the elements on the le	evel will be displayed at full height, regardless of	level h	
Section upper limit (>0: meaning from the top of the level upwards)	0 mm		
Section lower limit (>0: down from the bottom of the level)	0 mm		
Show objects in front of wall. Region width:	0 mm		
Enable grid lines			
Hatch on section			
Item types for applying section Line weight	Edit		
Section Line weight	0.03 mm		
Display Options			
Representation mode	Vector drawing	~	
Visual Style	Hidden line		
Types to colour/shadow	Edit		
Other parameters			
✓ Create dimensions for cabinets			
Opening direction symbol properties	Edit		
Cabinet Door	Without fronts	\sim	
Horizontal dimension style	Bearing and length from North	~	
Vertical dimension style			
OLength dimension	Bearing and length from North	~	
Elevation on section	Elevation dimension	\sim	
Symbol visible at wall	Wall marker symbol		
Symbol visible at elevation view	View marker symbol		

- Here, turn off Hatch on section.
- Set the Representation mode to Vector drawing and the Visual Style to Hidden line.
- Turn on the Create dimensions for cabinets option.
- The Cabinets should be without fronts.
- Turn on Elevation on section for Vertical Dimension style.
- Turn off Symbol displays.

.

Create the wall view based on the previous instructions.



4.7.2. Dimensioning cabinets on the floorplan

• Make the floor plan window active. Select Annotate / Cabinet / Define all.

All cabinets are scaled.

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For better placement, the scales should be moved. To do this, use the Move dimension string command from the Dimensioning local menu.





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4.7.3. Create an Excel list

- Select Documentation / Quantity take-off / Excel list.
- In the window that pops up, select the Interior calculation, then select only the Cabinet from the element types.



Make Excel report ×	Element types ×
Building calculation	Cabinet Cabinet Cabinet Cabinet Countertop Electrical Accessory
片 Interior Calculation	Kitchen Lamps Loft Luminous text Moulding Object
Tiling	Picture on wall Pipe and Duct Smart Object assembly
m² Rooms	
* Terrain calculation	Ignore invisible layers and its items Select elements Export BIM parameters
🔗 List by manufacturers	OK Cancel

- In the pop-up window, save the list to your computer, then open the file.
- In the *Furniture detailed* tab, the program lists the cabinets, the tiles and components that make them up, the number of pieces, the type of cabinets and their dimensions.

Name	Copies	Components	Туре	Width [mm]	Height [mm]	Thickness [mm]	Left edge	Right edge	Bottom edge	Top edge
alapszekreny antracit			Base unit	600	550	860				
		1 anthracite panel		596	756	20				
		1 Sink Corpus Panel		564	18	550				
		4 Simple Circular Leg		40	100	40				
		1 Side Corpus Panel		564	547	18				
		2 Side Corpus Panel		550	760	18				
		1 Side Corpus Panel		564	18	550				
		1 Bar handle simple 120								
		1 Back Corpus Panel		564	724	3				
Unknown			Tall unit	600	550	1640				
		1 anthracite panel		596	713	20				
		1 WS roll-front		596	919	20				
		3 Side Corpus Panel		564	547	18				
		2 Side Corpus Panel		550	1640	18				
		2 Side Corpus Panel		564	550	18				
		1 Bar handle simple 120								
		1 Back Corpus Panel		564	1604	3				
rejtett fiokos			Wall unit	2361	400	400				
		· · · · ·				2.0				

> Project properties Furniture summary Furniture detailed Summary

4.7.4. Cabinet exploded view

• Right-click on one of the cabinets and select the **Cabinet exploded view** option.



• Place the figure on the floor plan. The exploded view is also a group, so you can edit it freely with the Edit group command.



4.7.5. Using the Opening icon

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The opening icon is used to show you the internal structure of the cabinets, making the plans even easier to understand. Activate the 3D window and click on one of the cabinets. Select the Open icon from the markers that appear.





4.8. Display the whole plan

There are some more objects in the project. These are on layers, that are not visible. Switch them on so that all the objects will appear.

- Activate the 2D window. Select the Layer walk option.
- Activate the following layers:



Click on the 3D hammer icon and regenerate the 3D model. On the screen you will see a similar solution:



Activate all the layers. Regenerate the 3D model again. Now you can create renders too:





4.9. LED strip placement - optional

We will convert the upper cabinet to a glass door and install an LED strip.

• Select a glass door from the library to replace the default door of the upper cabinets. You can choose the *Aluminium Frame Modern Glassfront* and then change the frame material. Change the shelf material to glass.









Click on the LED lighting icon and set its position: horizontal and its length is automatic, so it will take up the internal width
of the cabinet:
Click on the green tick.

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Cabinet	×
	 Bottom Front Shelf - Single vertical Shelf - Single horizonta Door - 2, 3 or 4 sided Shelf - Single horizonta Door - 2, 3 or 4 sided Shelf - Single horizonta Door - 2, 3 or 4 sided Shelf - Single horizonta Door - 2, 3 or 4 sided Shelf - Single horizonta Door - 2, 3 or 4 sided Shelf - Single horizonta Door - 2, 3 or 4 sided Shelf - Single horizonta Door - 2, 3 or 4 sided Shelf - Single horizonta Door - 2, 3 or 4 sided Shelf - Single horizonta Door - 2, 3 or 4 sided Shelf - Single horizonta Door - 2, 3 or 4 sided Shelf - Single horizonta Door - 2, 3 or 4 sided Shelf - Single horizonta Door - 2, 3 or 4 sided Shelf - Single horizonta Door - 2, 3 or 4 sided Shelf - Single horizonta Door - 2, 3 or 4 sided Shelf - Single horizonta Door - 2, 3 or 4 sided Shelf - Single horizonta Door - 2, 3 or 4 sided Shelf - Single horizonta Door - 2, 3 or 4 sided Shelf - Single horizonta Door - 2, 3 or 4 sided Shelf - Single horizonta Top
	÷ 🗊 🔿 🕞 🔒 🔎
	Offset left/right (red) Offset left/right (red) Offset front/back (green) Offset front/back (green) Offset down/up (blue) Offset down/up (blue)
LED lighting	Automatic refresh on page OK Cancel

• Display the wall unit without front:

			÷ 🗊 🔿 🕂 🕹 &
Width 2401 mm ∨ Depth 550 mm ∨	Total height Unit type 720 mm Wall unit Carcass height Image: Carcass height 720 mm Image: Carcass height Space for legs Image: Carcass height 0 mm Image: Carcass height	3D representatio	lightly open open Units
Sizes		Automatic refresh on page	OK Cancel

• then change the position of the LED strip:





Place LED strip in the right cabinet as well: Display the cabinet with the doors closed.

Cabinet						×
					 Bottom Front Shelf - Singl Shelf - Singl Shelf - LED light Door - 2, 3 Shelf - Singl LED light Door - 2, 3 Side Back Side Side Top 	e vertical gle horizonta ing or 4 sided gle horizonta ing or 4 sided
				+ ‡	· 🗊 n n	A R
Width 2401 mm V Depth 550 mm V	Total height Z20 mm Garcass height Z20 mm Z20 mm Space for legs 0 mm	Unit type Wall unit	3D repres	d Slightly Ti	otally Without fronts	
Sizes			Automatic refresh on pa	ge O	ОК	Cancel

.





Workshop 5: Documentation



5. Workshop: Documentation

The topic of this tutorial is how to create documentation for your clients and other professionals from a completed project in ARCHLine.XP. Based on the reception room project which had been created in the "First lesson", here we show the preparation of documentation.

- Mood board
- Snapshot
- Architectural floor plan
- Colored floor plan
- Wall elevation views
- Plot layout
- Open your browser and watch the following video
 <u>https://www.archlinexp.com/enrollments/courses/preliminary-course/documentation/1</u>

Open and save project

Let's open the Reception room project, which includes a furnished room. We will work on this project.

Please download <u>Preliminary Course - Workshop Projects 2024</u> from our website and install it. It includes all projects for all preliminary workshops.

- Start ARCHLine.XP® Professional.
- Click on the Open Project:

and choose:

...\Documents\ARCHLine.XP Draw\2024\Workshop_Preliminary\5_Documentation\1_Receptionroom_workshop_start.pro file.

5.1. Creating Mood board

The ARCHLine.XP Mood board feature is an easy-to-use tool to create collage by using the images of the colors, materials, and furniture of the project, helping the communication between designer and customer. We are going to create the following mood board:



5.1.1. Open mood board

• Click on the Ribbon bar / Documentation / Mood board and choose the Create Mood board command.



Documentation	MEP		
	Ę		
off Hand-sketch styl ▼	Mood	board	Model to a Photo
✓ Click	to	Create Mo	ood board

5.1.2. Paper setup

 In the *Plot Layout Setup* dialogue window set the following properties: Forms: ISO A3 297x420 mm Orientation: Landscape

	ISO A3 297x420 n	mm				\sim
		Number	of sheets in o	olumns, rov	VS	_
Width	420			Columns	1	
Height	297]		Rows	1	
Plot layout	name (A-):				1	٦
Orientat	on		l			
A	Portrait Iandscape					
Non-prin	table Margin					
dX:	0]		dY:	0	
Include	e plot stamp					
				- 118a-		
E E e						
Enalish1	English1		52	Site Plan		4

Also, you can place plot stamp on the document by ticking the **Include plot stamp** checkbox. A blank page with the selected properties will be created, on which you can place images as you wish.

- In this case, turn this option off!
- Click OK to close the window.

5.1.3. Place images

The name of the created window is "A-1", it can be renamed by clicking on it.

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Draw Order Forward One

Draw order back one



Choose the **Ribbon bar / Documentation / Mood board / Raster image** command, so you can select the images to be placed.

- Find the folder where images are saved: Documents\ARCHlineXP DRAW\2024\ Workshop_Preliminary\5_Documentation\Pictures
- Click on "Interior_01", then click on Open. In the Image dialogue window just click on OK button.

mage				
File			General Properties	
Name	interior_01	Br	owse 🖓 8- Bottom-most	\sim
Path	C:\Users\renata.nagy\	Documents\ARCHlineXP Dra	aw\2024	~
	Attached		~	
Insertio	n Point	Size	Rotation	
✓ Spec	ify a custom reference p	Specify on-screen	Specify on-screen	
x:	0 m	Length 1 m	Angle 0	~
Y:	0 m	Height 0.7 m		
Preview			Transparency	
		Resolution: 850 x 595	0	
	BIM parameters		OK Car	ncel

An orange borderline appears above the plot layout indicating the selected image.

- To place the image, click anywhere on the page (1),
- Then move the mouse to define the other point (2) of the rectangle around the image, finally click to place the image. (The size of the image can be modified later.)





Place 6-7 additional images from the previous folder in the same way, or drag and drop them onto the plan sheet.



5.1.4. Modify images

We need to modify the pictures to get the desired look. The image editing and modifying options can be found under the **Mood board** command. Some instructions can be accessed by clicking on the corner of the picture.

Use the following commands to create an aesthetic montage:

Resizing and scaling images

After selecting this command, click on the image you want to change. An orange line appears as borderline of the picture, which can be modified by moving the cursor to get the right size. You can finalize the right image size by clicking once.

The command is accessible by clicking on any reference point of the selected image.





Resize image - Enter value

Once the image is selected, you can change its width and height by entering a value in the floor plan or in the side menu. In the side menu, you can scale the image proportionally by selecting *Keeping the X/Y ratios*.



✓ Keeping the X/Y ratios		
X size:	0.149 m	\sim
Y size:	0.104 m	×.

The calculator can be switched on and off under 🔯 Settings / Units and angles.

Calculator in dimensioning tool

✓ Use a calculator to enter the dimensions

Stretch image

The command is accessible by clicking on any reference points of the selected image. Using Stretch command, you can resize the image, but not proportionally to the original.





Order of image

While sorting pictures, you can specify their order. You can decide which is placed at the front or back.



The command is available from the *Mood board* menu, or by right-clicking on the image and selecting the *Draw Order* menu.

Display order functions allow you to easily set the desired position of the images.



Documentation	MEP			△ Searce
×	20220			
Quantity take-off ▼	Hand-sketch style ▼	Mod	od board	Model to a Photo
	- Click to sel	Ŀ	Create M	ood board
	Click to serv		Raster im	age
		7	Scale ima	age
		 	Crop ima	ge
			Flip horiz	ontally
		2)	Flip vertio	cally
		<u> </u>	Drop sha	dow
		٩	Draw ord	er to front
		Ş	Draw Orc	ler To Back
		Ś	Draw Orc	ler Forward One
		Ś	Draw ord	er back one

Flip image

Choose the Mood board / Flip horizontally or Flip vertically command and click on one of the pictures to mirror it.



Crop image

Click on a reference point in the image you want to edit. Select **Crop**.

Click on any part of the selected orange borderline, move this line parallel in order to cut off that area you don't need. Press ENTER to finish the command.



Obviously, the images can be also rotated and moved.

5.1.5. Place materials in same size

In the Mood Board you can place materials, fabrics, wallpapers which already had been used in the project. Under the **Design Center / Materials category** in the IN MODEL folder you can find the materials of the recent project.

- Find the material you want to place on the mood board (1) and simply use "Drag and Drop" method. Click on the material, hold the left mouse button down and move to the area where you want to place the material and then
- release the mouse button.
 From the pop-up dialogue menu select the "Insert as Raster Image" command (2).
- Place the picture as you've just learned to. If it is necessary, the size of the inserted image can be modified later.

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The simplest way is to place additional materials with the same size (e.g. in the same width) if you select the previously placed material on the mood board an on the left side under Properties check the image size.

Select the additionally placed materials on the mood board and set the same parameters on the Properties tab.





Properties		
Image		
Normal rast	er image	2
Property	Value	
🌣 General		
Layer	###Rast	~
Draw Order	8 - Botto	×
BIM parameters	Edit	
BIM name		
GUID	OLvvDFwf10	I
Set ID (dev only)	3GuE4cDOn6	5z
Classification	Edit	
* Constrains		
Name	hoarfrost9	3x
Resolution	1055x742	
Maintain aspect ra	atio	
X size:	40 mm	~
Y size :	40 mm	~
Angle	0°	~
Transparency	0	V
Categorize in IFC as:	Default	~
Use explicit geometr		

After placing the image, you can easily move it to the desired position so they don't cover each other.



5.1.6. Place colors with hatch

Within project materials there are some which can't be moved directly to the mood board, these are the colors. A material is considered to be a color, when "Insert as Raster Image" command is not offered by the pop-up menu at the time of placing. Colors can be displayed in mood board by hatching, which means that we have to fill a closed shape with a color. The process is the following:

Define the area and shape

• Draw a rectangle using the same size as the previous materials. Use the drawing tools (e.g. **Ribbon bar / Drafting / Rectangle**) to redraw the outline of an exciting picture and move the rectangle away from the pattern.





Define the properties of the solid area, as hatching

The applicable hatch properties can be specified in the Ribbon bar / Drafting / Properties / Hatch menu.

- In the pop-up dialogue window, in Hatch, change the Pattern property to "Solid" (1)
- Click on the color button (2)
- Select the right color from the palette (3)



- On the **Ribbon bar / Drafting / Hatch / Hatch pick point** command, click inside of the drawn rectangle, and press the ENTER. The selected color fills out the rectangle.
- The hatch can be changed later by selecting the rectangle.



5.1.7. Place text

Place text on the mood board by **Ribbon bar / Drafting / Text / Place it** command. In the popup Text actuals window type the content that you want to place (e.g. Mood board). Turn off the Insert text and repeat option, then hit OK.

	Text actuals		×
	Mood board		^
Building Interior Drafting	<		>
	Press ENTER key while typ	oing multiline tex	t
	Edit		Notenad
Text Raster Image Group 3D S			
	UT uble	F	
Place it	Insert text and repeat		OK Cancel

The orange contour of the textbox appears and one of the corner points is snapped by the cursor. Using this corner point, you can place the text on anywhere on the drawing by clicking once. Now the text is placed, the Text Actual window appears again, and close the window by clicking on the Cancel button.

If the size of the inserted text is not appropriate, it can be changed: Click on the text to select it and on the Properties tab change the Font size parameter from 200 mm to 10 mm.

Colour		
Line weights	0 mm	\sim
Draw Order	8- Bottom-most	~
BIM parameters	Edit	
Classification	Edit	
Text content		
Fext content	Mood board	
Constrains		
ont	Arial	\sim
ont size	10 mm	\sim
Fixed plot size	5 mm	~
lignment	Left	~
Mirrored		
Bold		
Italic		

You can also set text parameters in the Ribbon bar / Drafting / Properties / Text menu before placing them.

The default text height is 200 mm because it appears at the optimal size of 1:50 or 1:100 on a scale with respect to drawing content. In case of mood board, however, the composition is made in a ratio of 1:1, so it is necessary to modify the text height afterwards.

Other properties of the text, e.g. color, font, etc. can be modified as if it is required.



Print to PDF 5.1.8.

File

Print

Convert the completed mood board to a PDF file.

Choose the Ribbon menu / Documentation / Print / Print command or the File menu / Print option and enter the data as described:

> 🗗 🧲	$\mathcal{O} \mathcal{O} \mathcal{X}$	C				
	\wedge		l	Cancel		
Plot layout	Section	El	Number of copies		1	
•	•	-	Printer/plotter	PDF Printing	վե	
Print			(PDF Printing	~	
				Level B conformance (PDF/A-1b)		
		~	Settings	Level A conformance (PDF/A-1		
Print queue			Paper size:	Brother MFC-L2710DW series Canon TS3100 series		
Define printabl	e area		Drawing original size:	Fax HP DeskJet 3700 series [71753C]		
Manage printa	hle areas		Size	Microsoft Print to PDF Microsoft XPS Document Writer		
manage printa	bic dicas		Portrait	OneNote (Desktop)		

- Choose the PDF printing command. .
- Browse: specify to which folder the PDF created during printing should be saved and under which name. Let the . destination folder be:
- ... \Documents\ARCHLine.XP Draw\2024\Workshop_Preliminary/ 5_Documentation, and the file name is Mood_board A3.
- ٠ Paper size: A3 (same paper size as our mood board)
- Orientation: Landscape •
- Entire drawing ٠
- Scale Scale ratio: 1:1 ٠
- Plot offset: Center the plot •

When you see the desired result in the preview window, click Print. The PDF will be generated. Close the PDF file, then click Cancel to close the Print window.





Save your project

- Save the project under the requested project name. ٠
- Choose File menu "Save project as" command and type the file name to save the project.

• It is recommended that you regularly save the project during the work.

5.2. Creating snapshots

In the 3D view, you can create a snapshot of any details, views of the model. This is not the same as the rendered, photorealistic image.

- Activate the 3D window to create snapshot.
- Select the saved view or set the model in the position you want to see on the final image.



Click on the Ribbon bar / Documentation / Snapshot / Snapshot 3D view command. The Snapshot dialogue window appears, now set the followings:

styl

Building	Interior	Drafting	Annotate	Documentation
Ó		125	хI	
Snapshot	Schedule	Tags T	Quantity take-o	off Hand-sketch
Documentati	on			
Snapshot				×
-Image resolu	ution (pixel)			
Custom s	size		1 2048	~
Saved forma	t <mark>2</mark> .pn	g		\sim
Drawing	Flo	or plan - - (Ground floor (0 m)	\sim
3 Save	4	ОК	5 (Cancel

- Image resolution: You can specify the snapshot size (1). The higher resolution will result in better quality pictures, however the file size will grow too.
- Saved format: You can specify the format of the created image file (2). PNG format is recommended.
- Save: You can also save the result of Snapshot as an image file (3). In the Save as... dialogue box, here you can define the folder and name of the image file. You can send this file as an attachment to the customer.
 - Now the software offers to place the image in that window which is defined by the Drawing option.



- OK: In case you don't want to save the image, then press this button. The snapshot will be created and located accordingly the Drawing setting option (4).
- Cancel: Close the dialogue without placing a snapshot (5).
- Now save a snapshot of the set view in 2048 resolution in ".png" format in the ...\Documents\ARCHLine.XP Draw\2024\Workshop_Preliminary\5_Documentation folder with the name "living_room_view_1".

5.3. Create architectural floor plan

The architectural floor plan is an indispensable part of the documentation. This floor plan does not include for example, furniture, shades, electrical markings, etc. In the actual project, a furnished floor plan can be easily transformed into an architectural floor plan by using the layers.

5.3.1. Layer properties management

The layers are served to group used items in the project, see in 1.5. chapter. The different groups of items are placed on a separate layer, it is possible to modify them simply together. Without deleting items (such as furniture), you can create an architectural floor plan by turning off the unnecessary layers of objects or groups. With the help of *Layer visibility groups*, we can save different stages of the project. This way we can easily switch between Furnished floor plan and Architectural floor plan without having to step into Layer Properties Management and change the setup of layers one by one.

Switch off layers and create new layer groups

Turn off all layers that contains elements that we don't show on the architectural floor plan (e.g. layers of objects where the furniture is) and save two different stages of the project.

- The floor plan window should be activated.
- Open the Layer manager.



- Click on Used layers.
- Next to all "Interior" layers click on the light bulb icon to change it from yellow to grey. At the same time, the lock on the light bulb closes, so it is not visible and can't be modified on the floor plan.
- •

Layer Properties Management

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🐟 🔦 т	he name of current la	ayer: (Dimen	sion - l	ength						Show visible layers only	
Name		On	L	P	Ele	C	Line-type	Line	Description	^		1
🧼 Interior - Kitchen -	Decoration	7	8	9	0		Simple	0 mm				
🧼 Interior - Kitchen -	Furnishing	9	8	9	0		Simple	0 mm			- All layers	
🧼 Interior - Kitchen -	Lighting	9	8	9	0		Simple	0 mm				
🧼 Interior - Living roo	m - Decoration	9	8	9	0		Simple	0 mm				
🧼 Interior - Living roo	m - Furnishing	9	8	9	2661		Simple	0 mm				
🧼 Interior - Living roo	m – Lighting	9	<u>a</u>	9	0		Simple	0 mm				
🧼 Lighting		9	<u> </u>	9	0		Simple	0 mm				

- When you finished removing the visibility of the layers, press OK.
- This is the result you should see on floor plan window:



The active layer can't be switch off or locked. If you want to change the status of the currently activated layer, first you must activate another layer.

Another way to switch off layers is to right-click on the item on the floor plan and select **Layer / Off** from the list. At this time, the entire content of that layer becomes invisible where the selected item is located.





Please note:

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If you can't find Off, Activate, or Lock commands, the currently selected item is on the active layer. In this case, you must first activate another layer after that you can make changes.

Which layer is the element on?

When you select an element on the floor plan, its properties appear on Properties tab. The first feature is the layer where the selected item is placed.

You can easily move the selected item to another layer by selecting from the list.


5.3.2. Dimension

In the next steps, the wall and window dimensions will be placed on the whole plan.

Wall dimensioning styles

Wall dimensioning styles can be created for easier and faster scaling. These styles can be used when drawing the wall, so that the wall is automatically scaled together with the wall.

- Select the Ribbon bar / Annotate / Building / Wall dimensioning styles command.
- In the pop-up window, select Add, then name the style. Set the created style to current, then click Edit.



- Select the Dimension options.
- Add the desired dimensions to the list as shown on the picture.
- Pay attention to the order of dimensioning!
- For better clarity, clicking on the list item in the top list, the image on the right highlights the scaling in red.

Wall dimension

Interior walls dimensions 2 Interior walls with opening width 1 Interior walls with opening axes distances 1 Exterior walls with opening width 1 Exterior walls with opening axes distances 2 Exterior walls corner points 3 Exterior walls overall dimension 4 Add 2 Commands to execute: (from the inside to out)	
Interior walls with opening width Interior walls dimensions Exterior walls corner points	0.3 3.4 0.3 2.9 0.1 3 0.3 0.3 3.4 0.3 0.9 1.2 0.80,1 1 0.9 1.1 0.3 1,50 3.40 1,50 1,140 1,8 1.45 1.55 1,50
Dimension to the centerline of the wall	3.7 1.2 1.2 1.9 0.9 1.4
Dimension to core layer only	3.7 1.8 2.95 1.85
Dimension each wall layer separately	3.7 6.6
Wall dimensions ignore cladding	10.3
Door / window detailed dimension settings	_ph 0.9ph 0
Attention. Opening width may be the gross, net or gross reduced by the frame value	

Detailed dimensioning settings for doors and windows

Here you can define the appearance of the door and window data in the scaling chain.

• Click on the button. In the pop-up window you can only select the width.

Dimension style									
	* width								
	Associate a dimension to the opening Image: Dimension text visible								
100	Dimension line distance	0 m 🗸							
1 1	Dimension format	Width							
	What to display	Width - Frame							
	Width MINUS reveal on left/right side (wh	ere exist)							
	Taking into consideration of built-in detail	s Width/height PLUS blindframe							
	Adjust dimension to width value	Adjust dimension to width value							
	Height	🛞 Height							
	Height minus reveal on top/bottom (when	e exist)							
	Height minus frame								
	Height plus sill								
	Sign of sill height								
	Sill height	Y							
	Internal floor elevation:	0 m							

- Close the window by pressing OK.
- After closing the window, select Annotate / Building / All walls command.
- You can define the area where you want to place dimensions. Draw a selection rectangle from the top left corner, the color of the selected area changes to light blue.



- Press ENTER then the contour of the room is selected automatically.
- Move the mouse to the first point of dimensional chain and click one.



Setting up door/window dimensions

The first step is to set the dimension parameters for both doors and windows separately in their properties.

Select the Ribbon bar / Building / Properties / Opening / Door command.





- In the properties click on the *Dimension, consignment* button.
- In the pop-up window set the properties of the consignment sign.

Door				Dimension style	
Main parameters	Width:]	2000 mm		
Pagragantation		L		☆ Width	
Representation	Height:		2150 mm	Associate a dimension to the opening	
Reveal, void, niche, cavity	Thickness:	[130 mm	Dimension text visible	
Basic geometry		L		Annotation	Dimension, consignment
,				Dimension format	Axis
Outer handle	Hide opening and make a void			Distance above	650 mm
Inner handle	Distance from wall line	100 mm		Distance below	450 mm
	Sill height	0 mm		Dimension format	Width Height (two rows)
Accessories	Outer sill height:	0 mm		8 9 What to display	Width - Reveal width (1)
Interior and exterior sills	Add level shift			Width MINUS reveal on left/right side (when	e exist)
Duilt in detaile	Effective clear width	2000 mm		Taking into consideration of built-in details	Width/height PLUS blindframe
Built-In details	Effective clear height	2130 mm		Adjust dimension to width value	
Information	Colour		Layer	😤 Height	
	Line type	Layer		Height minus reveal on top/bottom (where e	xxist)
	Line weights	0.2 mm		Height minus frame	
Create variant	Draw Order	8- Bottom-most		Height plus sill	
	Reference axis	Middle		Sign of sill height	
	Distance from wall corner	1499 mm		Sill height	
		Lining and architrave		Internal floor elevation:	0 mm
		Dimension, consignment		Top height of door/window	STUK
		Thermal parameters		Height comparison	Relative
	Ratio (Illumination area)	0%		1910 - 1919	
	Material	Value			
	Solid	Plastic 03			
	Frame material	Beech			
	Glass material	Glass26			
DIM FarameterS	NO STYLE				ОК

• The same way set this for windows too.

Window	orint 🚽 📔 🛄 🛄		Dimension	n style			
window							
Main parameters	Width:		1200 mm		A wideb		
Representation	Height:		1500 mm		Associate a dimension to the opening		
Reveal void niche cavity	riegite		1000 1111		✓ Dimension text visible		
neredy roldy maney early	Thickness:		100 mm		Annotation		Dimension, consignment
Basic geometry					Dimension format	Axis	
Outer handle	Hide opening and make a voi	d			Distance above	650 mm	
Inner handle	Distance from wall line	- 100 mm		#5 0	Distance below	450 mm	
uner nanue	Sill height	900 mm			Dimension format	Width Height	(two rows)
Accessories	Outer sill height:	900 mm		20	What to display	Width - Reve	al width (1)
Interior and exterior cills	Add level shift				Width MINUS reveal on left/right side (where exit	st)	
Interior and exterior and	Colour				Taking into consideration of built-in details	Width/height	PLUS blindframe
Built-in details	Line type	Simple Line			Adjust dimension to width value		
Information	Line weights	0 mm			* Height		
	Draw Order	8- Bottom-most			Height minus reveal on top/bottom (where exist))	
	Reference axis	Side			Height minus frame		
Croato variant	Distance from wall corner	4581 mm			Height plus sill		
create variant		Lining and architrave			Sign of sill height	pm	
		Dimension, consignment			Sill height		
		Thermal parameters			Internal floor elevation:	0 mm	
	Ratio (Illumination area)	100%			Top height of door/window	STUK	
	Ratio (Ventillation area)	100%	Pio:		Height comparison	Relative	
	Material	Malua					
	Material	Value					
	Solid Class material	Beech Clacc26					
	External frame material	Default material					
	Internal frame material	Default material					
	<						
			_		L		
BIM Parameters	m x 150 (cm ablak					ОК

Dimensioning doors and windows by axis

The axis dimensioning of the windows is placed separately.

• Choose one after the other Annotate / Building / Door, Window commands using the All option.



Modify dimensions

The dimensions will follow the changes of the drawing. You can add new ones to the current or delete existing ones. You can also move dimensions in groups later in case the location is incorrect. This method is as it follows:

- Select the dimension lines to move, where they overlap each other.
- By clicking on the blue reference line, select the *Move* dimension command.
- Move the dimension lines to the desired position, ensuring that the values don't slip away from the dimensioned elements and then click on the ideal position. To fix the direction, you can use the Shift key.



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5.3.3. 2D symbols

Creating architectural floor plans other symbols are needed on the floor plan, such as the marking the entrance, the North direction or the Elevation. Most markings can be found under the **Design Center / Building / Group** category. Place on the floor plan the following ones:

North direction

Before placing the North direction, first set the project direction.

• To do this, click the gray arrow in the bottom Status Bar. In the dialog that appears, set the North direction of the project exactly graphically or in degrees. Close the dialog with OK.

Set North Direction ×									
North									
Enter a degree that represents the angular distance measured anticlockwise from the X axis.									
63 • •									
OK Cancel									
i Mov									

• Select **Design Center / Building / Group / Signs / North - English** category, select one sign and simply drag and drop to the floor plan.



- As you can see, the North direction symbol points to the direction already set in the project. If you want to modify the position of the sign, then select it and use the rotation and move commands. Other properties can be changed on the Properties tab.
 - Its size can be modified from the Local menu / Scale group.



Entrance

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- Now select an arrow from the Signs / Arrows category, and place it to the entrance.
- The above-mentioned modifications (such as size, position) can be made in the same way as it was described in the previous example.





Elevation

• Choose from the Ribbon bar / Annotate menu the Elevation on floor plan command.



To determine the elevation on the floor plan you must define an object (e.g. a wall) (1) and its one point (2) with a single click.

- In the appearing top right menu, choose where the height point is located on the bottom or top flap (3).
- A dialogue box appears with the starting height (4) which can be changed if it is needed. Click on OK to continue.
- In the next dialogue window, you can change the Elevation (5), then OK.



• One single-click and place the created height point on the floor plan (6).

The dimension and the 3 previously mentioned signs were placed on the floor plan.

5.3.4. Room stamp

You can read more important information about the floor plan by using the room stamp e.g. the name and the size of the rooms in the plan.

Room stamps commands are under **Ribbon menu / Building / Room and area**. There are basically two ways how to define the area of the plot stamp on the floor plan.

- Room by walls
- Room by polygon

This function is used when you need to scale a room that is not bounded by walls. Such as e.g. a balcony, terrace. Then draw a line with a polyline to draw the area to be scaled.



Room by walls

In case the room is surrounded by walls, we recommend to use the **Room by walls command**. It has the advantage that clicking inside of the room creates a room stamp based on the closed contour by walls. There is no need to draw the contour of room. This means that the room stamp is connected to the walls, changes on the walls are followed by the calculations.

- Select the Room by walls tool.
- Click on a room that is surrounded by walls (1).
- The Room book appears where you click (2).



We can change the appearing content on the room stamp within its properties.

• Click on the already placed text in order to select it and then choose the pencil icon (3).

In our example, there are 3 data. We can modify them as follows:

- Room Name: It can be renamed to the name that you want to appear (e.g. Living room).
- Gross area: indicates the area of the room. We need this.
- Floor finish: Choose one from the list of materials or enter other materials (e.g. Parquet).
- When changes are completed, press the OK button.
- The changes also appear on the floor plan.

Room				×
	Energy zone assignment	Redraw		
	Futes			
	× Koom kind			
2 27. 1	Norm	DIN 277		- 1
	Room number			-
	Room kind	Living-room		
× * 8	Room code	(RCE) Gross floor area	~	
	Apartment Unit	Anartment Unit	~	
* 1,5	Orientation	Interior	~	
	Undercutting type	a.	~	
tpr	Room properties			
	Gross area 🗸	34.12 m ²	User d	
	DIN277 area	35.53 m²	User d	- 1
Norm	Volume	92.12 m ³		
DIN 277	Illumination area	9.24 m ²		
-	Perimeter	27.13 m		living Room
WoFIV	Height	2.7 m		
O Norm I	Area factor	100 %	~	Concrete
0	Constrains			34.12 m ²
General properties	Hatch]		
	Floor level			(BGF) Gross floor area
Upper Limit	Slab level			
Calculated values	Floor finish 🗸	Concrete	~	
	Wall finish	Dispersal paint	~	
Abbreviations	Ceiling finish	ACT	\sim	
Room surfaces				
Profile and area properties				
Custom Stamp				
Room book order				
BIM Parameters	No style			OK Cancel

, Livin g = r 0 0 m GA: 35.34 m² ₃ ♪

General properties

In the Properties section, you can set the text style. Here you can only choose from predefined styles.

Room			×
	Rules If the stair has more than 3 steps	subtract the whole area	Redraw
	The changes can be visible on 'Calculat Properties Colour Line weights Layer Priority Volume solid color Text properties	ted values' dialog panel in 'DIN277 area' field 0.1 mm V Helyiségpecsét 8- Bottom-most V	
Norm DIN 277 WoFIV Norm I General properties Upper Limit Calculated values Abbreviations Room surfaces Profile and area properties Custom Stamp Room book order	Room name text style: Room data text style: Room number text style: Flat name text style: Table text style: Draw frame Line Spacing Room partitioning properties Room partitioning enabled Font types Font size Colour Layer Line type Text margin	Arial 250 - Arial 250 - Arial 250 - Arial 250 - Arial 250 - Arial 300 - Arial 300 - Arial 300 - Arial 300 - Arial 600 - Arial 800 - Bookman 250 - Bookman 500 - Century 250 - Century 500 - Courier 250 - Courier 250 - Schedule name - Schedule name - Schedule table - Times 250 - Times 250 - Verdana 200	Living Room Concrete 34.12 m ²
BIM Parameters	No style		OK Cancel

If you need a different style of text, you must create it and save it as a style in the Text properties window. The new style appears under Room Stamp - Properties text styles

erties			×
Text			•
No style Property Value			
Property	Value		^
â General			
Layer	###Text###	~	
Colour			
Line weights	0 mm	~	
Draw Order	8 - Bottom-most	~	
BIM parameters	Edit		
BIM name			
GUID	2bS9\$c3M592R6olj	g	
Classification	Edit		
Constrains			
Font	Verdana	\sim	
Font size	200 mm	\sim	
Fixed plot size	5 mm	~	
Alignment	Left	~	
Mirrored			
Bold			
Italic			
Underline			
Strikeout			
Character width[% of size]	Default	\sim	
Character spacing[% of size]	0%	~	
Line spacing [% of size]	48%	~	¥
OK	Cancel		



Dimensioning spaces with different functions in one room

When you want to scale rooms with different functions and cladding in one airspace, it is worth placing a room demarcation line between the two rooms. In this example, we divide our room into a dining room and a living room according to function.



• Select the Room and area / Room separation line (pseudo-wall) command.

Enter the start (1) and end (2) of the line. Be careful to draw the line from wall to wall, otherwise the command will not work! Press Enter. The room stamp is automatically created in the two rooms with the appropriate dimensions.



The information on the left room stamp must be modified:

- Select the room stamp on the left, then click on the name marker to transcribe the text, or click on the arrow to select from the list. Now select *Dining Room* from the drop-down list.
- You can change the floor material in the side menu. Here select Ceramic tile from the list.

Zone	Concrete								
Background colour:	Cement								
Room number	Cement finishing								
Norm	Granite								
A	Flooring								
× Constrains	Ceramic tile								
Structure	Marble tile								
Dimensions	Glazed ceramic tile								
DIN277 area	Mettlachi tile								
Gross area	Boarding								
Net volume	Mosaic tile								
Crassing	OSB tile								
Gross volume	Parquet								
Perimeter of room	Wall-to-wall carpet								
Height	Stripe parquet								
Finishes	Viacolor								
🗸 Floor finish	Ceramic tile 🗸 🗸								
Wall finish	Dispersal paint 🗸 🗸								
Ceiling finish	ACT 🗸 🗸								
Categorize in IFC as:	Default 🗸								

Text placement

Place the text "Living room floor plan M=1:50" on the drawing as learned in the Mood board section.



5.3.5. Print to PDF

Create a PDF file from the completed plan. We use a scale of 1:50, unlike the Mood board. Choose the **Ribbon menu / Documentation / Print / Print** command or the **File menu / Print** option and enter the data as described:



File	$\square \square \square \bigcirc \bigcirc \land \land$			
			Cancel	
Print	Plot layout Section	Number of copies	1	
•	* *	Printer/plotter	PDF Printing գիհ	
	Print		PDF Printing Level B conformance (PDF/A-1b)	
		☆ Settings	Level A conformance (PDF/A-1a)	
	Print queue	Paper size: Brother MFC-L2710DW se Canon TS3100 series		
	Define printable area	Drawing original size:	Fax HP DeskJet 3700 series [71753C]	
	Manage printable areas	Size	Microsoft Print to PDF Microsoft XPS Document Writer	
	manage printable areas	Portrait	OneNote (Desktop)	

- Choose the PDF printing command.
- Browse: specify to which folder the PDF created during printing should be saved, and under which name. Let the destination folder be: ...\Documents\ARCHLine.XP Draw\2024\Workshop_Preliminary\5_Documentation,
 and the file name is Architectural_design_A3.
- And the file flam
 Paper size: A3
- Paper size: A3
- Orientation: Landscape
- Entire drawing
- Scale: 1:50
- Plot offset: Center the plot

When you see the desired result in the preview window, click **Print**. The PDF will be generated. Close the PDF file, then click **Cancel** to close the Print window.



PDF is created in the predefined folder under the specified name.

5.4. Create colored floor plan

5.4.1. Layer variations

To create a colored floor plan first you must switch to furnished floor plan.

Previously, we switched off "Interior" layers in the layer manager. Now we turn them back on. The Group, Room stamp, and Dimension ... layers are turned off.

To make it easy to switch between different plans, we create layer variations.

Activate the floor plan.

• Click on the status bar on the arrow next to the layer icon, then select the Layer Manager option.



Click on the button in the Layer variation section to create a new variation and name it "Architectural".

🐟 🤿 🔿 The name	Image: symbol and symbol an										
Name	On	L	P	Ele	С	Line-type	Line	Description		Layer Inters	
🧼 00 Fólia 0	0	_	4	30		Simple	0 mm			× + ×	
Dimension - Length	0	<u> </u>	ā	28		Simple	0 mm			- All layers	
Dimension - Openings	0	<u> </u>	8	5		Simple	0 mm			Used layers	
Interior - Living room - Cu	8	8	8	32		Simple	0 mm				
Interior - Living room - De	8	8	4	5658		Simple	0 mm				
Interior - Living room - Fu	8	8	8	5311		Simple	0 mm				
Interior - Living room - Lig	9	<u> </u>	8	254		Simple	0 mm				
🧼 Slab	Ŷ	Ē	9	26		Simple	0 mm				
✓Text	Ŷ	<u> </u>	8	1		Simple	0 mm				
🧼 Wall - Load bearing	Ŷ	<u> </u>	4	170		Simple	0 mm				
<									~	Layer filter restricts the layers displayed in the Layer list to the selected layers. Drag and drop the selected layers onto the layer filter Variations Available variations All layers Architectural	
Do not delete used lavers			\sim	Conv t	o clinh	oard D	Protocol for	Laver Naming		OK Cancel	

To create a Furnished variation, we need to disable the VText layer, which is currently active and cannot be disabled.

• Click on the slab layer and then on Activate Layer, then deactivate the text layer.



Layer Properties Management											
The name of current layer:Slab											
	Name	On	L	P	Ele	C	Line-type	Line	Description		
	🧼 00_Fólia 0	9	<u> </u>	6	30		Simple	0 mm			
	🧼 Dimension - Length	9	<u> </u>	8	28		Simple	0 mm			
	🧼 Dimension - Openings	9	<u> </u>	8	5		Simple	0 mm			
	Interior - Living room - Cu	9	<u> </u>	9	32		Simple	0 mm			
	Interior - Living room - De	9	<u> </u>	9	5658		Simple	0 mm			
	Interior - Living room - Fu	9	<u> </u>	9	5311		Simple	0 mm			
	Interior - Living room - Lig	9	<u> </u>	9	254		Simple	0 mm			
	🖌 Slab	9	_	8	26		Simple L 💌	0 mm 💌			
	🧼 Text	9	_	8	1		Simple	0 mm			
	🧼 Wall - Load bearing	?	<u> </u>	6	170		Simple	0 mm			

• Switch the layers on and off as shown in the picture, create a new layer variation and name it "Furnished" variation. You can select or disable multiple layers at once by pressing the CTRL key and clicking the layer name. All items between the selected first and last layers can be selected by pressing the SHIFT key.

Layer Properties Managem	ent										×
🐟 🤜 🐟 The name	of cu	rrent la	ayer:In	terior - L	iving ro	oom - Curta	in			Show visible layers only	
Name 00_Fólia 0 Dimension - Length Dimension - Openings Interior - Living room - Cu Interior - Living room - De Interior - Living room - Lig Slab Text Wall - Load bearing	of cu 이미 영 영 영 영 영 영 영 영 영		eyer:in P 23 25 25 25 25 25 25 25 25 25 25 25 25 25	Ele 30 28 5 32 5658 5311 254 26 1 170		Line-type Simple Simple Simple Simple Simple Simple Simple Simple	III Line 0 mm 0 mm 0 mm 0 mm 0 mm 0 mm 0 mm 0	Description		Layer filters All layers Used layers Layer filter restricts the layers display Layer list to the selected layers. Drag the selected layers onto the layer filte Variations Auilable variations All layers	ed in the and drop r
< Do not delete used layers			~	Copy t	to clipb	oard	Protocol for	- Layer Naming	>	Architectural Furnished A layer variation saves all the layers v current states. It helps switching betv possible layer variations in one step.	vith the veen Cancel

• Click the Quick 3D Model icon to create a 3D model that matches the new layer settings.



5.4.2. Create floor snapshot

You can create a colored floor plan by using the **Create floor snapshot** command, located in the **Ribbon bar / Documentation / Snapshot** menu.

When you start the command, you can set the value of the cutting elevation and the picture resolution in the pop-up dialogue window, this is the height where you cut off the model.

Building	Interior	Drafting	Annotate	Documentation	Snanshot		
Ó		125	×Щ		Custom size		^
Snapshot	Schedule	Tags	Quantity take-o	ff Hand-sketch s	Image resolution (pix	el)	2048 ~
Copy	/ Image		rnished	- CI	Cutting elevation		1500 mm
🗐 Snap	shot 3D view	/					
Crea	te or delete f	loor snapsl	hot *			ОК	Cancel

The snapshot is a raster image (1) that can be easily moved away from the floor plan and placed next to it (2; 3).





Attention!

Choose the proper height from where the openings can be seen on the snapshot too. If you choose lower or higher point the openings will not appear on the snapshot, only the wall becomes visible.



The finished colored floor plan, can be printed to PDF as it is described in Chapter 5.4.5. Also, you can save it from its Local menu by Save / Save as...

If you no longer need the level snapshot, you can turn it off by clicking the floor plan window name and selecting Colored Floor Plan.



5.4.3. Draw order

To display the objects on the floor plan as they appear in the level snapshot, we need to set their display order.



• Select the chairs (1), then activate the Enable 2D Fills option in the side menu (2), click on the button next to Display 2D Fills, (3) set the Properties window to Hatch: Solid (4), and select a greenish brown color (5)(6). OK.





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- Select the carpet and set a pale yellow fill, then select the table and set a brown fill.
- In the side menu, set the draw order of the carpet to the bottom and the table to the top. Select the chairs and set their display order to 3.



5.5. Creating wall elevation views

Create an image (textured) wall view, a vectorial (line wall view), and then scale the latter.

5.5.1. Image wall view

Click on the Ribbon bar / Documentation / Wall view / Settings command.

0	1 X			- − + ? ⁺	F Edit	View	Building	Interior	Drafting	Dimension	Documenta	tion
	IIII	ΪĦŔ)	A •	3	Ó		125	хI		ŧ	
	Wall v	/iew	Callout	Drawing cor	nparison	Snapshot	Schedule	Tags	Quantity take-of	f Hand-sket	ch style Mo	ood boa
		Settir	ngs		ne	Documentat	tion 1:100	• — 1	:20 🗸			Click t
-		Singl	e wall view	/					Floor pla	an Ground flo	oor (0 mm) *	
	P	Roor	n with all v	vall views								

- Enter the lower limit of the section: 0 m. Thus, the slab under the wall is not included in this wall view.
- Here, set the Representation mode to Image and Realistic visual style with edges.
- Turn off the Create dimensions for cabinets option. (This option only applies to furniture created with the KBB instruction.)
- Turn on Symbol placements to easily identify the wall and its wall view.

Parameters	Value	
☆ General		
Layer	00 Fólia 0	\sim
Draw Order	8- Bottom-most	~
Representation in 3D		
If section upper and lower limit options are turned of	f, the elements on the level will b	•
Section upper limit (>0: meaning from the to	0 m	
Section lower limit (>0: down from the botto	0 m	
Show objects in front of wall. Region width:	0 m	
Enable grid lines		
Hatch on section		
Item types for applying section Line weight	Edit	
Section Line weight	0.03 mm	
Display Options		
Representation mode	Image	\sim
Visual Style	Realistic (with edges)	\sim
Snapshot / Wallview resolution	2048	\sim
Snapshot / Wall view file format	.jpg	\sim
Types to colour/shadow	Edit	
ôther parameters		
Create dimensions for cabinets		
Opening direction symbol properties	Edit	
Cabinet Door	Closed	\sim
Horizontal dimension style	Normál hosszméretezés	\sim
Vertical dimension style		
CLength dimension	Bearing and length from North	~
Elevation on section	Elevation dimension	\sim
✓ Symbol visible at wall	Wall marker symbol	
Symbol visible at elevation view	View marker symbol	
Skip cutting objects above complexity		
Maximum value of object complexity (number of	100000	
Г	OK Ca	incel

- Start Ribbon bar / Documentation / Wall view / Single wall view command.
- Click on the inside of the wall (1).
- Move the orange arrow and click on the desired point (2). A blue rectangle appears, indicating the area to be displayed by the wall view. Enter.



• Place it on the desired spot.





Before creating a wall, elevation view it is also possible to select a part of the highlighted wall to be used for the snapshot. You can do it, when the blue frame appears: click on the frame and us the Offset command.

	Offset	6 0 2	
	Offset all		
	Insert node		
r	Insert Smooth Node		

5.5.2. Vector wall view

Create a vector wall view of the opposite wall.

- Click Ribbon Bar / Documentation / Wall View / Settings.
- Set the Representation mode to Vector drawing and the Visual style to Hidden line.
- Turn off the lower limit of the section. Thus, the slab under the wall is also included in this wall view.

Parameters	Value	
🕯 General		
Layer	00_Fólia 0	~
Draw Order	8- Bottom-most	~
Representation in 3D		
If section upper and lower limit options are turned off, the elements on the le	evel will be displayed at full height, regardless o	of level h
Section upper limit (>0: meaning from the top of the level upwards)	0 mm	
Section lower limit (>0: down from the bottom of the level)	0 mm	
Show objects in front of wall. Region width:	0 mm	
Enable grid lines		
Hatch on section		
Item types for applying section Line weight	Edit	
Section Line weight	0.03 mm	
A Display Options		
Representation mode	Vector drawing	~
Visual Style	Hidden line	\sim
Types to colour/shadow	Edit	
Other parameters		
Create dimensions for cabinets		
Opening direction symbol properties	Edit	
Cabinet Door	Closed	~
Horizontal dimension style	Bearing and length from North	~
Vertical dimension style		
OLength dimension	Bearing and length from North	~
Elevation on section	Elevation dimension	
Symbol visible at wall	Wall marker symbol	
Symbol visible at elevation view	View marker symbol	

- Start Ribbon Bar / Documentation / Wall view / Single wall view.
- Click on the inside of the wall (1).

Move the orange arrow and click on the desired point (2). A blue rectangle appears, indicating the area to be displayed by the wall view. Enter. Ok, then place the wall view.





5.5.3. Dimensioning Length

In this example, only the architectural elements will be dimensioned on the vector wall elevation view. You can do it on image wall elevations too.

• Select the Ribbon bar / Annotate / Serial in horizontal command. By starting this command, the Dimension – Length layer is automatically activated.





- Click on the first point on the wall view (1), then on the second one (2).
- Select the place of the dimension line (3).
- Add the other points too.
- Serial means that the second point of the previous distance and the first point of the following distance we are overlapping each other, therefore we have to give the second point only.



5.5.4. Elevation on section

In this example we will measure the wall with window on the right side of the wall view. The dimensioning process is the following:



- Click on the Ribbon bar / Annotate / Elevation on section command.
- Enter the first point to be dimensioned. This will be the connection point between the slab and the wall (1).
- Click on the same point again so we can place the 0.00 height point (1).
- Click the scaling location (2).
 - The first height value 0.00 appears next to the wall view at the desired location.
- Specify the additional points to be scaled: the window sill (3), the top of the window, and the top of the wall



5.6. Create tags

Let's create a tag for an object.

Click Documentation / Tags / Create tags.

	Draftin	g A	nnotate	Docu	mentation
	125		x∎		
	Tags	Quai	ntity take-	off H	and-sketch st
_	125	Quick ta	ags		
1	125	Place ta	igs		· U
		Create t	ags		

• In the pop-up window, select Interior from the Disciplines, (1) Object from the types, (2) then add Depth to the label parameters. (3) Modify the Width, Height, Depth parameters of the prefixes as shown in the figure. (4) Click OK to accept the settings.

Tag creation								
Discipline: 1	Group		Tags	Object	t tag	\sim	New	Delete
Interior	Common properties				Import	Export	Export all	Delete All
	General properties		-					
Types	Calculated values		l ag p	arameters			1	
3D Shape	ARCHline.XP ObjectCommon (2)			Parameter Name	V	isible	Prefix	Suffix
Brise soleil	ARCHline.XP Common (6)		1	ID			ID:	
Cabinet			2	Object Name		4	0	
Cabinet Door			3	Width	~	1	W:	
Countertop	Name		4	Height	~	1	н: 4	
Curtain	Object Name		5	Depth	L-	·	D:	
Electrical Accessory	Width							
Grid ceiling	Depth	3 ->						
Gutter	Height							
IFC element	Model complexity (surfaces)							
LED lighting	Light							
Light sources	Tilting to left							
Loft	Tilting ahead							
Luminous text	Room name							
Moulding 2	View							
Object								
Picture								
Plain ceiling				UP Down				Delete
Roman blind								
Smart Object assembly	 From existing object 				0	к	Cancel	Annly

Select Documentation / Tags / Place tags. The pop-up window will display the previously made setting, accept it by clicking Apply and OK.

In the next pop-up window, you can set the label formatting.

Formatting tag	×
Cell text style	Default
Length dimension style	Default
Elevation dimension style	Default
Ratio (Image height / text height)	2
Opening direct	ion symbol properties
	OK Cancel

• Accept this also by clicking OK. Click on the sofa and place the tag.



The tag and the object are connected by a line, indicating that the two elements are linked. The line can be deleted, but the link remains. When the object's tag parameters are changed, the tag is also changed.

• Change the width of the sofa to 1800 mm. Update the label using the Update item command.



5.7. Using the plot layout

As we have seen, we were able to print the floor plan using the Print PDF command directly from the floor plan. This is the easiest, fastest solution. However, documenting plans is a much more complex process. Get to know the use of the *Plot layout*. In this example, we create 6 sheets, which are specified on one print view.

5.7.1. Prepare plot layout

The Prepare plot layout command is available under the Ribbon bar / Documentation / Plot layout menu item.

🔚 🖴 🗲) 🔿 🐰 🗇 🗂 🥜 .	/ 🗙 🗝	Ā	≠ Edit View	Building	Interior Drat	fting Dimension	Documenta	ition
Plot layout	Copy part to plot layout Paste to plot layout Refresh all layouts	A	Wall elevation	A B Drawing comparison	Snapshot	Quantity take-off	Hand-sketch style	Mood board	Mod
	epare plot lavout				Documentat	tion			Virt
							Floor	plan - Default -	Ground

- Set the A3 size to the page size and landscape orientation.
- Since we want to create 6 layouts, the column should be 3, the row 2.
- Select Include plot stamp option, with English horizontal.
- Click OK to create the 6 blank layouts.

Plot Layout Setup
Paper setting
Forms ISO A3 297x420 mm
Number of sheets in columns, rows
Height 297 Rows 2
Plot layout name (A-): 003
Orientation
Non-printable Margin
dX: 0 dY: 0
English1 English1 English2 English3 English4 English4 English4
OK Cancel

The actual size of the A1 print sheet, i.e. the A3 sheet, is determined by the size of the black rectangle 1:1. The blue dashed rectangle indicates the margin size. None of the rectangles appear in the printout.

5.7.2. Sheet 1: Furniture layout

Place a drawing on the page from the project navigator

The floor plan will be placed from the project navigator on page 1, which will include our furnished floor plan.

• Switch to the floor plan view and select the Furnished layer variation.





- From the project navigator on the left, drag the Floor Plan Ground Floor to the plan sheet.
- Select 1:50 from the list that appears.



• Place the drawing.



The floor plan also includes the wall view, which we do not want to show on this plan sheet. By modifying the drawing border, only the floor plans are displayed.

Click on the right side of the blue rectangle and select Offset. Move the cursor to the left so that exactly the floor plans are in the rectangle.







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The important parameters can be set or modified directly with the markers on the layout. The markers help you to directly edit drawings on the plan sheet, such as drawing scale, architectural scale, phase or wall fill.

Properties		D >	×	Floor plan Ground floor (0 m) * View 1 [Image] * A1 - Sheet Layout 0 * +		
Group			•	Layout 0 *		
Normál cso	port	\$	¢			
Normál csoj Property \$ General Layer Colour Line weights Draw Order BIM parameters Classfication \$ Property Property Property Property Property Property Property Property Property Property Color schemes \$ Resizing Width Height Keeping the XYY ratios	port Value Text Text Text Text 0 mm 0 mm			Foor plan -	Draw Archi Gold Ground floor	ing so tectur a = Al fill pa' sche
Categorize in IFC as:	Default	\sim	Ĩ			
Jse explicit geometry in I				Client Name 11:	Cer actina	
Add level shift						
				Project 101	ak fest	Wear Colore
					CATE TREAM 2023.06.09	

Filling in the stamp

• Select File / BIM / Project Parameters.

When opening a new project, this window will always appear so that you can pre-fill the project details.

• Enter the data as shown in the diagram and OK to close the window.

roject properties		×	× Project properties		
Parameters	Value	^	Parameters	Value	
8 Building information			Reference		
Building type	Office		Building gross volume		
Project name	Living room		Buildable area		
Project version number	v01		Maximum height of the Building:		
Building name			Building site total area [m2]		
Begin date			Building elevation above sea level in m		
Completion date			Project:		
Energy Rating			Location information		
Current Floor			Project location	48°05'52.08",20°47'18.24"	
Usable Floor Area			Project address	Budapest	
Reference			Postal code		
Building gross volume			Region		
Buildable area			Town		
Maximum height of the Building:			Country		
Building site total area [m2]			Client information		
Building elevation above sea level in m			Organization name		
Project:			Client name	Cadline	
Location information			Client address		
Project location	48°05'52.08",20°47'18.24"		Architect information		
Project address	Budapest		Architect Name	Berta Fias	
Postal code			Architect Company Name		
Region			Architect Address		
Town			Email:		
Country		~	* Other		
Add Place			Add Place		
Do not show this dialog again	OK	Cancel	Do not show this dialog again	OK Cano	

In case the stamp is not updated, you can update it with the **Documentation / Plot layout / Update Project Parameters** command.

The other information can be filled in in two ways.

 Click on the stamp and enter the missing data by clicking on the different field values as shown in the figure, closing all data with Enter.

- /		\
fim Name and Address \$company CadLine Ltd.>	Consigner	signer
Project \$compaddr	Designed by	Sheet
Sproject < Living room documentation > Designation	Project no. \$check	Date \$scale
\$designation Promise non plan	\$projnum	\$date
Firm Name and Address CadLine Ltd.	Consigner	
Project	Designed by	Sheet
Designation	Controlled by	Scale
Furnished floor plan	Project no.	Date

Another way to fill in the stamp is to use the Documentation / Plot layout / Fill /modify title box command.

Name	Value	•	
ArchitectName			
ClientName			
CreationDate			
PostalCode			
ProjectAddress			
Drawing			
drawnum			
phase_name			
Project			
Scale			
Sheet			
town			
	Drawing name		
	Architect		
	Design phase		
	Client Name		
	Project		

5.7.3. Sheet 2: Wall elevations

Viewports

Viewports display a selected part of the model on the plan sheet.

Viewports are located on the plot layout. You can create multiple viewports on a plot layout.

Each viewport displays a view of the design space, such as a floor plan, section, facade, 3D views with the scale and orientation you specify.

If the viewport was created on the floor plan, it can be edited either in its original location or on the plot layout.

We will copy the wall views elevations the floor plan as drawing details to the second, still blank plan sheet.

- Activate the floor plan.
- Choose the All layers variation.
- Choose Ribbon bar / Documentation / Plot layout / Create viewport.
- Select the part you want to copy and enter the scale: 1:50.



• Fill the stamp.



5.7.4. Sheet 3: Architectural floor plan

Activate the floor plan view, select the Architectural layer variation and from the Project manager, place it on the third plan sheet at a scale of 1:50.

On the floor plan on the plot layout, both the furniture and the dimensions, north sign, etc. are visible.

Our goal is to display the furnished floor plan on this sheet without any dimensions, north mark, etc. We could have achieved this directly using Viewport. In this example, we will show the use of transparencies on the plan sheet.



Layer settings on the layout

- Select the floor plan on the layout sheet, and then click the pencil icon from the shortcut menu.
- Enter the layer manager from the pop-up window.

Plot layout	×		
	Layer		
	Classes		
	Floors: place floors as displayed in floor plan		
	Floor		
<u> </u>	Drawing scale		
	0.02 1:50 ~		
	Architectural scale		
	1:100 ~		
	Phase Filters		
	All 🗸		
	Wall fill pattern		
	Fine \checkmark		
	Color schemes		
0.619 x 0.189 m	None \checkmark		
	OK Cancel		

- Activate the Used Layers filter.
- Turn off the 00_Layer 0 layer, where the snapshot and the wall views are. (If one of these is active, move the active layer to, for example, 00_Layer 0, as the active layer cannot be switched off.)



Layer Properties Management				
The name of curre	ent lay	er:Mére	ezés - Szintmagasság	Show visible layers only
Name	On	Ele	Description	
🧼 00_Fólia 0	9	522		
🧼 Dimension - Length	Ŷ	33		🖃 All layers
Dimension - Openings	?	5		Used layers
Interior - Living room - Curtain	9	32		
Interior - Living room - Decor	9	5658		
Interior - Living room - Furniture	9	5311		
Interior - Living room - Lighting	8	254		
🖋 Méretezés - Szintmagasság	9	5		
🧼 Slab	9	26		
I Vonal	9	8		
🧼 Wall - Load bearing	?	171		
				Layer filter restricts the layers displayed in the Layer list to the selected layers. Drag and dro the selected layers onto the layer filter Variations Available variations All layers
Do not delete used layers		~ (Copy to clipboard Protocol for Layer I	Naming OK Cancel

Then only the architectural plan and the dimensions of the wall elevations remain on the plan sheet.

• Click on the drawing, then click on the side of the blue contour where the wall view dimensions are, and select the offset. Move it so that the dimension lines of the wall views are not visible.



After setting up everything, the you will see the following:



Add new sheet

In retrospect, we will add a new sheet to our plans. The sheet is also placed on the existing print sheet so we can handle it all at once.

- Activate the Plot Layout, then create a new plot layout with the *Prepare plot layout* command. Set the number of Columns and Rows to 1.
- Then a dialogue box will appear, asking you to choose whether you want the third sheet to appear on an entirely new page layout or on the same layout. Here, place it in the same page, so select No.



The plan sheets can be freely moved or deleted.

• Select and delete sheet 7.



5.7.5. Refreshing drawings on the plot layout

It is also possible to display changes in the 3D model in the wall view on the plan page, or 3D snapshot.

- Activate the 3D window.
- Make the desired modification to the model (e.g. change the wall material).
- Activate the floor plan view.
- In the context menu of one of the wall views located there, select Update all wall views.
- The contents of the wall view change based on the changes.
- Make the Print tab active.
- On Sheet 2, click the wall view and choose Update drawing from the shortcut menu.
- The layout is updated based on the wall views in the floor plan window. It is also possible to update all layouts at once.

If we continue to work on the floor plan and make changes to it there, after saving the project, clicking on the plan on the layout sheet will display a new message stating that our drawing is out of date and waiting to be updated. We recommend the update.

Dining-room	Message		\times
	ו ? ו	This drawing is out of the date. Would you lik	ke to update it?
	-	Igen	Nem
	Clert Name Project Drawing name	Napat Loader Andreat Today yima Samay under Samay under	

5.7.6. Print to PDF

There are six Sheets on the plot layout. Now we print the first page, the Furnished Plan.

Choose File Menu / Print To PDF, and then enter the following information:

- Browse: specify in which folder the PDF created during printing will be saved and under what name. Make the destination folder:... ...\Documents\ARCHLine.XP Draw\2024\ Workshop_Preliminary\ 5_Documentation, and the file name is Furnished_Design.
- Paper size: A3
- Orientation: Landscape
- Instead of Entire drawing, select Sheet 1 from the list.
- Scale: 1:1
- Plot offset: Center the plot

When you see the desired result in the preview window, click **Print**. The PDF will be generated. Close the PDF file, then click **Cancel** to close the Print window.


阍 You may see elements on the floor plan, but some of these elements may not appear when printed.

The reason for this is that the **Printability of Layer** is turned off. This is also indicated by the warning message when printing:

Some layers are in non-printable status. These layers will not be printed.

In this case, the printability of the layer of the element must be switched on in the Layer manager on the floor plan, if necessary.

Layer Properties Management × 🐟 👒 🧇 The name of current layer:Slab Show visible layers only Layer filters C... Name On L... P... Ele... Line-type Line-... Description × + × æ 🥏 00 Fólia 0 0 514 Simple ... 0 mm 6 Csoport പ് 11 Simple ... 0 mm - All layers Used layers 🧼 Dimension - Length 2 65 Simple ... 0 mm **_** Dimension - Openings 6 5 Simple ... 0 mm Helyiségpecsét Æ 7 Simple ... 0 mm 0 ď Interior - Living room - Cu... ? 8 32 Simple ... 0 mm 🧼 Interior - Living room - De... 💡 Ē 9 5658 Simple ... 0 mm 🧼 Interior - Living room - Fu... 💡 ۲ 5308 Simple ... 0 mm ſ 🧇 Interior - Living room - Lig... 💡 9 254 Simple ... 0 mm 7 🧼 Méretezés - Szintmagasság 💡 12 Simple ... 0 mm 5 🖋 Slab Ŷ 34 Simple ... 0 mm Szöveg Ŷ ď 8 3 Simple ... 0 mm Layer filter restricts the layers displayed in the Layer list to the selected layers. Drag and drop the selected layers onto the layer filter Vonal 0 ď 8 8 Simple ... 0 mm f 8 Wall - Load bearing Ŷ 172 Simple ... 0 mm Variations 0 **+** × Available variations All layers Architectural Furnished A layer variation saves all the layers with the current states. It helps switching between possible layer variations in one step. < Do not delete used layers ✓ Copy to clipboard Protocol for Layer Naming ОК Cancel

 \times

OK

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In the example, the dimensioning layer is not printable. The Print window will then show the following result:



5.7.7. Print queue

Print Queue helps to print a large number of drawings (plot layouts, views and sheets) from a project. To batch print, you can insert every plot layout on one print layout. This way you can drop every document into a single PDF file.

- Select the File Print Queue command.
- Specify the name and location of the PDF file.
- Click on Insert green cross.
- Select Plot layout: A-001

Print queue	×	125	×≣			
Select / Unselect all Page Document Drawing number Paper size: Drawing original Scale		ags	Quantity take-off	Hand-sketch style	Mood board	Model to a Photo
						Virtual Staging
		Pr	oject Navigator			
		48	Views (3)			
		1	🐨 Floor plan			
			Floor plan -			
			2nd floor			
			Fround floor			
			Basement			
			View			
			View 1			
	-1					
C:\Users\renata.nagy\Documents\ARCHlineXP Draw\2024\Workshop_Preliminary\5_Documentation\2_Receptionroom_workshop_final.pdf		Ι.	Elevation			
Combine into a single PDF file		11				
PDF Printing			Sheet 1			
Create a cover page			Sheet 3			
	_		Sheet 4			
Template hie set C:\Users\renata.nagy\Uocuments\AKCHIIneXP Uraw\202\Template.rtt Browse Parameters Preview	-		Sheet 5			
			Sheet 6			
			Mood board			
			💮 Rendering			
Print OK	-1					
	-/					OK Cancel

255

• Set the parameters in the appearing Print dialog window. Paper size: A3, Source: Landscape, Scale factor: 1:1, Center the plot.

Print					
	Apply				
	Cancel				
Number of cop	ies	1			
Printer/plotter	PDF Printing				
	Browse -]			
Paper size:	420 x 297 mm				
Drawing origina	al size: 420 x 297 mm				
Size	ISO A3 297x42	0 mm 🗹			
Landscape)	\sim			
合 Color setti	ng	\sim			
🖨 Default		\sim			
Plot offset X		0.0 mm			
Plot offset Y	Plot offset Y 0.0 mm				
Center the p	lot				
☆ Scale					
 Scale to Fit 1:1 1:25 1:50 1:100 1:200 Custom scale 1 	1 : 1.0 e 1 : 1.414 :	1.414			
☆ Line weight					
Scale Line weight	eight with scale factor				
Plot Line wei	ight ON/OFF				
Replace half	tone with thin lines				
Draw bounding rectangle					

Click on Apply.

The settings in the Print dialog box apply to any additional views and sheets imported into the Print Queue.

Now the Print Queue window appears. You can change the order of the sheets by using the arrow keys.

- Turn off the last three blank sheets.
- Activate the Combine into a single PDF file option.
- Click on Print.

Now the batch PDF file is ready.



Print queue							×
Select / Unselect all	Page	Document	Drawing number	Printer name	e I	Filename	Error report
\checkmark	1	Layout 0 - Sheet 1		PDF Printing		kshop_final.pdf	
\checkmark	2	Layout 0 - Sheet 2		PDF Printing		kshop_final.pdf	
\checkmark	3	Layout 0 - Sheet 3		PDF Printing		kshop_final.pdf	
		Layout 0 - Sheet 4		PDF Printing		kshop_final.pdf	
		Layout 0 - Sheet 5		PDF Printing		kshop_final.pdf	
		Layout 0 - Sheet 6		PDF Printing		kshop_final.pdf	
C:\Users\Strelecz Fanni\Documents\ARCHlineXP Draw\2023\Workshop_Preliminary\5_Documentation\2_Receptionroom_workshop_final.pdf Combine into a single PDF file PDF Printing Create a cover page Template file set C:\Users\Strelecz Fanni\AppData\Roaming\Cadline\ARC\Template.rtf Browse Parameters Preview							
				ſ	Print PDF Printing Orientation Paper size: Printable Area Scale	Layo Defa 420 : 420 1:1.	out 0 - Sheet 1 ault x 297 mm x 297 mm 000
						Print	ОК

5.7.8. Create and use the plot stamp - optional

Documentation can be formally unified with the use of the plot stamp, which provides a suitable framework for the presented plans. It is possible to create a plot stamp that can be saved later on the plot layout. It is desirable to draw a plot stamp in different sizes (A3, A4), as well as in portrait and landscape positions, which you can use afterwards.

What does '\$' character mean before parameter name?

If the plot stamp contains a text beginning with '\$', that means ARCHLine.XP takes it as a parameter . The '\$' before parameter name means parameter can be used to assign a value by user.

Create plot stamp

The process of creating a custom plot stamp by the following steps:

- 1. Draw the shape of the plot stamp using 2D drafting tools.
- 2. Fill in the stamp with texts and the assigned parameters containing the "\$" sign. These parameters can be either parameters from the project (BIM parameters) or individually created.
- 3. Save plot stamp as a 2D group.

1. Draw the plot stamp by 2D drafting tools

In this example we draw the stamp on the existing print layout (It could be also on the floorplan.)

- Draw a rectangle with real 1:1 stamp size, e.g. 30 x 165mm.
- Draw the first horizontal line 15mm from the bottom of the rectangle and mark it. Select Edit / Duplicate and then Repeat from the floating menu. Enter the repeat number: 8.



• Enter the points required for the command as shown in the figure.

• Draw two vertical lines to help you position the text accurately.



2.a Fill in the stamp with BIM parameters

First, add BIM parameters from the project to the plot stamp. If you have already filled in the project IDs (project name, building name, building address, client name, architect name etc.) in the project, the details of the plot stamps will be filled in automatically on the plot layout. Using BIM parameters will save you time.

• Select the following command: Documentation - Plot Layout - Create Plot Stamp - Variables



🚸 A R C H | I N E. k

• In the appearing Project parameters window select those data you want to display on the plot stamp. In this example six parameters are selected.

Project parameters	×	
Select all	^	
* Building information		
Building type (\$BuildingType)		
✓ Project name (\$ProjName)		
Project version number (\$ProjectNumber)		
Building name (\$BuildingName)		
Begin date (\$begindate)		L 1
Completion date (\$enddate)		Project name
Energy Rating (\$Energy_rating)		\$projectname
Current Floor (\$CurrentFloor)		
Usable Floor Area (\$UsableFloorArea)		Project version number
Reference (\$Reference)		CD role at humber
Building gross volume (\$GrossVolume)		\$Projecuvumber
Buildable area (\$BuildableArea)		
Maximum height of the Building: (\$BuildingHeightLimit)		Project address
Building site total area [m2] (\$TotalArea)		\$ProjectAddress
Building elevation above sea level in m (\$Height_above_sea)		
Project: (\$ProjShortName)		Client name
Location information		\$ClientName
Project location (\$ProjectLocation)		
✓ Project address (\$ProjectAddress)		
Postal code (\$PostalCode)		Architect Name
Region (\$region)		SArchitectName
Town (\$town)		
Country (\$country)		Creation date
Client information		\$CreationDate
Organization name (\$OrganizationName)		
✓ Client name (\$ClientName)		
Client address (\$ClientAddress)		
Architect information		
Architect Name (\$ArchitectName)		
Architect Company Name (\$ArchitectCompanyName)		
Architect Address (\$ArchitectAddress)		
Email: (\$ArchitectEmail)		
A Other		
✓ Creation date (2023.06.09.) (\$CreationDate)	~	
>		
OK Cancel		u

- Define the text size 2 mm. Place the text together with the assigned with parameters.
- Later you can modify the text ("\$" parameters cannot be modified). Now change

Client (Customer) – Client, Creation Date – Date.



2.b. Fill in the stamp with your own data

To complete the plot stamp, we need additional data that is not in the project data (BIM parameters), such as drawing name, scale factor, page number... Add these texts to the plot stamp by adding variables starting with "\$". Now the content of these texts can be modified later after the plot stamp is placed on the plot layout.

- Set the height of the text to 2 mm in the general properties of the text.
- Place the text with variables. E.g. Drawing name, drawing name Make sure that the variable does not contain accent or special characters.
- Now turn this text to variables beginning with "\$" character: From the local menu select "*Convert to variable*" command.







Add regular texts, images etc. to the plot stamp, which will be the same in all plan: For the first field add an image containing the Logo.

• Now drag and drop an image on the plot stamp and set the size.



• Delete the vertical guide lines.

3. Save plot stamp in the library

Save the plot stamp in the library as a new group:

- Select Plot layout / Create plot Stamp / New plot stamp command.
- Select items, and close selection by pressing Enter.
- The specify two reference points, now press Enter. When the plot layout is created the program will place the plot stamp at the second reference point in the bottom right corner of the drawing sheet.



			A.B.
	Plot la	yout Section Elevation view Wal	all view Callout Drawing com
ſ		Prepare plot layout	
e		Drag and drop from Project Navigator	- Földszint (0 m) Nézet 1 [lm:
5		Copy part to plot layout	
		Copy part to plot layout by rectangle	
		Paste to plot layout	Þ
	Ũ	Import drawing from project	
		Edit after paste	
		Open title box	
	[abc]	Fill/modify title box	
		Create Plot Stamp	▶ [=\$] Variables
		Element visibility on printing	New Plot Stamp
	7	Refresh all layouts	
	 	Update Project Parameters	
		Duplicate sheet	

• Enter name, category, sub-category and producer in the appearing dialog.

Create new item in the library	×
Name of the new item in the library:	
Stamp with logo	×
Category:	
PRINTING	\sim
Sub category:	
English	\sim
Producer:	
generic	\sim
3 2	
ОК	Cancel



The new stamp is created here: Desing Center > Building > Group > Printing > Other.

Uploading project data

When you create a new project, the program automatically asks to add the project data. If you do not do this at that time, later you can complete it in the Project properties. This way, the plot stamp will be filled with project parameters automatically.

• Select File - BIM - Project Parameters.

ļ	File	🖻 🖪 🗛 🎧 🖓 🐛 🗔 💐	9 0 :	× = = = - +? = Edit View	Buildi
		New project		Project Parameters	
		Open project Ctrl+O		Shared Parameters	
-		Save project Ctrl+S		Project milestones	
I	B	Save project as Ctrl+Shift+S		Edit parameters in Excel	
		BIM		Add BIM parameter	
		Import >		Add classification	

Enter project parameters:

٠

Parameters	Value	1
Building information		
Building type	Office	
Project name	Living room	
Project version number	v01	
Building name		-
Begin date		
Completion date		
Energy Rating		
Current Floor		
Usable Floor Area		
Reference		
Building gross volume		
Buildable area		
Maximum height of the Building:		
Building site total area [m2]		
Building elevation above sea level in m		
Project:		
Location information		
Project location	48°05"52.08",20°47'18.24"	
Project address	Budapest	
Postal code		
Region		
Town		
Country		1
Add Dises		

Use customized plot stamp on the plot layout

We replace the default plot stamp to a customized one on the plot layout.

- Delete the original plot stamp.
- Drag and drop the new plot stamp from the *Desing Centre > Building > Group > Printing > Other* to the plot layout.

- Select the Next reference point.
- With its right bottom corner point place the plot stamp in the right bottom corner of the rectangle (printable area) marked with blue dashed line.



 Select Documentation – Plot layout – Update Project Parameters command. Now the Project Parameters dialog window will appear. OK.

All plot stamps data is updated with project data on the plot layout. We also fill in the missing information on the stamp:

- Select Documentation Plot layout Fill / modify title box command
- Enter the missing data: Page, Drawing name, Scale factor.

Name	Value	^
ArchitectName	Berta Fias	
ClientName	CadLine Ltd.	
CreationDate	2023.08.14	
ProjName	Living room	
ProjectAddress	Budapest	
ProjectNumber	V-01	
drawingname	Architectural floor plan	
page	1	
Scale	1:50	
	Project name	
	Project version number	
	Project address	
	Client name	
	Architect Name	
	Creation date	
	Drawing name	
	Scale	· · · · · · · · · · · · · · · · · · ·

Project data can also be updated here.





5.8. Everything you need to know about printing - Summary

The print dialog on the Dashboard makes printing with ARCHLine.XP quick, easy and straightforward.

Command location: Documentation / Print / Print

Click on the **Print** icon and select any drawing or printable area you want to print or create a PDF file from. When printing is activated, the other parts of the interface are hidden. To go back to the project, click on the Cancel button.





Print	When all settings are done, click on this button to start the printing process or to create the PDF file.
Cancel	Exit the print dialog
Number of copies	Set the number of copies you want to create from the printing.
Printer/Plotter	Select the printer/plotter available on your computer to use for printing the created sheet.
Browse/Properties	In case of PDF files you need to specify the path of the file. In case of printers/plotters you can change the settings of the printer/plotter.
Size	Select the paper size.
Orientation	Set the sheet orientation (portrait/landscape).
Printed area	Select the whole drawing or the printable area you want to print. You have the option to automatically create a print queue from the available printable areas.
Color setting	Select the grayscale, black and white or color option to fit the requirements of your printer.
Drawing orientation	You can rotate or mirror the content of the sheet.
Plot offset	you can move in horizontal and vertical directions the drawing on the sheet.
Center the plot	When activated, the drawing's center and the sheet's center will be aligned.
Scale settings	Set the right scale for the drawing. Use Scale to fit if you want the drawing to fit perfectly on the sheet. Select the preset values if you want it to be scalable after printing. Select the custom scale if you need a specific drawing size.
Scale line weight with scale factor	This command only takes effect if the Plot line weight on/off below it is turned on. This scales the line thickness according to the scale settings on the print sheet.
Plot line weight on/off	When enabled, the program takes into account the line thickness assigned to each element.
Replace halftone with thin lines	Replaces the half tones with thin lines to save ink.
Draw bounding rectangle	When activated, a grey rectangle replaces the drawing. It is useful in case your computer is too slow while setting up the print properties.



5.8.1. 3D printing

You can directly print the current 3D view into a PDF file or with a printer/plotter. This way you can easily share the 3D model views of your project with others.



5.8.2. Section printing

You can print image and vector sections with the new print dialog. In case of vector sections, you can create printable areas, thus you can set the areas of section you want to print. In case of image sections, the printable area command is not available.



5.8.3. Print queue

You can create a set of print sheets that will be printed into one file or into separate files. Create the print sheets, the set the print properties for each one. In the preview you can see what the final print will look like.

Print queue								×
Select / Unselect all	Page	Document	Drawing number	Printer nam	e	Filename	Error repo	ort
	1	or plansGround floor		PDF Printing		p_plan_03.	pdf	
	2	Floor plans1st Floor		PDF Printing		p_plan_03.	pdf	
	3	2D ElevationsS		PDF Printing		p_plan_03.	pdf	
	4	2D Elevations		PDF Printing		p_plan_03.	pdf	
	5	2D ElevationsN		PDF Printing		p_plan_03.	pdf	
	6	2D ElevationsE		PDF Printing		p_plan_03.	pdf	
	7	2D SectionsCro		PDF Printing		p_plan_03.	pdf	
	8	2D SectionsSection		PDF Printing		p_plan_03.	pdf	
Combine into a single PDF file PDF Printing Create a cover page								
Template file set C:\Users\balin\OneDrive\Dokumentumok\ARCHlineXP Dra\Template.rtf Browse Parameters Preview Image: C:\Users\balin\OneDrive\Dokumentumok\ARCHlineXP Dra\Template.rtf Print Floor plansGround floor Portion Image: C:\Users\balin\OneDrive\Dokumentumok\ARCHlineXP Dra\Template.rtf Default Parameters 289 x 202 mm Image: C:\Users\balin\OneDrive\Dokumentumok\ARCHlineXP Dra\Template.rtf Browse Printable Area: 289 x 202 mm Image: C:\Users\balin\OneDrive\Dokumentumok\ARCHlineXP Dra\Template.rtf Image: C:\Users\balin\Douton Image: C:\Users\balin\Douto					d floor			
		** * *				Print		ОК

Select/unselect all	With this button you can select/unselect all rows or you can click on the check box to select/unselect a row.
Page number	Automatically created numbering for the pages.
Document	The name of the print sheet.
Drawing number	You can set a drawing number for the pages.
Printer name	Displays the selected printer.
Filename	Displays the name of the file that will contain the print sheet.
Error report	Any error messages regarding the print sheet are displayed here.
Path	Set the folder where you want to save the PDF file.



Combine into a single PDF file	When activated, all the listed drawings will be combined into one PDF file.
Printer	Select the printer.
-	Add a new print sheet.
*	Delete the selected print sheets.
Ľ	Change the print sheet settings.
3	Refresh all print sheets with the settings.
	Move print sheet up.
	Move print sheet down.
Create a cover page	Add a cover page to the combined PDF.
Browse	Select the used RTF file.
Parameters	Set the project parameters.
Preview	In the preview you can see the automatically created cover page.
Print	When all settings are ready, create the PDF file with this button.
ОК	Save all settings and exit the Print queue dialog.

5.8.4. Printable area

Define printable area

The "printable area" is a part of the view that you mark for printing if you do not want to print the entire view.

If you select a printable area in the Print dashboard, only what you see in the rectangular part will be printed, not the entire view. A view can have several printable areas.

Drawing sheets placed on a print layout view are automatically listed as separate printable areas in the Print dashboard. It can be used on floor plan and section views.

Printable areas make it easy to specify the plan details you want to print.

Command location: Documentation > Print > Define printable area



Printable areas are marked in red in the image:



The Print dashboard displays the print areas, which can also be printed as a print queue.



Manage printable areas

In the Manage Printable Areas dialog, you can simply rename the created printable areas, locate them in the project with the click of a button or delete unused printable areas.

Automatically created printable areas cannot be deleted.



The Manage printable areas dialog has four columns. In the first column you can change the name of the area to be printed. This helps you to find the right area during the printing process, so that you can quickly and easily select the right area from a list of several to be printed. The area size column shows the width and height of the selected area. In the third column, click on the Show button and the program immediately shows you where the selected area to be printed is located in the project. In the Delete Area column, first select the areas you want to delete, then click OK to close the dialog and delete the selected areas from both the list and the project.

Printable area name	Area size (mm x mm)	Show it	Delete
A-002 - Sheet 1	420.0 x 297.0	Show	
A-002 - Sheet 2	420.0 x 297.0	Show	
A-002 - Sheet 3	420.0 x 297.0	Show	
A-002 - Sheet 4	420.0 x 297.0	Show	
A-002 - Sheet 5	420.0 x 297.0	Show	
A-002 - Sheet 6	420.0 x 297.0	Show	
A-1 - Sheet 1	420.0 x 297.0	Show	
Area-1	6844.6 x 10117.4	Show	
Area-2	5224.6 x 5709.8	Show	

Workshop 6: Lights



6. Workshop: Lights

During this lesson you can learn about the following topics:

- Placing lamps from the library
- Placing and modifying recessed spot lamps
- Creating a new lamp, adding light sources, saving it to the library
- Modifying the directions of sport lamps
- LED strips
- Luminous text.

Open your browser and watch the "Lights" tutorial video.



Please download <u>Preliminary Course - Workshop Projects 2024</u> from our website and install it. It includes all projects for all preliminary workshops.

Start

- Start ARCHLine.XP.
- Click on the Open project button.
- Open the following project: Documents\ARCHlineXP Draw\2024\ Workshop_Preliminary\6_Lights\1_Lighting_workshop_START file.

Saving the project

 Before starting, we recommend to save the project with a different name, not to overwrite the original project. Select the File / Save project as command, then give the name of the new project and the place where you want to save it.

Before starting, it is essential to discuss the following definitions:

Light source: A special point, line or area from where light beams start and spread in the space. **Lamp:** This is an object with one or more light sources.

6.1. Placing lamps from the library

Let's place two wall lamps in the project from ARCHLine.XP Design Center.

6.1.1. Placing lamp on the floor plan

• Activate the 2D window. In the 3D window select a perspective view, from where the right wall is visible and lamps will be placed on.





- Zoom in the upper corner of the right wall on the floor plan.
- Select from the Design Center / Catalogue / Objects / Lighting / Wall lamps library the object named "Wall lamp 3". Click on it.
- Before placing the lamp, modify its base offset from the floor to 1600 mm, then hit Enter.
- With the "Drag and drop" method drag the lamp into the project and place it to 1660 mm from the upper corner. Just type in the value and hit Enter.
- Hit ESC to close the command.

With this method you can place any lamp from the Design Center to the layout.



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6.1.2. Placing lamp in 3D

- Activate the 3D window.
- In Design Center click on the wall lamp and drag and drop it on the floor plan next to the cupboard.
- After placing it, select it and rewrite its Base Elevation to 1600 mm on the Properties panel on the left side.

This is how you can modify posteriorly an already placed lamp.



You can choose from more lamps under *Design Center / Catalogues / AL Warehouse* or *Interior menu / AL Warehouse*. Here you can search by model or by Brand (Manufacturer). In the case of brands, you can select Eglo or Rabalux, for example.

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Light effect

If the Realistic representation mode is active, you can use the Light effect to see the light of the 2 wall lights in 3D:

- Make sure the 3D window is active, no items selected. In the Dashboard, the Visual Style should be Realistic representation.
- Make light sources visible.



 $\mathbf{p} \times$ Dashboard ➢ Perspective view Ø N C D R 的 \triangleright 4 D \leq Θ Ð P D Time 15:00 Date 12 July

• Turn off Lights. (Light Effect does not work with DirectX 9.)

- The light effect displays point and spot lights in 3D. The limitation is that it only displays the light from the Led strip as a spot light.
- For full display, we recommend Rendering.

Standalone rendering

In addition to the Light effect, you can also check the light of the lamp in the Render image. During the workshop we will use the *Standalone rendering*.

- Start the Standalone rendering command from the Rendering icon in the Status bar.
- Do not change the render settings. OK.
- Save the completed image.



Resolution	800x60	0 (SVGA)	\sim	
Render presets	Q1 - Q	uick preview image	~	
Samples per pixel (anti-aliasing)	2		~	
Renderpass count	30		~	
Sharper details	\checkmark			
Enable artificial lights	\checkmark			
Scaling of artificial lighting	100 %		~	
Sunlight	Cloudy	daylight	~	
Jse IES Light in all spotlights.				
Choose IES		Edit		
Date and time	12 July	15:00 (Daylight)		
Background	Uniforn	n	\sim	
Colour				
Specify a folder to save render i Sackground brightness	C:\Us 25	sers\renata.nagy\Documents\A	ARCHlineXP D	
Specify a folder to save render i Background brightness	C:\Us 25	sers\renata.nagy\Documents\A	ARCHlineXP D	
Specify a folder to save render I Background brightness	25	sers\renata.nagy\Documents\4	RCHlineXP D	
Specify a folder to save render i Specify a folder to save render i	C:\Us 25	sers\renata.nagy\Documents\#	IRCHlineXP D	
Specify a folder to save render i Background brightness	25	ers\renata.nagy\Documents\A	IRCHlineXP D	
Specify a folder to save render i Background brightness	25	ers\renata.nagy\Documents\4 Inherit background fi Rendered Fram Change to the	IRCHlineXP D	



6.2. Recessed spot lamps

Let's place spot lamps on the ceiling. First, we have to create the ceiling of the store.

- Activate the 2D window.
- Click on the **Ribbon Bar / Building / Ceiling / Plain auto ceiling** command. When clicking into the room the ceiling is automatically created.



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- Modify the base offset of the ceiling. Select the ceiling and rewrite its Base Elevation to 2680 mm on the Properties panel on the left side.
- Open the properties of the ceiling by selecting it and clicking on the pencil icon on the appearing Local menu.

We will place 4 rows of spot lamps into the ceiling, with 6 spots in each row. First, we set the global properties of the lamp groups.

- Select the Default unit tab (1). From the Lighting tab (2) select the lamp named "Series of spot lamps 600 mm" (3).
- By clicking on the pencil icon, you can further modify the selected element (4).



- On the Distribution Mode tab left the Lamps enabled on path option on, and below that activate the Each path one by one option.
- Switch off the Lamps enabled on nodes option.
- Left the Lamps enabled on endpoints option on and rewrite the Number of elements to 4. Left the other options on the default settings.



Save the lamp group on the Save tab as "Spot lamps 6" then return to the ceiling by clicking on the OK button.

Lighting

8	Create new item in the library Name of the new item in the library: Spot lamps 6 Category: LIGHTING Sub category: Spot lapts Spot lapts
	generic v
	BIM parameters OK Cancel
Save the current item into the library, or select a new Series of spot lamps kitchen ligh	e to edit
Save	Description V Restore default from:
	Mutoritable refressition page OK Cancer

- Let's sink the spot lamps 40 mm into the ceiling. Rewrite the value of Offset down / up to 40 mm.
- Let's go to the Lighting tab (1).
- The path of the lamp group will be a straight line. Select the profile named "Vertical base profile 1" (2).
- The first and the last lamp should be 500 mm from the edge of the ceiling, and the path should also be 500 mm from the left edge of the ceiling. Rewrite the values (3) by clicking on the lock icon on the right, then with the green tick place the first lamp group (4).





- On the Cut tab activate the Make holes in false ceiling option.
- Modify the parameters of the cut. Select the Circle profile, rewrite the Width and Height values to 100 mm.



- Let's go back to the Moulding path tab.
- Click on the green plus to add the second row 2000 mm from the left edge of the ceiling using the previously set values. After that place the third and the fourth row to the right side, mirroring the first and second rows.
- With the OK button close the dialogue.



6.2.1. Placing spots to a given profile - optional

The next step is to place 10 spot lamps to a previously drawn arc in the middle of the ceiling. Allocate to the plain ceiling 5 lamps, that contains 10 spot lamps.

- Activate the 2D window.
- Select the previously drawn profile by clicking on the Layer walk icon and while holding the CTRL key, activate the Spline layer.

\bigotimes	Layer Manager				
Ş	Move Objects to New Layer				
	Layer Walk				
	Change to Current Layer				
Ś	Activate the layer of selection				
	• 🙏 • 🕞 🗽 🗗				

• With the OK button close the Layer walk and the arc appears.

	-
Layer walk	
-Decor (734)	
-Euroiture (26)	
-Led (10)	
-Lighting text (256)	
-Spline (1)	
-Switches and sockets (46)	
06_Layer6 (50)	
11_Wall1 (88)	
89_Cirde (1)	
Slab 1 (35)	
L	
Display empty layers	
OK	Cancel
	111





Open the properties of the ceiling again.
 Go to the Lighting tab and add a new profile by clicking on the green plus icon. This will not be a simple straight line so click on the Define profile button.

• Chose the Select an item option from the Ribbon Bar.

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Polygon	Arc	Rectangle ▼	Rectangle lw	Circle	Closed loop	Multiple profile	Edit boundary	Select an item	Select from list	Select connected lines	Finish	Cancel
						Draw					Edi	itor

• Click on one point of the previously drawn arc close to its endpoint.

Do not use the "Spot lamps 6" lamp group here, add a new one.

- Go to the Lighting / Pattern tab and untick the default settings.
- Select the "Spot lamps 6" lamp group and click on the pencil icon.



- On the Distribution Mode tab set the **Number of items** to 8 and tick the **Full path** option and torn off the Lamps enabled on nodes option.
- Left the other settings unchanged. Close the dialogue with the OK button. Click on Yes in the appearing dialogue.
- Sink the spot lamps 40 mm into the ceiling here as well. Rewrite the value of the Vertical offset to 40 mm.
- Click on the green plus to create the lamps and close the dialogue with the OK button.
- In the 3D window, set View_5.
- Turn on the Light effect, then turn it off.



• Restart the Standalone rendering command.



Save the image.

6.3. Creating new lamp

When (for example) we download an object from 3D Warehouse, it has no light source automatically attached, so it will not have light and will not be a lamp on our renders. To have this effect, we need to add light sources to this object, then save it to the library including the light sources.

The saved object now can be used as a lamp and its light can be switched on and off in the project.

Let's see the process of creating a new lamp.

- Click on the Design Center / Catalogue / 3D Warehouse icon, sign in.
- Download the object named the following: "Concrete ceiling lamp".



- Untitledxxx appears in the element name. Enter the name of the lamp: Concrete ceiling lamp
- Select the appropriate category, subcategory.

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The object to download is a lamp to which we will assign a light source.

• Select the "Add light source" icon. The program will then automatically place a light source at the bottom center point of the item. Its position will be changed afterwards.

Create new item in the library	×
Name of the new item in the library:	
Concrete ceiling lamp	~ 💡
Category:	
LIGHTING	~
Sub category:	
Pendant lights	~
Producer:	
3D Warehouse	~
Product line	
	~
BIM parameters	OK Cancel

If the light source icon was on, i.e. the element is a lamp, a window will pop up. In this window, set the lighting type to Ceiling. This parameter will be used later by the program when creating the lighting plan.

• After download, place the new object near to the right corner of the store, above the desk. Enter.



The size of the downloaded lamp is too big, thus we will modify it.

- Select it, then open its properties by clicking on the pencil icon.
- Before modifying any of the values, tick the **Uniform scaling operation** option.
- Rewrite the height to 1000 mm.
- Modify the material of the lamps, Click on the Edit button in the New material row.



	Height:	1000 mm	
	Width:	1032 mm	
	Depth	144 mm	
	Uniform scaling operation	\checkmark	
	Base offset from the floor	1600 mm	
	Model complexity (surfaces)	Unknown	
*	Visualization		
	Layer	00_Fólia 0	\sim
	Colour		
	Line type	Simple Line	\sim
	Line weights	0 mm	\sim
	Draw Order	8- Bottom-most	\sim
	BIM parameters setting	Edit	
	Keep original graphical att	ributes	
	New material	Edit	
	Display 2D Fills	R:255 G:255 B:255	
-	Constrains		
	2D representation by 3D to	op view	
	Visible on other floor?		
	All floors	Edit	
	Sprite in fixed direction		
	Tilting to left	0°	
	Tilting ahead	0°	
*	Connection to other elem	ents	
	Show 3D		
	Place it as column		
	Slab-roof cutting		
	Insert into wall		
	Make only hole in the wa	all	
		Depth Uniform scaling operation Base offset from the floor Model complexity (surfaces) X Visualization Layer Colour Line type Line weights Draw Order BIM parameters setting All floors Sprite in fixed direction Titling ahead Consection to other elem Show 3D Place it as column Slab-roof cutting Insert into wall	Depth 144 mm Uniform scaling operation ✓ Base offset from the floor 1600 mm Model complexity (surfaces) Unknown × Visualization Layer 00_Fôlia 0 Colour Simple Line Line type Simple Line Line type Simple Line Draw Order 8- Bottom-most BIM parameters setting Edit Vesualization Edit Display 2D Fills R:255 G:255 B:255 2D representation by 3D top view Visible on other floor? All floors Sprite in fixed direction Titting ahead Show 3D Place it as column Slab-roof cutting Insert into wall

• Click on one of the lamps on the preview window, and modify its material by clicking on the Modify button.

Edit material	×
	<pre>SketchUp default</pre>
Material direction	Modify OK Cancel

- Select the "Chrome_002" material from the Material library.
- Close the dialogues with the OK button.

The material of the lamp has been modified but the lamp is not at the right place yet.

• Select the lamp again and rewrite its Base Elevation to 1680 mm on the Properties panel appearing on the left, then replace it above the desk.

Switch off all the lamps in the store, except the previously placed one.

- Select the 2_View_2 perspective view and activate the floor plan window.
 Select "Switch off all lights" command under Ribbon menu / Interior / Lighting.
- Select "Where are the lights?" command under Ribbon menu / Interior / Lighting. On the floor plan, all light sources appeared with a black icon, because we turned them all off.
- Turn on the lights you just placed by clicking on the light bulb icon. The icon will turn yellow, indicating that it is on.





The Show all lights command can be used in 2D and in 3D.



If there are no changes on the rendered image, then it worth to refresh the rendered image by pressing the play button.



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6.3.1. Adding light source

The name of the downloaded object contained the "lamp" word; therefore, the program automatically added a light source to the bottom center point. This is visible now on the picture. Obviously, it is not on the right place, therefore we have to add three more light sources.



- Activate the 3D window.
- Select the lamp and from its Local menu select the Lighting / Add / Edit light source command.
- The Light manager appears. At the moment there is only one light source added to the lamp, but it is not at the right place.
- Rewrite the Z value to 40 mm and select the Top view.



- In this view the light source could be adjusted exactly to the middle of the lamp.
- Add 1 more light sources to the lamp by clicking on the Add button. From the library select the Global light sources / Compact fluorescent / Compact 11W light source.


• Rewrite the Z value to 40 mm at the second light source from left and relocate it using the Top view. Close the dialogue with the OK button when you are finished.

Check the modifications in the render window as well. Now the first two lamps from left are turned on.

- In the 3D window, set View_1.
- Start the Standalone rendering command again.

Copy light sources on floor plan

The missing lights sources will be copied from the existing lampshades.

- Select the ceiling lights on the floor plan.
- Click on the second light sources.
- Click on the blue markers and choose "Move a copy" command.





• Click in the middle of the third lampshade.







• Repeat the same on the last lampshade.

6.3.2. Save lamp to Design Center

• Select the lamp. 4 yellow light bulbs appear next to the lamps. These indicate the light sources.



• To save the lamp to the library select the Lighting / Save lamp into library command from the Local menu.



- The program asks whether you want to overwrite the original object. Click on Yes.
- The next questions are about the original 2D and 3D view. Here, click on No both times.
- Search for the saved lamp in the Design Center. The quickest way to do it is to select the object and from its Local menu, select the Locate item in Design Center option.



•

The object appears on the left with its properties. On the top, next to the house icon its path can be seen. Let's relocate it to the right category.

Click on the cogwheel icon. Select the Sort in categories command from the appearing menu.



• You can rename the lamp. Keep LIGHTING as the main category and Pendant lights as the sub category. The producer could remain the 3D Warehouse too, but you can specify another manufacturer as well.

Create new item in the lib	rary		
Name of the new item in th Concrete ceiling lamp	e library:		~
Category: LIGHTING			~
Pendant lights Producer:			~
3d warehouse			~
BIM parameters		OK	Cancel



This lamp is accessible from this folder for future projects as well.

- Set an evening time on the Dashboard.
- Restart the Standalone rendering command.

In the evening picture you can clearly see that only the new lamp is lit:



							
Time	21:18						
Date	12 July						
	*						
Q1Q2	Qx						
Joining Surfaces							
Color schemes None	~ .						
Dashboa Design c	Project n Styles						

Make the floor plan window active. The Interior menu / Lighting / Where are the lights? command will then display the light sources of the lamps on the plan, indicating which are lit and which are not:



6.4. Changing direction of spot lights

In the ARCHLine.XP program you can change the direction of light of an already placed spot lamp.

 Activate the 2D layout and place the object named "Spot lamp" from the Objects / Lighting / Spot lights folder before the wall that is standing alone.



- Select the placed object and on the Properties panel appearing on the left rewrite the value of Base elevation to 2650 mm.
- At the moment the spot lamp is facing the middle of the store. Select and rotate it to face the wall.

Optional:

• Go to the 3D window and turn on the Light effect in the Dashboard.

The light effect will then also appear in the 3D view. The pendant and spotlight will now be lit. To light only the spot lamp, do the following:

- Go to Ribbon bar / Interior / Lighting / Select and choose the Switch on lights only here command.
- Select the last spot lamp you placed. This is the result:



Let's change the direction of light.

Select the spot lamp and from the Local menu select Lighting / Add / Edit light source command.







- The Light manager dialog appears. The light source and its direction are visible.
- Select the Right View so both the inner and outer light cones are visible. Rewrite the Cone angle to 100° and the Inner cone angle to 60° at the Own parameters.



- With the OK button close the dialogue.
- Select the spot lamp and click on the yellow light bulb icon. Now modify the direction of light with the appearing arrows.
- Click on the blue arrow pointing downwards, then the change direction icon.



• With the help of the appearing orange point pull the arrow lower.

This way the light on the wall is moved lower.





Turn off the Light effects. We won't need the spot lamp anymore, thus you can delete it.

6.5. LED strips

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Let's place LED strips to the blue wall and to the bottom of the cylindrical desk on the floor plan.

Before placing LED strips, it is recommended to open the ceiling properties and on the General settings tab select a Top view under Representation in 2D. This way the mark of the plain ceiling will not appear on the floor plan.

- Activate the 3D window and set the view to 1_View_1. Zoom in on the blue wall.
- Select Ribbon Bar / Interior / Lighting / LED light strip.
- Select the blue wall, then click along the nodes of the wall starting from the bottom left point. Enter.



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			ED LED	light strip								
							12				1.7	5
								1 pm	Part	Szel	sópont Hosszúság 7 Hailásszög	2.7 m 270°

Once you have placed the LED strip, the LED lighting dialogue box will appear. The light properties can be set on the **Size and lighting parameters** tab.

• In the dialog box, set the Dimming level to 60%. In the **Section Profile** tab, under Profil properties, move the reference point to the bottom left corner point.

	Edit profile			×
LED lighting	12		Rectangle Simple	Mirror on X Mirror on Y Rotate
. [CTTSelect Profile	10	Uniform scaling operati Width: 0.02 m	on 7 Height: 0.01 m
	Name Value Height [0.001 - 100 m] 0.01 Width [0.001 - 100 m] 0.02	Reduby		-
			OK	Cancel
Rectangl e Simple				Height 0.01 m Resize profile Rescale
Section Profile			Automatic refresh on page	OK Cancel

The LED strip around the wall is finished. Now we will place a circular LED strip around the counter.

Activate the 2D layout. In the 3D window select a perspective view from where the cylinder-shaped desk is visible.
In the 2D window zoom it in, then start the LED light strip command from Ribbon bar / Interior / Lighting.

The LED stripe path will be given by a circle passing through three points.

• From the appearing menu select Circle - 3 points command.

	(+) Circle	Closed loop	Edi
	+	Circle	-
	\bigcirc	Center point	
k	\bigcirc	3 points	

• Define three points on the inner circle of the desk.



- Set the Light color to light yellow.
- Then go to the General settings tab.
- Set the value of Relative elevation to 130 mm, so the LED strip is placed at the bottom of the counter. Click OK to close the window.





Close the integrated rendering window and start a stand-alone rendering. When the process is over, the result is clearly visible:



6.6. Luminous text

Let's place luminous text on the portal and on the rear walls in the project.

eDesign sign

- Select in 3D window that view from where we can see the top part of the entrance from outside.
- Select Ribbon bar / Interior / Lighting / Luminous text command.

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ng	Sweep	Soft furnishing	Ligh	ting	Lighting Plan	Electrical accessory	KB
	Decora	ition	lamp	s			-
/deselect					Ţ 🌾	- 	
View 2 [Image] *			A	Place	e Lamp		
			**** ****	LED	light strip		
			T	Lumi	nous text		

- In the appearing window type the text: "eDesign". Hit OK to close the dialogue.
- Select the surface, next select where you want to place the text, then with a third point determine its direction. By pressing Enter the direction will be 0°.



In the appearing properties dialogue set the following:

- Enter the value for the thickness of the text, i.e. the extrusion height: 40 mm.
- Set the height of the text to 400 mm.

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• Under Text style you can select the font type. The user set text height overwrites the font size settings of the text style.

Here you can only choose predefined text styles. New style can be created under Draft / Properties / Text.





- Go to the Materials and lighting tab.
- Activate the Enable light and Lighting is enabled on the front only options.
- Modify the color of the light to "purple". (By clicking on the stripe under Light color you can choose any from the color palette.)
- For the text color select Pink.
- Close the dialogue with the OK button.

Luminous text x 🗗 🗳 RP TT 🖉 🗖 🗹 Enable light Т ÷ \checkmark Lighting is enabled on the front only Т Light intensity per meter 0 50 lm \sim Chrome_00 g580 Т Cherry g630 g840 Saffron Oil_green pink 2 Dimming level 0 100 % \sim Light color \sim Material direction 0° Materials and lighting Automatic refresh on page Ð ОК Cancel

If the text is not at the right place, it can be moved afterwards with the markers or arrows or under Properties on the left side.



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"imagine" sign

The next step is to place more luminous text to the bare wall at the back of the store.

- Activate the 3D window and select a perspective view so the wall we want to work on is visible.
- Select Ribbon bar / Interior / Lighting / Luminous text command again.
- Type in a word and place it diagonally, not horizontally this time.
- Set the extrusion height to 20 mm.
- In the appearing property window set its height to 200 mm.
- Go to the Materials and lighting tab.
- Activate the Enable light and Lighting is enabled on the front only options and choose a color to the text.
- Hit OK to close the dialogue and place more texts in any direction.



The result should be similar to this image:



Luminous decorative strips on the floor

Let's place decorative strips on the floor with the Luminous text command.

- After starting the command type in points and not text to the appearing window.
- Select the floor and define the starting point and direction of the luminous strips.
- Set the extrusion height to 5 mm and the text height to 500 mm.
- Activate the Enable light and Lighting is enabled on the front only options on the materials and lighting tab.
- If the light strip has shifted to a wrong place during the modifications just move it to the right place.
- To do so activate the 2D layout and relocate it with the Move marker.
- Place another light strip parallel to the first one with the Move a copy command.

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• The light strip can be modified after placement. Open the second strip properties and delete as many points as needed.



With this tool you can easily place any luminous text, decorative strips or shapes in your project. Turn on the layers named "Decor" and "Led" and rebuild the 3D. The project is finished:



Workshop 7: Rendering



7. Workshop: Rendering

Taking a good quality photorealistic picture is not a matter of pressing a button.

You have to learn how to deal with light and shadow, know the physical properties of the materials, find the ideal point of view and build up a photorealistic image that looks realistic, step by step.

Now you will learn the technical requirements and rendering settings needed to make a good interior and architectural render.

During the workshop we will discuss the following topics:

- Project settings
- Render settings
- Render styles
- Render effects
- Render list
- Open your browser and watch the <u>Rendering workshop</u> video.
- Please download <u>Preliminary Course Workshop Projects 2024</u> from our website and install it. It includes all projects for all preliminary workshops.

Start

- Start ARCHLine.XP.
- Click on Open project.
- Open the following project: .../Documents\ARCHlineXP DRAW\2024\Workshop_Preliminary\7_Rendering\eDesign_Shop_1_START file.

Save project

 Before starting, we recommend to save the project with a different name, not to overwrite the original project. Select the File / Save project as command, then give the name of the new project and the place where you want to save it.

7.1. Default settings

Before starting the work, let's get to know the project.

7.1.1. Perspectives

Let's look through the perspective views.

In order to navigate between the already set up views, click on the black arrow next to the name of the actual view. The saved views appear. You can activate a view by clicking on it or you can switch between them using the blue arrows.

<pre> 01_Shop_1 </pre>	
<pre></pre>	
<pre> 01_Shop_3 </pre>	
<pre></pre>	
🗸 01_Shop_5	
01_Shop_6	
01_Shop_7_External view	· · · ·
<	>
🖝 01_Shop_5 🛛 🗸	1 +

It is recommended to set up the views in a room clockwise so they are traceable and understandable to everyone. Create more views in a room and when naming them, first type in the name of the room then the number of the view (e.g.: Kitchen_01). If we have a multi-storey building, type in the number of the storey before the name of the room (e.g.: 01_Kitchen_01). if you follow this method your views will be easily understandable.

Select the perspective view named "01_Shop_5".

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When setting the perspective, make sure that the camera and the subject are at the same height. The recommended height is 1100 mm -1400 mm. The angle of view of the camera should be 60-70 degrees. Deviate from this rule only if there is a reason to do so.



7.1.2. Layers

The view also has a floor plan. The project has a costumer area and a storage area. We will work in the costumer area. Let's look at the layers of the project.

The Layer manager can be found on the Status bar. Click on the arrow next to the Layer Manager icon and select the Layer walk icon.

	Layer Manager					
\$	Move Objects to New Layer					
	Layer Walk					
٢	Change to Current Layer					
Ś	Activate the layer of selection					
	• 🙏 • 🕞 🔯 🞜					

A window appears with the layers. You can see that the names of the layers are grouped in the following way. There is a room, which is now the "Customer Area", and for this space different layers were created:

- ✤ a layer for furniture
- ✤ a layer for décor
- ✤ a layer for switches and sockets
- ✤ a layer for the LED strips
- and finally, one layer for the luminous texts.

When creating your layers, it is recommended to use this grouping method, because, for example, you can easily display the project without decorating. Simply enter the Layer Manager and turn off the "decor" layer from the Used layers. This can be turned on at any time later.

To summarize, it is recommended to create layers similarly when dealing with an interior design plan. Type in the name of the room and create a lone layer for the furniture, for the décor and for the lighting. These are elements that need to be turned on at the final rendering, but it will speed up the workflow if you can turn them off.

If you do not deal with a layer (do not create a new layer) during the work (e.g.: walls, slabs), the program automatically places these items on a pre-created layer. You can also turn them off and on.

The 3D and the 2D can have different layer lists so we always change the layer settings on the floor plan.

Simplification of the model

- Activate the 2D window.
- Click on the Layer walk icon and select the layer of the slab and while holding the CTRL key select the layers of the wall too.
- Close the dialogue with the OK button.
- The floor plan has been changed accordingly, and from this you can rebuild the model by clicking on the 3D hammer icon



on the bottom status bar.

	Layer walk	
ea.	-Costumer area - Decor (73 -Costumer area - Furniture	(4) (26)
	-Costumer area - LED strips	(13) text (314)
;	-Costumer area - Switches	and sockets (46
	01_Slab (35)	
	11_Wall1 (88)	
	Display empty layers	
	OK	Cancel



7.2. Render settings

7.2.1. Render time

Which factors define the render time?

1. **The computer you are working on** (processor speed, memory size).

There are several ways to get information about your computer's parameters in Windows. One option:

Click the Windows start icon and type **DXDIAG**, then run the command. (Do not request online access.) In the System window that appears, you will find detailed information about the processor and memory:



DirectX diagnosztikai	eszköz		0	કે	_		
Rendszer 1. képemyő	2. képemyő Leképezés 1	. hang 2. hang	Bemenet				
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Rendszerinformáció							
	Aktuális dátum/idő:	2024. május 23.	, csütörtök, 14:27:44				
	Számítógépnév:	DESKTOP-477PA	S1				
	Operációs rendszer:	Windows 11 Pro	64 bites (10.0, buildszá	m: 22631)			
	Nyelv:	magyar (területi	beállítás: magyar)				
	Rendszer gyártója:	Micro-Star Intern	national Co., Ltd.				
	Rendszer típusa:	Katana GF66 12	UD				
	BIOS:	E1584IMS.110			_		
	Processzor:	12th Gen Intel(R	.) Core(TM) i7-12700H (20 CPUs), ~2.7G	Hz		
	Memória:	32768MB RAM					
	Lapozófáji:	Használatban: 1	0033MB, szabad: 24484	IMB			
	DirectX-verzió:	DirectX 12					
WHQL digitális alái	rásainak ellenőrzése						
	DxD	iag 10.00.22621.	3527 64 bites Unicode	Copyright © Micr	osoft. Minden j	og fenntart	va

2. Project size (number of surfaces).

You can check the surface area of the model by clicking on the Build 3D model command.

		Level of Geometry settings		×
		Views	Level of Geometry Symbolic Schematic Detailed Documentation Construction	Others
20	Quick 3D model			
R	Build 3D model		Content of 3D model	
	Create cut-away 3D view		Selecting floor plans by storeys for 3D model construction	
	Space volume computation		All Element types	~
	3D Section Box	< >>	All	~
R	🔹 Slab 🗠 🔬	Surfaces 3588	ОК	Cancel

A medium-performance computer can work efficiently up to about 1 million surfaces. If the number of surfaces exceeds 2 million, and then 5 million, the program sends a warning. At this point, it makes sense to replace objects with a high number of surfaces for optimal performance.

3. The complexity of the materials.

4. The complexity of the lights.

5. The render settings.

When rendering, it is recommended to turn off all the details of other rooms, except from the room currently being rendered. This will save you a considerable amount of render time, as the program does not need to calculate items that are not displayed in the final result.

It is helpful to filter the model within a selected room. According to this the rendering workflow is divided into 3 phases:

Phase 1:

With the help of layers, now we only display the architectural items together with the lighting, we start to render them. The render is quickly done. Then we can make the necessary changes. **Phase 2**

Switch on the furniture layer too, now on the rendered image the furniture will be also displayed beside walls, slab and lighting. The render time will increase, the rendered image is still ready quickly. Then we can make the necessary changes.

Phase 3:

Switch on the décor and other layers too. Now all details are displayed on the image. Depending on the complexity of the model the render time can increase significantly.

7.2.2. Sun settings, shadows

Set sunlight (shading) and the North direction for natural lighting. The geolocation is also important basic setting for the right light effects, so let's start with it.

- Activate the 3D window.
- Select Ribbon bar / View / Sun / Sun position command.
- In the appearing dialogue window choose "H-Budapest" for location and set date and time: 7. October 13 h.
- Here you can also set the North direction in relation to the floor plan. Now we don't modify it. Close the dialogue by pressing".

Location and Sun settings			2
H- Budapest V Latitude 47.5000 Longitude 19.0700 Add Delete			
Date Month Day October V 7 V	Local time	Azimuth: 249.62	orth 90.00 °
		ОК	Cancel

We had defined the location on Earth with orientation as we want to see the sunlight effect on a specific date and time. We can display the sunlight and shadows with proper settings and then we can adjust the sunlight effect periodically by changing the date and time.

- Activate the 3D window.
- Go to Ribbon bar / View / Shadow and click on Shadow on/off command to display shadows.





• Turn off the shadow.

Check that the spots on the ceiling are switched on:

• Click on the false ceiling and check if the Enable light option is active on the appearing Properties panel on the left side.





Representation in 2D	Symbolic view 🗸
Thickness	0.02 m 🗸 🗸
🖄 Light	
Enable light	\checkmark
Structure	
Structure	Edit

If this option is turned on the spots will have lights on the renders.

7.2.3. Main settings

To start the rendering click on the yellow orbit icon on the Status bar or Ribbon bar / View / Rendering.

\bigcirc	Standalone rendering
	Standalone rendering - realtime draft
<u>@</u>	Integrated rendering
	Integrated rendering - realtime draft

You have two main choices: you can start a standalone or an integrated rendering.

The Integrated rendering appears as a drawing in the project and you can handle it as the drawing windows.

The Standalone rendering opens an application which is in close connection with the program but runs separately.

You can start these two modes as real-time draft, which are in a live connection with the content of the 3D window and can react immediately to several modifications, and display the draft of the result in a short time.

The Integrated Rendering – Realtime draft mode does not work on all computers that meet the system requirements. In this case, it is recommended that you use the Standalone rendering – Realtime draft. The result differs from the previous one in that the render window cannot be inserted between the ARCHLine.XP windows, but can be accessed by clicking on the Render icon in the taskbar, but we see the same fast rendering image that always matches the current scene.

Click on the Standalone rendering - real-time draft and check its settings.

Resolution

The first important setting is the **Resolution**. You can select from the list or define an individual resolution.

Resolution	854x480 (Widescreen 16:9) ~
Render presets Samples per pixel (anti-aliasing) Renderpass count Sharper details Enable artificial lights Scaling of artificial lighting Sunlight Use IES Light in all spotlights. Choose IES Date and time Background Colour	320x240 (QVGA) 640x480 (VGA) 768x576 (PAL) 800x600 (SVGA) 1024x768 (XGA) 854x480 (Widescreen 16:9) 1280x720 (Widescreen 16:9 - HD) 1920x1080 (Widescreen 16:9 - Full HD) 2048 x 1536 (4:3) 2560 x 1600 (16:10) 2880 x 2048 (5:4) User defined Same as view size
Specify a folder to save render i	C:\Users\renata.nagy\Documents\ARCHlineXP D
Background brightness	25

Among the predefined options there are low-resolution, so-called work sizes, and there are higher-resolutions that can be presented to the client.

It is recommended to use sizes smaller than Full HD in the inter-work condition, while it is advisable to give the customer Full HD or larger.

Photorealistic Rendering

• Select 854x480 resolution.

The render presets

We can influence the quality of rendering with render presets. The sets generate images of increasingly higher quality and less noise. Each set is expected to take three times longer to render than the previous one.

Render presets:

- Preview render in real time
- Q1 Quick preview image
- Q2 Cleaner, higher quality image
- Qx Custom settings

Preview render in real time

The *Preview render in real time* option produces a blown-up but almost instantly rendered image. It is intended to provide a quick working state display. Its speed makes it a good option for creating *working renders*. It can save you a lot of time when setting up your materials. Changes in the project are automatically tracked by the renderer and the image is regenerated. For the final render to be submitted to the client, you will have to choose from the other options:

Resolution	854x480 (Widescreen 16:9)	\sim	
Render presets	Preview render in real time	~	
Samples per pixel (anti-aliasing)	Preview render in real time		
Renderpass count	Q1 - Quick preview image		
Sharper details	Q2 - Cleaner, higher quality image		
Enable artificial lights	Qx - Custom settings		
Scaling of artificial lighting	100 %	~	
Sunlight	Cloudy daylight	~	
Use IES Light in all spotlights.			
Choose IES	Edit		
Date and time	12 July 15:00 (Daylight)		
Background	Uniform		
Colour			
Specify a folder to save render i	C:\Users\renata.nagy\Documents\ARCHlineXP D		
Background brightness	25	~	

Q1 - Quick preview image:

It is recommended to use this setting at the beginning of the render process, with a low resolution (e.g. 800*600 pixels) it quickly produces a work-quality image.

Q2 - Cleaner, higher quality image:

The next stage of the render process, setting for scenes approaching the final image, at a medium resolution (e.g. 1280*720 pixels).

Qx - Custom settings:

The setting can be adjusted to the user's needs, values can be specified individually based on the number of light sources and the complexity of the model. With its basic setting (Pixel 10, Render pass 30), it is suitable for creating the final image at FullHD or higher resolution (1920*1080 pixels).

• Select the Preview render in real time option.

Samples per pixel:

The number of ray-tracing samples computed per pixel of the output image. Adjusts anti-aliasing, which will smooth away the "jaggies" you see along the edges of objects and shadows. Increasing Pixel Samples will result in a cleaner, higher quality image.

Suggestion:

Higher value (> 10): useful for final scenes with complex lighting, fine textures. Lower value (< 5): useful for preview or quick scenes. Samples per pixel and Render pass count are the most important settings for quality rendering.

You can only change the samples per pixel value when selecting Qx - Custom settings.

Render pass count:

The render engine uses a progressive rendering method, which further refines the generated image during each rendering pass. Increasing the render pass number will increase the time required to perform rendering but will also increase the image's quality per each single pass. The default value is 30.

You can only change the number of render pass count when you select Qx - Custom settings.



Sharper details:

Reduce noise and get the sharper details in your render image. It removes image noise while recovering and enhancing the details. The effect of the switch is immediately visible in the picture.

• Turn on the Sharper details option.

Enable artificial lights

It is a master switch that allows you to turn off all the lights even if you have turned on any of them before.

Turn off Enable artificial lights option, because the first renders are made in natural light.

Sharper details	<u>`</u>
Enable artificial lights	

Scaling of artificial lights:

You can control the intensity of artificial lighting.

• Choose 100% option.

Sunlight

The Sunlight setting is a fundamental determinant of the nature and intensity of the external light effects on the scene.

Clear daylight means undisturbed sunlight.

Choosing *Cloudy daylight* means that the sunlight is less dominant, while artificial lights have a stronger effect on the scene, just as they would on a cloudy day.

In the *Sunset* setting, the red and orange of the sky is more pronounced in the atmosphere, just as it would be in a photo taken at dawn or sunset.

The Outdoor Night scene is an outdoor night scene lit by dark artificial light.

If the room is poorly lit, the render image will have a bluish tint. This can be avoided by using the "Cloudy daylight" option in the render window instead of the "Clear daylight" option.

Select Cloudy daylight option.

Night render:

To set up the night renderer, you need to follow these steps:

- 1. In the Sun position setting, select Night time.
- 2. It makes sense to choose a night background image if the scene also shows the external environment.
- 3. Background Brightness should be set to low.
- 4. For Sunlight, it is recommended to set the Outdoor night scene.

Background

You can choose a color or an image as background. There are default images in the program but you can import your own background. You can also select a panorama as a background or import your own. (The panorama images completely surround the model). Panorama pictures can be downloaded from the internet, their extension is .hdr.

Background	Image	\sim
Print Raster	Uniform	
Specify a folder to save render i	Gradient	
Background brightness	Image	
background brightness	Panorama	

To continue, now select Image and choose the background "City sky - Cloudy".

Specify a folder to save render images

This is basically a back-up save path, where the program creates a back-up of the last state of each image. It is recommended to set the folder, where the project is saved.

Background brightness

The brightness of the background should be adjusted according to the time of day. The recommended value for a day scene is 100, for an evening or night scene the lower value of the scale is recommended. • Set the background brightness to 100.

Background	Image	\sim
Print Raster	City sky - Cloudy	~
Specify a folder to save render i	C:\Users\Strelecz Fanni\Documents	ARCHII
Background brightness	100 Brighter, daytime scenes	
	All and a second se	

Accept the settings by clicking Close.

The render command can be also accessed from the **Ribbon bar**. Click on the **View tab / Rendering** icon. Now the rendering commands appear. However, here an extra option, the **Render-frame on/off** can be found.

View	Building In	terior	Draft	ing	Dimension	Documentati
3D ck 3D model	Visual styles	Rende	ering	ģ- Su D Sh ₩ Shac	n 👻 adow 👻 low simulatior	Panorama 36
ebuild 3D	View 2	R	Registr	ation		
			Standa	lone rer	ndering	
			Standa	lone rer	ndering - realt	ime draft
		<u>@</u>	Integra	ted ren	dering	
			Integra	ted ren	dering - realtir	me draft
			Render	-frame	on/off	D

Set the 3D window to the maximum size by pressing the rectangle icon in the top left corner.

Activate the render frame. A grey area appears on the left and on the right. This shows the details of the image which will not be in the final picture. The scene inside the dashed line will be the content of the final image.



This function is useful to set the perspectives precisely, because you can define exactly which will be visible in the final render.

• Turn off the frame.

7.2.4. Create the first rendered image

We are in the first phase of rendering. According to the layers setting only the architectural and lighting layers are switched on.

After reviewing the different render settings, start the *Standalone rendering – Realtime draft* command. You will see the same settings you have just set.

• Click the Start Rendering button.

Resolution	854x480 (Widescreen 16:9)	\sim	
Render presets	Preview render in real time	~	
Samples per pixel (anti-aliasing)	1	~	
Renderpass count	30	~	
Sharper details			
Enable artificial lights			
Scaling of artificial lighting	100 %	\sim	
Sunlight	Cloudy daylight	~	
Use IES Light in all spotlights.			
Choose IES	Edit		
Date and time	07 October 13:00 (Daylight)		
Background	Image	\sim	
Print Raster	City sky - Cloudy	\sim	
Specify a folder to save render i	C:\Users\renata.nagy\Documents\ARCHlineXP D		
	C. Joseis (renata.nagy (bocuments (ARChimeAr	····	
Background brightness	100 Brighter, daytime scenes	~	
Background brightness	100 Brighter, daytime scenes		
Background brightness	100 Brighter, daytime scenes	del	
Background brightness	100 Brighter, daytime scenes 100 Brighter, daytime scenes Inherit background from 3D mode Rendered Frame on/off	jel	
Background brightness	100 Brighter, daytime scenes 100 Brighter, daytime scenes Inherit background from 3D mod Rendered Frame on/off Change to the default	del	

Denoiser

At the end of rendering or when it is stopped, the module denoises the entire scene. Image noise means the graininess or blurriness of the image. After denoising, you will get a clearer image, which will allow you to further adjust the material settings.

You can stop the rendering process at any time. If the rendering process has not yet reached 50%, you can turn the noise filter off. If you stop the process, a dialog box will appear asking you if you want to apply the denoiser. If you select NO, the rendering process will stop immediately.





• Click Save to save the render image: **Render_01**. Do not close the Render window.

You can see that the sunlight penetrates too deep into the interior, so it is quite contrasty. Since we started a real-time render, we can easily modify this.

Click on the ARCHLine.XP button on the taskbar.



- Activate the 3D window.
- Click on the **Ribbon bar / View / Sun / Sun and Shadow simulation** button and with the slides, modify the date and time, so that it does not infiltrate into the room so deeply. Set the time to 12. July, 3:00 pm.
- Hit OK to accept the changes.



Click the Render button on the taskbar.

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• The render window will appear, which will immediately follow the changes, as the interactive Realtime draft has been launched.

With the new sun setting, the lighting conditions have changed significantly. The strong yellowish effect is gone.



Click Save to save the render image: Render_02
 Compare with Render_01:



Render_01: sun setting: 10.07. 13:00

Do not turn off the Render application.

• Click the ARCHLine.XP button on the taskbar.

Render_02: sun setting: 07.12. 15:00





Try several sun settings, compare the results and choose which setting is the best. Make sure the setting creates a contrast between light and shadow, but not too strong. Don't brighten scene too much by having the light come from too low behind the camera or choosing a low angle of sunlight that brighten the whole interior. Try to find the right light/shadow balance!

7.3. Render styles

To create a high-quality, lifelike photo-realistic image, it is essential to set the materials correctly used in the project. Setting up materials is not always easy and often a time-consuming process. Using Render styles can simplify and shorten this process.

We have categorized different types of materials such as metal, glass, brick, mirror etc. into different groups, and set their most characteristic properties. That's how we created 21 different Render styles. These are the following:



Features of Render Styles:

- Can be assigned to any material.
- Available from the Design Center. From here, you can "Drag and Drop" to the selected surface in the 3D view. The effect is shown in the internal Rendering application.
- Do not change the size and texture of the materials, only change the material properties.
- After using the style, a customized style setting can be created.

Taking this into account we recommend the following method for the ideal material settings.

- 1. Assign the appropriate Render style to the different types of materials in the project.
- 2. Create a test render.
- 3. Refine the material settings depending on the result.

7.3.1. Use render styles

In our example, for better understanding, we set *Matt* property to materials. In the render image made earlier, only matt materials appear on the floor, walls and ceiling.

Then, we'll focus on adjusting the floor, walls, and ceiling settings:

1st step

As a first step we will drag and drop from Design Center to these surfaces the proper render styles



On 3D model using "Color coded" representation mode we can quickly check if we didn't leave any surface out.

Color coded representation

The color coded view allows you to display the render styles in a classified way. The assigned color codes are shown on the top right corner of the render style icons.

Clicking on "**Color coded**" word in Design Center the model appears in the colors assigned to the different render styles. This way we can easily check the currently assigned render styles through colors.

• Click on the word "Color coded". On 3D view surfaces appear in clear colors assigned to render styles.



Click on "Restore" to view the original representation mode.

2nd Step Render Test

Click the *Rendering* button on the taskbar.

In the interactive draft render, you can see the result of Render_03. Compare it with Render_02: The ceiling is " whiter ", the wall is brightened, reflecting the glass wall opposite, the floor is slightly reflective.

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Render_02: matte render style

Render_03: using render styles

Rendering with lights:

In the Render window, on the Details tab, turn on the *Enable artificial lights* option. The spotlights are displayed on the wall.

The change is quite slight, as daylight is filtering in through the window.



• Click Save to save the render image: Render_04

This will be our 4th render image. Compare it with render 3:

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Render_03: without lights

- Do not turn off the Render application.
- Click the ARCHLine.XP button on the taskbar.

3rd step: Refine material settings

Let's discuss the material settings first on the floor.

As we have seen, the floor has changed in some way, the blue wall is reflected in it. In the example, the floor we use is brighter and more reflective in real life. So, we need to change the floor settings. Please do the following:

- Activate the 3D window.
- Click on the floor with right mouse button.
- Select the Find material option from the Local menu.



The Egger floor material appears on the left side with its properties, which can be modified here.

- Increase the **Reflection** from 25% to around 50% and check the changes in the render window.
- The next step is to decrease the Blurriness of reflection to 0% from 5%. The reflection on the floor is sharper now.
- You can also change the reflection of the walls: take it down to 1%: Save render image: Render_05



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This will be our 5th render image. Compare it with render 4:



Render_04: spotlights

Render_05: with spots and fine tuning of material

At this point, it is worth turning off the real time draft and choosing a better quality render set.

Select Q1 - Quick preview image with 1024x768 resolution.

Resolution	1024x768 (XGA)	\sim
Render presets	Q1 - Quick preview image	
Samples per pixel (anti-aliasing)	2	
Renderpass count	30	\sim
Sharper details	\checkmark	
Enable artificial lights	\checkmark	
Scaling of artificial lighting	100 %	~
Sunlight	Cloudy daylight	~
Use IES Light in all spotlights.		
Choose IES	Edit	
Date and time	12 July 15:00 (Daylight)	
Background	Image	
Print Raster	City sky - Cloudy	
Specify a folder to save render i	C:\Users\renata.nagy\Documents\ARCHlineXP D	
Background brightness	100 Brighter, daytime scenes	\sim

Here the rendering time will be longer. When the image is ready, save it: Render_06

A better quality image will make it easier to decide whether the material settings were correct or whether you need to refine it any further.


Render_06: Q1 - 1024x768

The materials have additional properties depending on their type and render style. Later, when you have more practice in rendering images, you should get to know how they work and interact with each other. In the meantime, only use the settings provided by the render styles.

More material settings - optional

Here we gathered the most important information about material properties:

Transparency

The left side of **Transparency** slider is where the material is not transparent at all, while we set it to 100% the material almost disappears.

Brightness/Albedo

50% of **Brightness** is the starting state. If we decrease this value the material will be darker, and if we increase it the material will be brighter.

Bump mapping

For some materials, you can set a bump amplitude which is depending on the nature of its texture. It is recommended to smooth it a little afterwards (**Bump softness**).

General type

If you need material setting that doesn't appear within the properties of any render styles, then use the **General render style**. In this case to modify the materials all the necessary settings will appear. Based on this is a universal style any other styles can be created. Render Styles are also available on the Material properties tab.

7.3.2. Display Furniture

So far, only the architectural items have been displayed on the render image.

If we are satisfied with the settings so far, we can enter Phase 2 where we are going to deal with the settings of furniture materials.



- Activate the 2D floor plan and with the help of "Layer walk" command turn on the layer "Customer area Furniture" and "Lighting".
- The Refresh 3D option should be enabled.

Try different render styles on furniture:

- Restart the Standalone rendering Realtime draft render command.
- Select the Metal, Plastic, and Marble Render styles and drop them on the surface one of the furniture which previously had been turned on. On the rendered image you can track the changes as well.

Layer walk	>
-Costumer area - Decor (734)	
-Costumer area - Furniture (26)	
-Costumer area - LED strips (13)	
-Costumer area - Luminuos text (314)	
-Costumer area - Switches (46)	
-Spline (1)	
Circle (1)	
Lighting (63)	
Slab (35)	
Wali -1 (88)	
Display empty layers	
opping empty invers	
Refresh 3D	
ОК	Cancel
24	Carroot



• It's worth playing a bit with the Render styles. You can also try other styles on furniture. On the "Integrated rendering - Realtime draft" you can always see the changes.

Finally, using the Marble style, we get the following result with Q1 - 1024x768 resolution:



Render_07: Q1, 1280x720

7.3.3. Replace material

Let's see another example of modifying a material. We will replace an existing material to another one.

- Open the Main page of the Design Center.
- Type in to the Search field above: mirror. (Be sure that the search is started from the start page of the Design Center).
- Select the material " CHROME_MIRROR_03" from the options under "Materials".
- Using the "drag and drop" method and place it on the dark grey wall. From the appearing menu select the "Like painting or grouting" option.



Click on the wall surface.
 Check the render window for changes.

This is how you can easily change one, already placed material to another one on an object or element.





Render_08: Q1, 1280x720

• Undo this last step and activate the 2D layout.

7.3.4. Display decoration

Until now, only the architectural items and furniture have been shown on the rendered image. If we are satisfied with the settings so far, we can enter Phase 3, we will display additional elements, e.g. the decorative items.

These are usually smaller, but more complicated elements with higher surface numbers (e.g. ornaments, plants). Therefore, they can slow down the rendering, but don't have the same effect on the quality of the rendered image as the larger furniture. However, they need to be dealt with. In the following example, we will turn on the computer screens, such as we assign light to them.

- Switch on "Customer area Decor" layer as well.
- Rebuild the 3D model.
- Drop the "Real emissive" render style on screens.
- Try the "Glossy covering", "Plastic" or "Metal" material type for the body of the computers and screens on display.

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Render_09: Q1, 1280x720

7.3.5. Display other details of the model

As discussed previously the process of creating rendered images is divided into several phases.

In Phase 1, we only deal with the dominant surfaces of the project (floor, ceiling, walls).

In Phase 2, we displayed furniture, while in Phase 3 the decoration was exhibited, but we can also add all other accessories.

The advantage of this progressive workflow is that the tiny accessories are set at the end of the workflow - often enough to deal with the materials that really affect the visuals, which can save you a lot of time.

- Activate 2D floor plan.
- Click on the Layer walk icon and turn all the layers except the –"Spline" and the "Circle" layers. With the OK button close
 the window.
- Activate the render window, now you still have an option to make further changes before starting the final render.

Standalone rendering - Q2 cleaner, higher quality image

Let's move on to the Q2 render set. Here we use the Standalone rendering.

- Turn off the integrated renderer.
- Activate the 3D window.
- Select Render Standalone render Q2 Cleaner, higher quality image render preset.

7.4. Render effects

While the program is rendering, all the setting which are influencing the brightness, contrast and other settings of the final image can be modified on the **Effects** tab. These settings can be modified on the final result as well. It is recommended to set the **Exposure** first, so that the ceiling (white colors) is right. This modification is visible immediately.

Be careful using these effects, because setting them too high or low can result in an undesirable final image.

If you want to get back to the default value at any of the settings, you just have to click on the icon of the setting next to the slider.

If you want to reset all the values, click on the **Reset all** button at the bottom of the tab.

Resolution

The final rendering will be made in Full HD resolution.

Layer walk	x
-Costumer area - Decor (734) -Costumer area - Furniture (26) -Costumer area - LED strips (13) -Costumer area - Luminuos text (314) -Costumer area - Switches (46)	
-Spline (1) Circle (1)	
Lighting (63) Slab (35) Wall -1 (88)	



If the previous render has not been completed yet, click the "stop" button to stop it.

Elapsed time: 02:50 Rendering in progress(9 / 30) 26%	💾 Save	Exit

• You can change the resolution by clicking the arrow in the upper right corner. Select 1920x1080.





On the *Details* tab, select Qx - *Custom settings*. Leave the *Pixel sampling rate* setting at 10 and the *Render pass count* at 30.

Effects	Details	List	
Qx - Custo	m settings		•
Pixel sampl	ling rate		10
Render pas	s count		30
o —			

• Restart the rendering.

The final image can be saved by clicking on the Save button with a new name to a folder selected by you. You can save multiple images with the different settings and render phases. You can also select its format before saving it. It is recommended to choose JPG if you want to send it to your client.



Final render

7.5. Render list

There is a third tab in the render window, the Render List. Creating the final images is a long process per image, and it is time consuming to save images and to switch to new ones, then launching a new rendering. Essentially, this process is automated by the rendering list.

- Click on the List tab, this is a render list.
- The previously saved perspective views appear here.



- If you click on another view the program starts to render it with the current settings.
- If you go back to the Effects tab, you can change the settings of the current image.
- If you click on previously completed image the program only displays it with the previous settings, not renders it again. Here you can modify the settings or change its resolution, then click on the Start button and render it again.

It is important to know that each given setting on Effects and Details pages and the image resolution can be independently defined for each view. Therefore, you can set different backgrounds or exposure; likewise, to real photography due to different materials and light conditions that might be necessary.

In the Render list you can select multiple views, after setting the effects, resolution and other parameters. You just have to tick the square before the name of the view, then click on the Start button below.

🐟 A R C H | I N E.🕏

Effe	cts Details List				
🗌 s	Select / Deselect All Items				
	01 Shop – 01	D			
\checkmark	01 Shop – 02	D			
\checkmark	01 Shop – 03				
\checkmark	01 Shop – 04				
\checkmark	01 Shop – 05				
	01 Shop – 06				
	01 Shop – 07 Outside				
	Default 0				

The selected images are rendered with the settings and resolution previously selected at each image.

It is recommended to leave the computer "alone" after starting the final render list. No other programs should be run during the rendering because it will increase the render time.

7.6. Rendering guide

As we have seen, creating a good photo-realistic image requires a longer process. You can create attractive, realistic images with a series of steps below.

- 1. Use layers. Architectural elements, large furniture, lights, additional objects should be on separate layers.
- Set up 2-3 perspective views from which the scene can be well presented. Recommended values: Camera and subject at the same height (between 1100 - 1400 mm), angle of view between 60-75 degrees.
- 3. Turn off all layers until we get a clean architectural model (Phase 1). Only walls, floors, ceilings, doors, and windows should remain visible. These will be the large surfaces in the scene, so their display settings should be adjusted first.
- 4. Set a clear day position. Turn on the shadows to display clear shadows, but not too strong. Make corrections. Start a quick preview rendering and if you don't like the scene, find a new sun position.
- 5. Use the drag and drop method to assign rendering styles to them as a starting point.
- 6. Create a Realtime draft render. Based on the result, fine-tune the materials of the architectural elements.
- 7. Start the Standalone rendering. Use a low resolution (maximum 800x600), in Q1 mode, for quick preview.
- 8. Focus on adjusting the white walls. Turn off reflections, and brightness between 0.5 and 0.8.
- 9. Parquet usually requires a lot of experimentation. Have reflection, but not excessive, reflection blur is minimal.
- 10. Turn on the layers containing large elements (e.g., furniture, Phase 2) and perform the same assignment.
- 11. Zoom in on the characteristic elements (e.g., sofa, table, kitchen counter, etc.) and fine-tune the texture material properties if the result is not satisfactory. The brightness and reflections, which should first clarify. Always check the new settings with a new rendering.
- Focus on metals and fabrics. Approach the selected object again and repeat the 12th step accordingly. Fabrics benefit from the application of bump mapping (unevenness), while metals generally have high reflection (0.4) and refraction (3-4).
- 13. Turn on the lights to provide sufficient brightness, but avoid over-illuminating the scene with artificial lights. The scene benefits from the synchronized effect of interior artificial lights and sunlight.
- 14. If everything has been going according to expectations so far, turn on the layers containing all the remaining elements (Phase 3).

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- 15. Start another test render, this time with a higher resolution, such as 1280x720, and use the Q2 set for a cleaner, higherquality image.
- 16. If the test render is successful, it's time for the final render image! Choose a high resolution (Full HD, 1920x1080 or higher), use the Q2 or the Qx preset, and adjust the values based on the number of light sources and the complexity of the scene. Rendering can take up to 60 minutes depending on your computer, the scene, and the chosen resolution. Higher resolutions increase rendering time.
- 17. Use effects! Post-processing is a crucial step in the rendering process performed by professionals. Adjusting parameters such as brightness, contrast, saturation, and white balance can significantly improve the quality of the final image, for example, by making it warmer or cooler. Small changes of 5-10% can have a significant impact on the final scene.
- 18. Try out the sharper details function! Enabling the effect can create impressive, highly detailed images. Disabling it results in a softer, more subtle appearance.

Anyone who follows the above workflow will be able to generate high-quality photorealistic images. Of course, this brief guide cannot cover all the intricacies, as rendering is a process that requires learning and experimentation with any rendering program.

