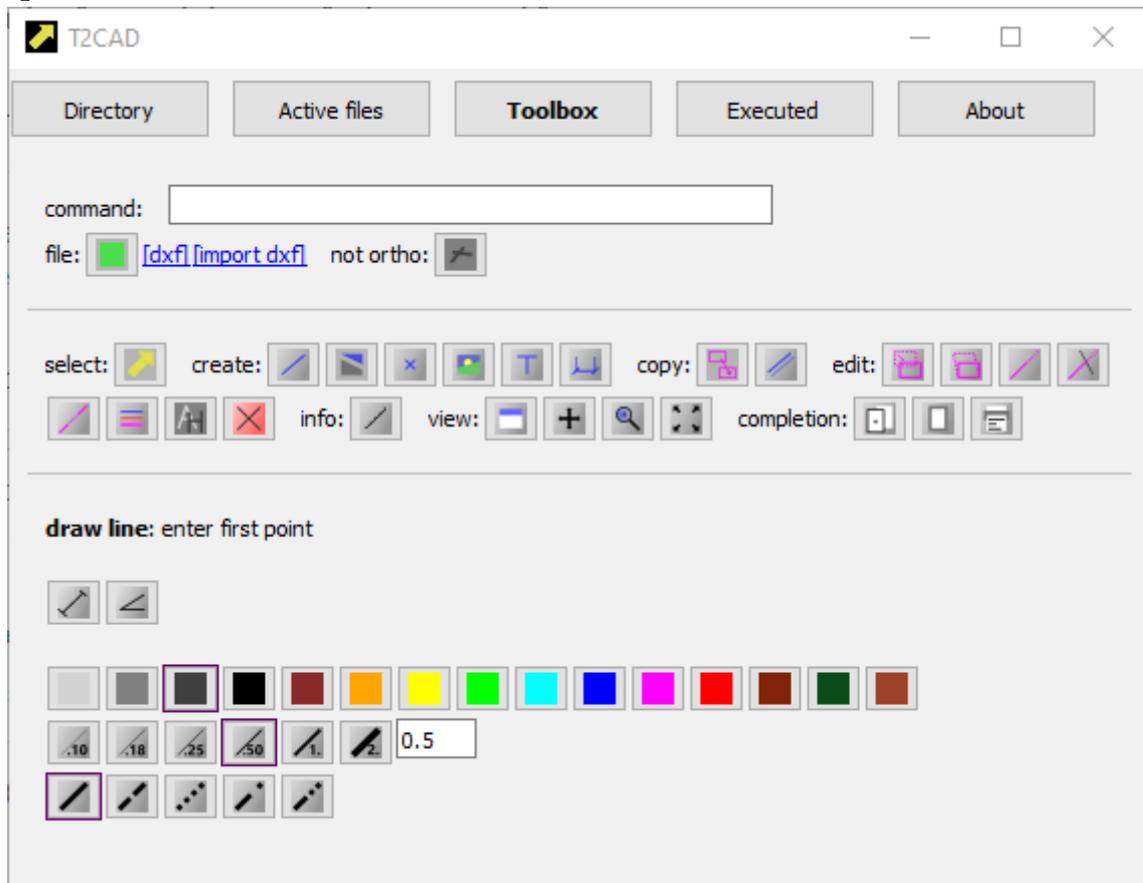


T2CAD

All the controls of the T2CAD are in a single window. All the controls can therefore be shown in a single image. Apart from this tab **Toolbox**, only file opening and listing of opened files are hidden under the other tabs.

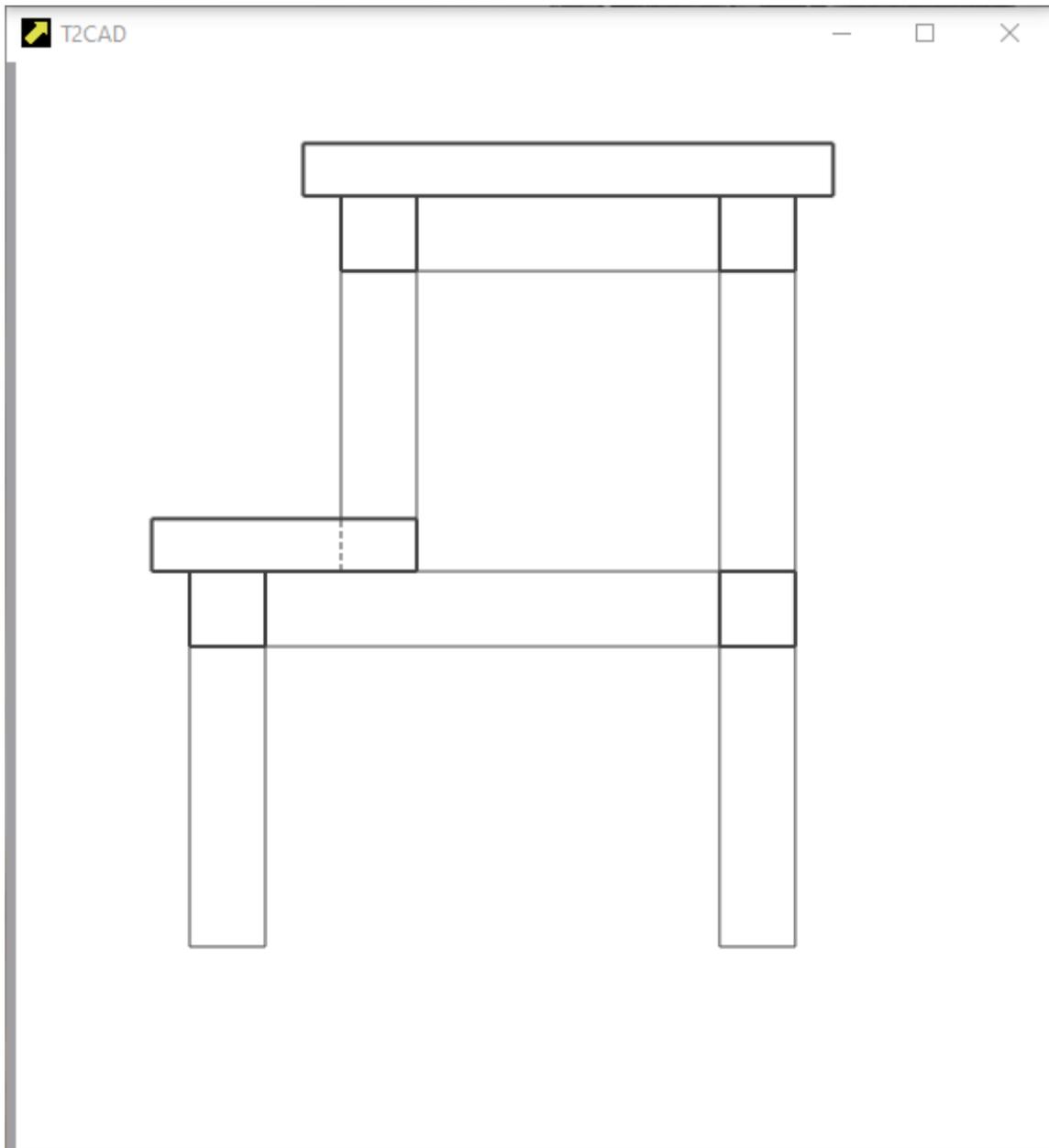
specific.md



TUTORIAL

Set aside about two hours to master this tutorial before you start drawing your own designs.

For learning purposes, let's try to draw these stool:



First, let's get some information about the basic principle of using T2CAD. After T2CAD launching, the main program window opens, which contains all the controls. It has a series of buttons in the top row that switch the window contents using the left mouse button.

Directory - is active when the program is started. Displays a file manager to open the files you want to work with.



Active Files - displays open files and allows basic manipulation with them - closing, activating, etc.

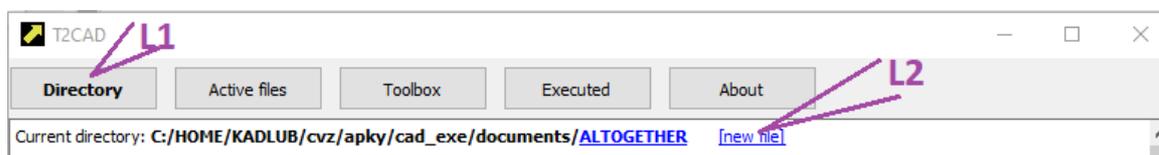


Toolbox - T2CAD basic working environment. It allows you to draw and edit graphical entities.

Executed - a record of what you have executed. You don't have to pay attention to it for now.

About - basic information about the software.

First you need to create a file to which you will draw.



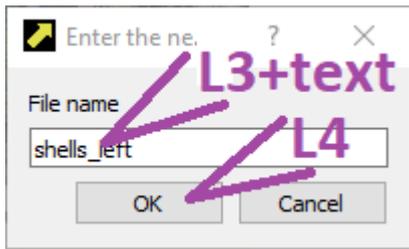
In the picture you can see the buttons marked L1, L2. This means to click on them with the left mouse button in the order of the numbers.

In the pictures we will use M - for the middle mouse button and R for the right mouse button. Always with the ordinal number of the execution.

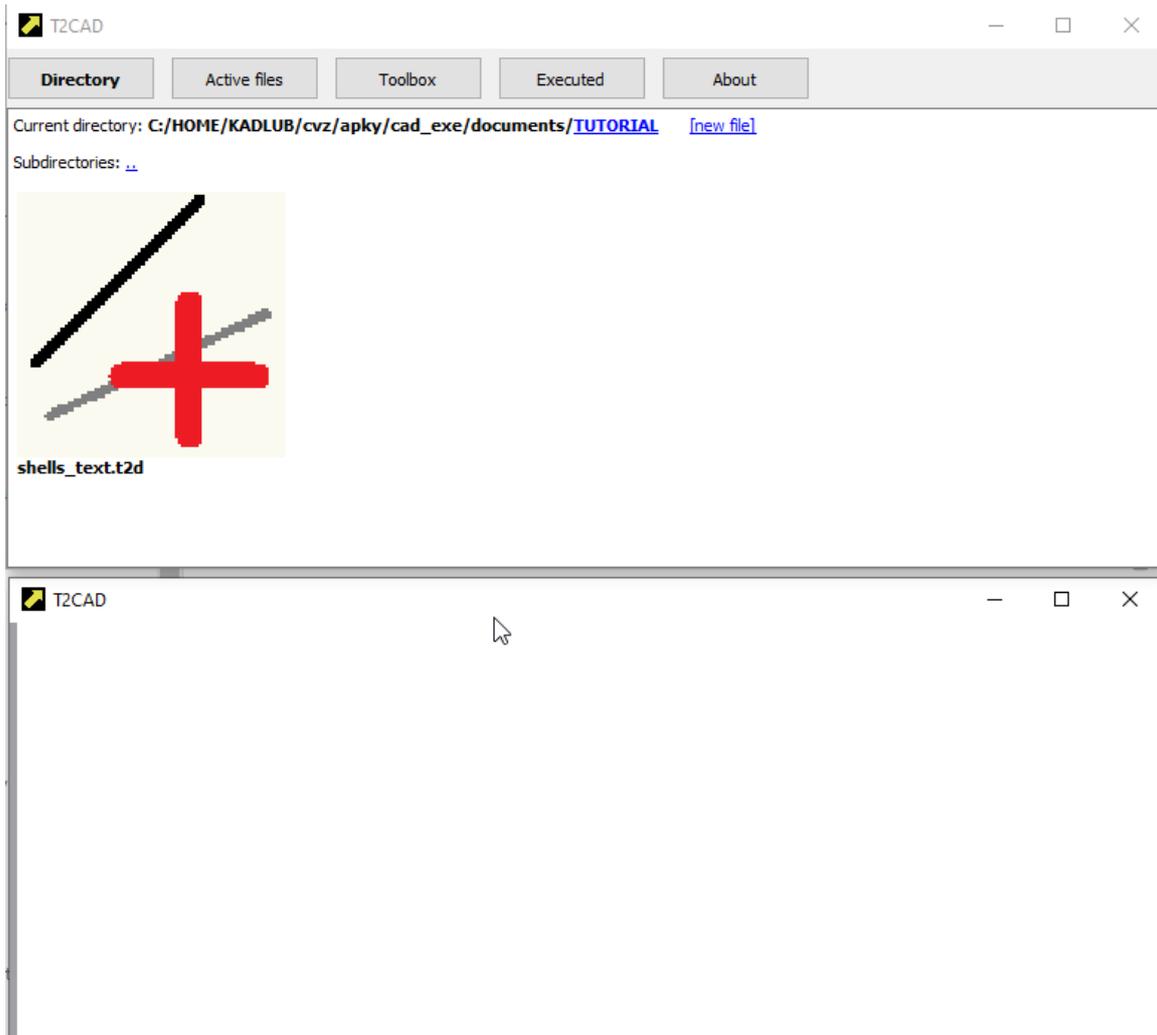
L will be referred to as POINT, M as TENTATIVE and R as RESET.

After execution of L1 and L2, the following window will open.

Follow the instructions here and this will open a window with the file you will be drawing to:

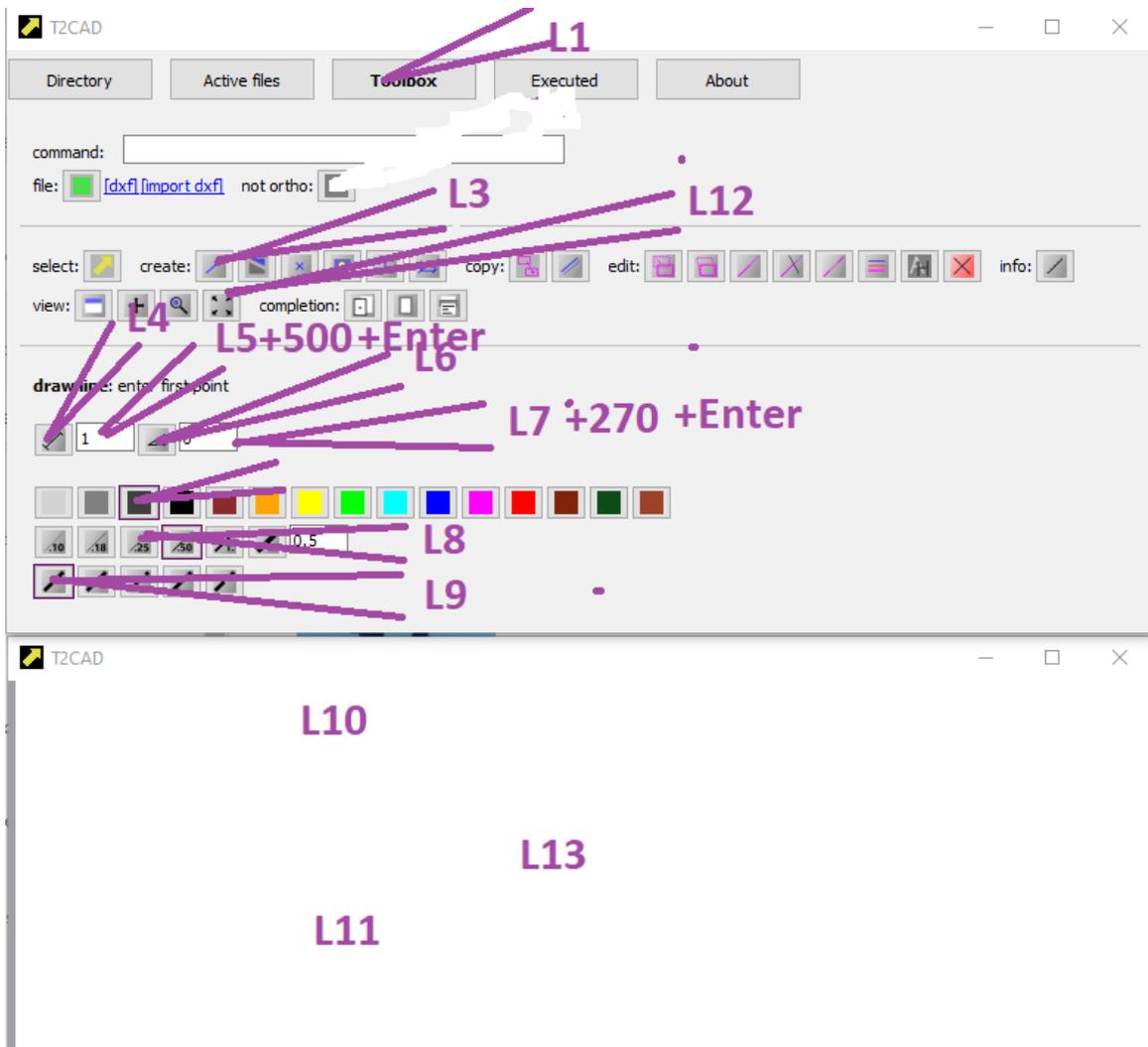


From now on we will refer to this window in which we draw as VIEW.

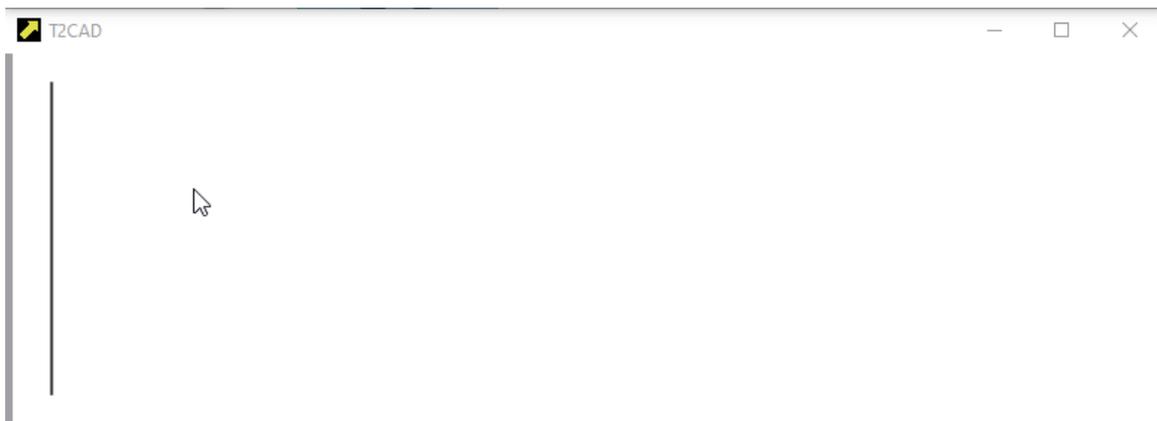


Follow these instructions:

I would like to emphasize that after entering a numeric or other value it is always necessary to press the ENTER key, otherwise the value will not be displayed.



If you were successful, you should see this in the view:



The result will surely amaze you, you have drawn a line. And not just any line. The line is vertical and 500 mm long. Or 500 inches. Or 500 feet. Depending on what unit you assign to the plot. This time you will think millimeters and therefore it is 500 mm.

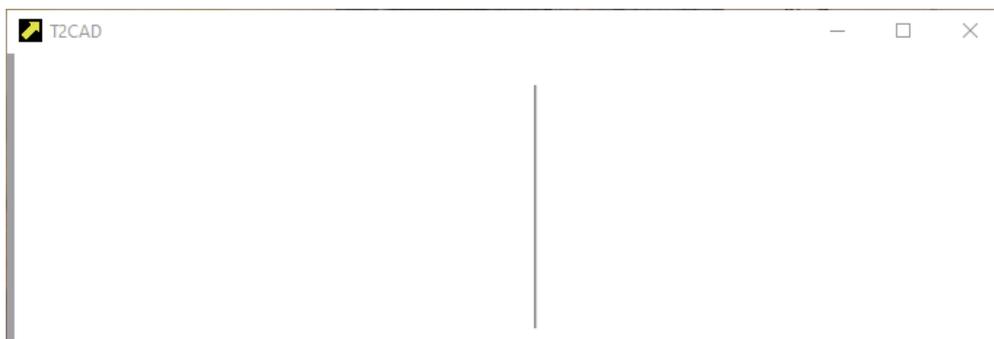
If you are uncomfortable with mm, divide each measure in this guide by 25 and think of it as inches. All the lengths here will be such that this operation will be agreeable. Just at the end of the tutorial when printing, enter "drawing units in mm" as 25.4.

Well, now we have to explain what we've actually done.

- L1 - you have switched the main window environment to drawing.
- L3 - you have activated the line drawing.
- L4 - you have activated the drawing of a line of a certain length.
- L5 - a text box has appeared where you can enter the line length.
- L6 - you have activated line drawing with a certain direction.
- L7 - a text box has appeared where you can enter the line direction. You have entered 270 degrees, i.e. downwards. 0 would be horizontal right, etc.
- L8, L9 - you have chosen the color (dark grey), thickness (0.25 mm) and style (solid).
- L10 - you have entered the first line point somewhere on the drawing area.
- L11 - you have entered another POINT that completes the line drawing. The line is now fully defined by the first point, angle and length.
- L12 - you have activated command **display all**.
- L13 - by clicking you have identified the VIEW in which the COMMAND is executed.

Remember the operation performed in 11,12 well, if you lose the drawing in the VIEW, this will get it back.

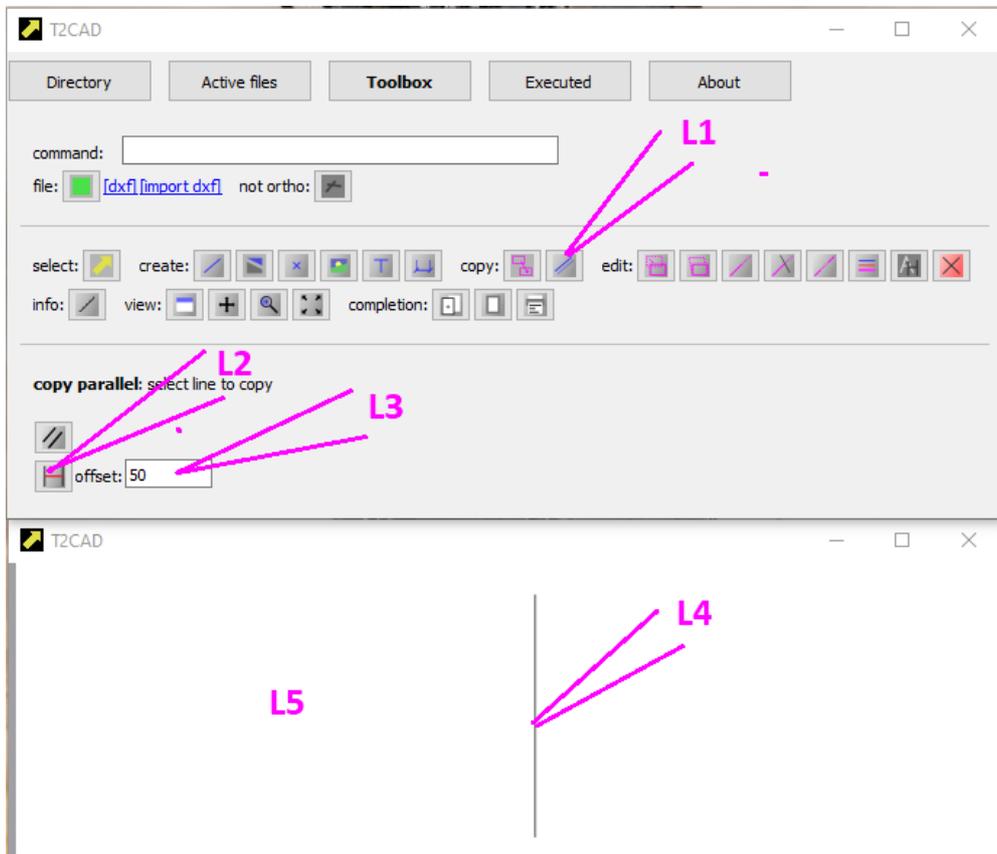
Now do a drag-drop in view, similar to functionality of the Google maps, and move the car to the middle of the screen. When you are done, you should see something like this:



T2CAD

Like in Google maps, you can also zoom by turning the mouse wheel.

Follow these instructions:



T2CAD

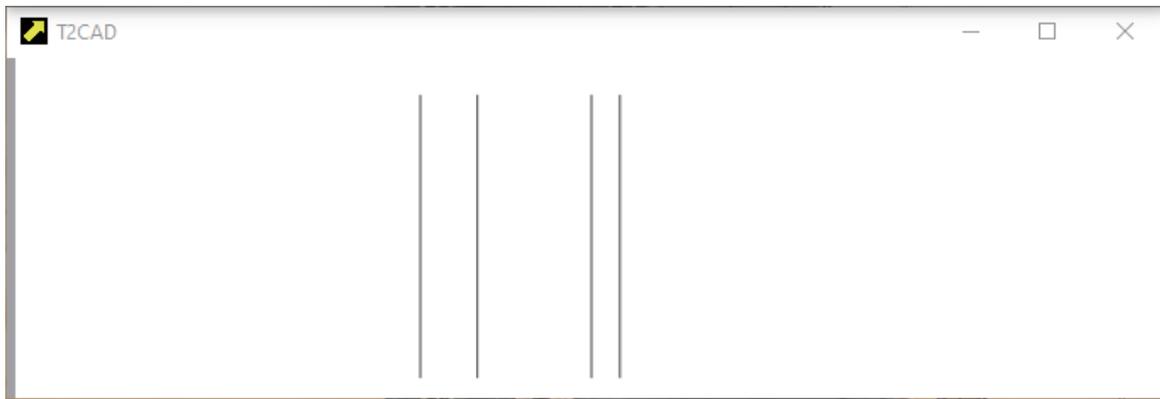
And here's what should happen:



Now let's explain again what you actually did:

- L1 - you have activated COMMAND **copy parallel**. COMMAND makes a copy of the object at a certain distance perpendicular to the original.
- L2 - you have activated option offset. This means that the copy will be at this distance from the original.
- L3 - you set the offset value to 50 mm.
- L4 - you have selected the object to be copied.
- L5 - you have specified the side on which the new object will be created.

Now copy the line with offset values 250 and 350. You should see this:



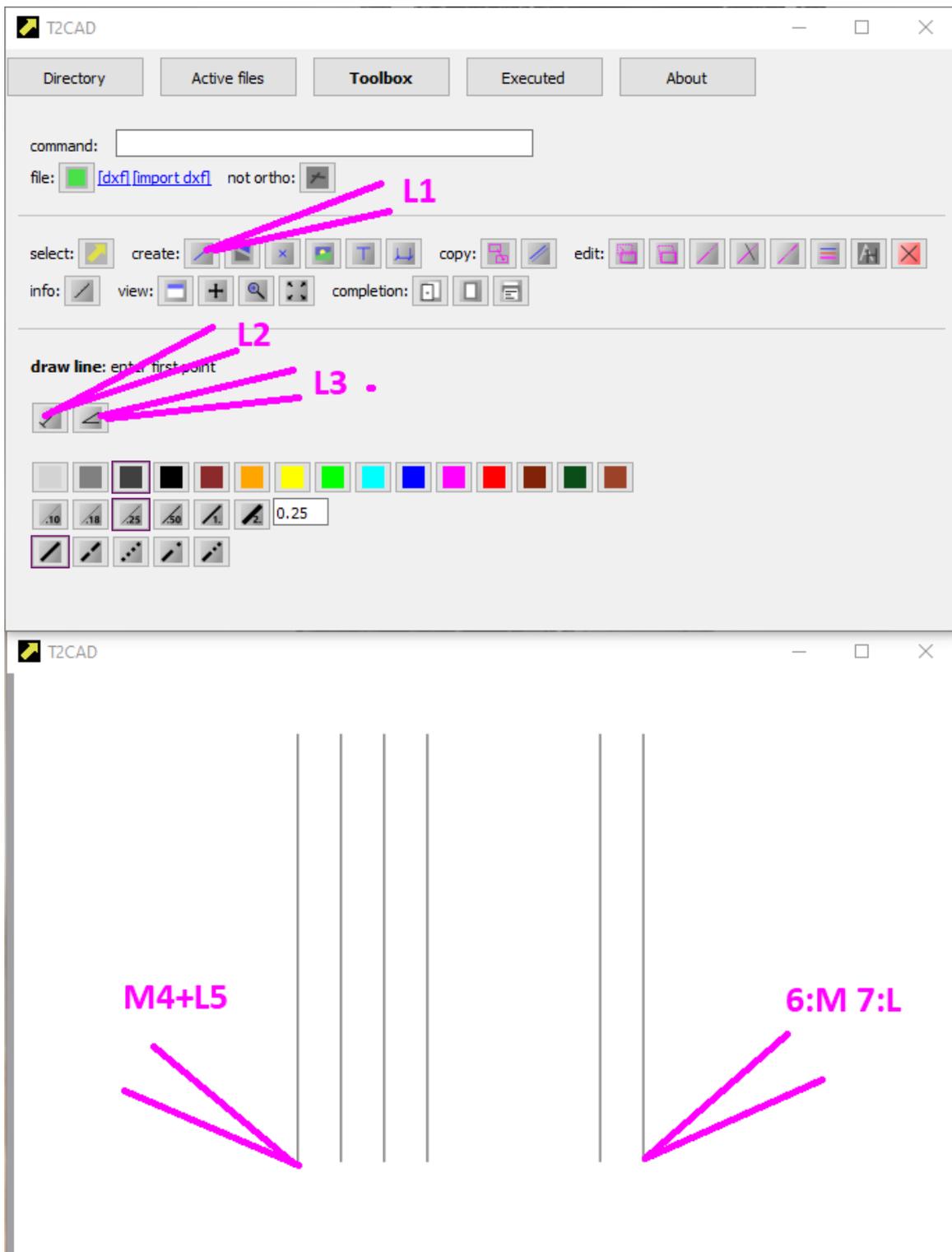
Copy each of these lines by 50 mm:



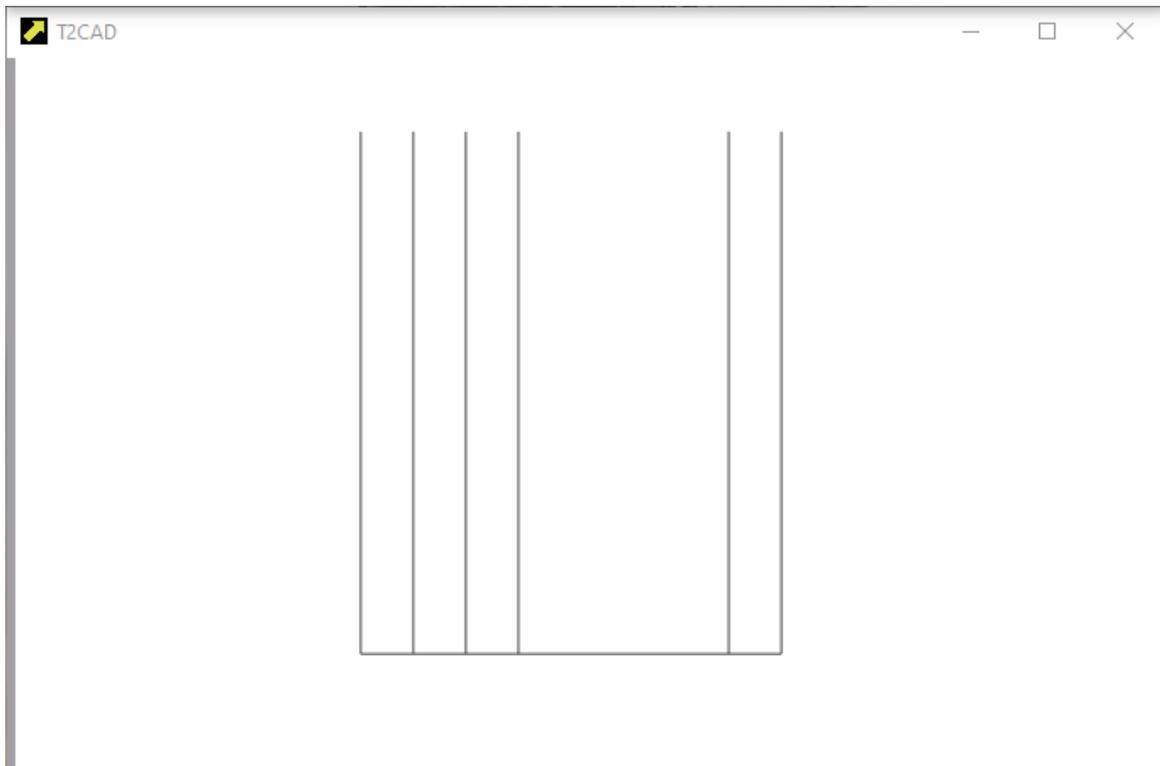
Parallel copying is an immensely powerful tool. Perhaps half of the drawings are always created in this way. So half of the work necessary for learning is done (o:

Now we do the following:

The M here and in other pictures stands for the middle button/knob click.



Well, if all went well, the result looks like this:



Let's explain again what was done:

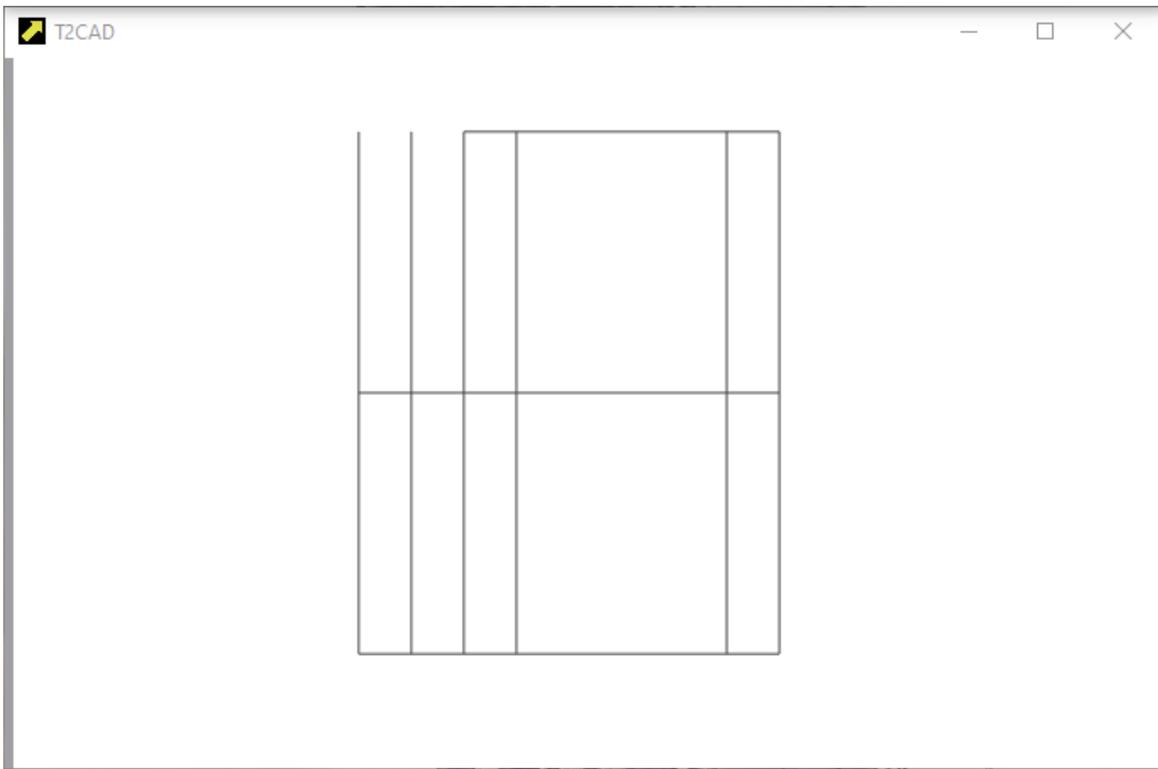
- L1 - COMMAND **place line** activation.
- L2, L3 - we deactivated drawing with fixed angle and length
- M4 - activating TENTATIVE, performs a grab at the nearest significant point, here it is the end of the line.
- L5 - enter the first point of the line. We can place the POINT anywhere, because if a TENTATIVE is active, the POINT will be placed there. After POINT is clicked, the TENTATIVE disappears.
- 6:M 7:L - the same again.

TENTATIVE can be used repeatedly until we are satisfied with its placement.

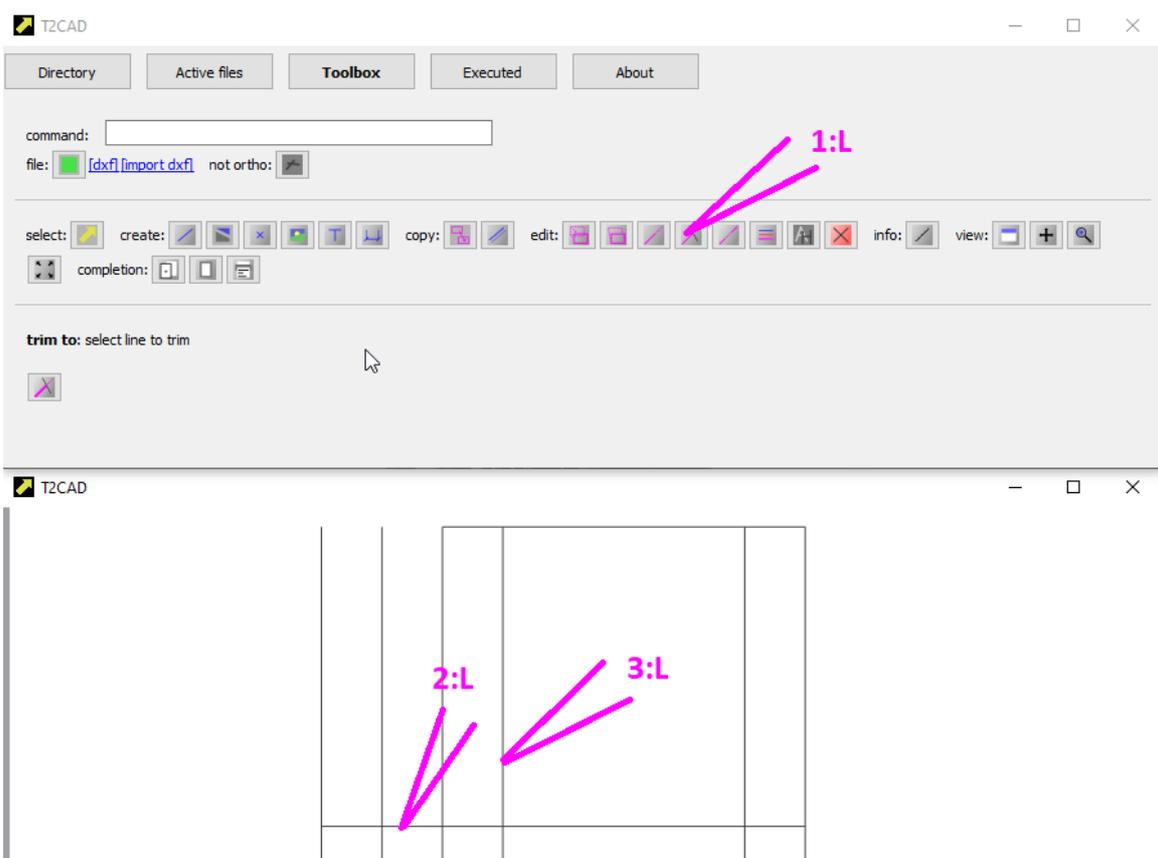
TENTATIVE is one of the reasons why this program was created. With other drawing programs, the point is constantly sticking somewhere when drawing accurately and it is never possible to make what you want without abnormal mental effort. That's a lot more mental effort than writing a bit of code that does just what you want.

Surely you can repeat the operation to achieve the following drawing.

L1-L3 does not need to be redone. COMMAND is active for repeated use after its execution.



Now do the following:

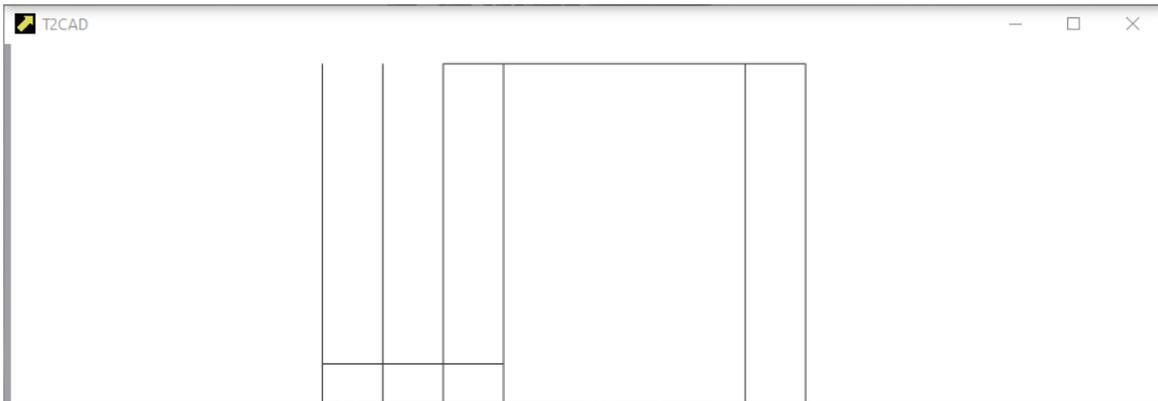


You have performed a **trim to** COMMAND, which is the trimming of one line by another. The line you're trimming by is tied as if it were infinite. Here's a description of what you did:

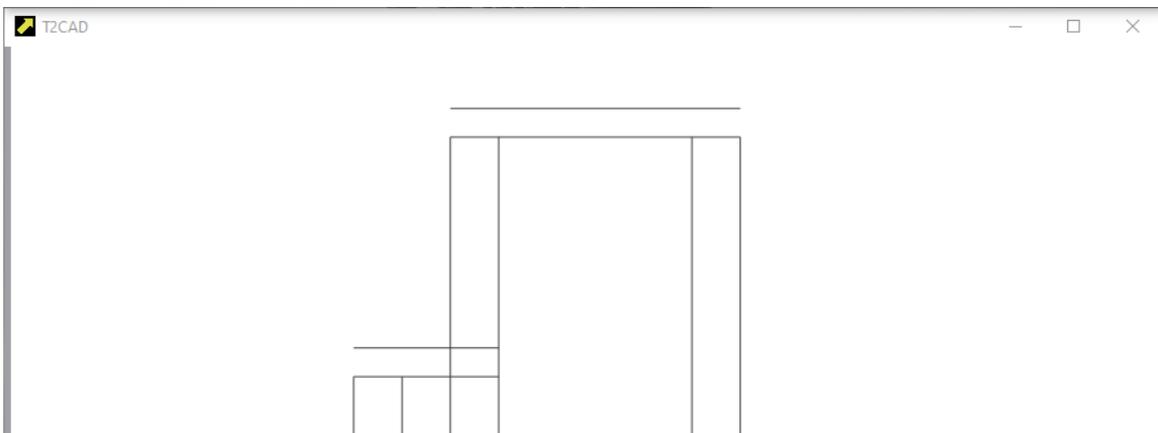
- 1:L - activation COMMAND **trim to**
- 2:L - selecting the line to be trimmed

- 3:L - selecting the line to which it will be trimmed

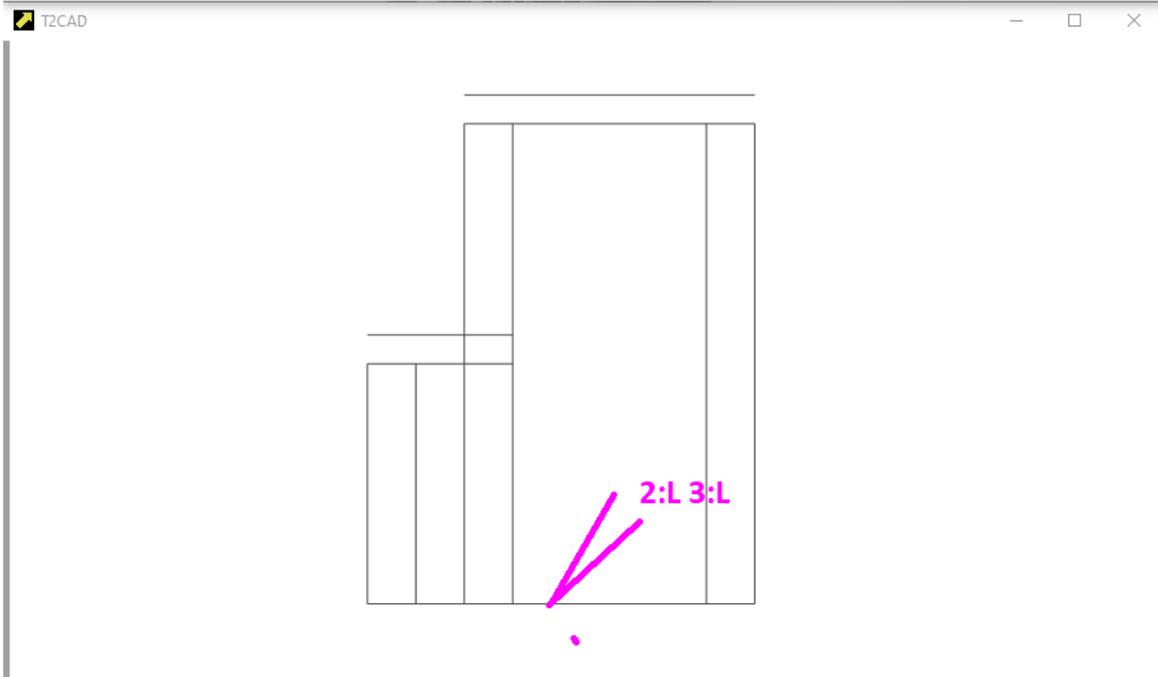
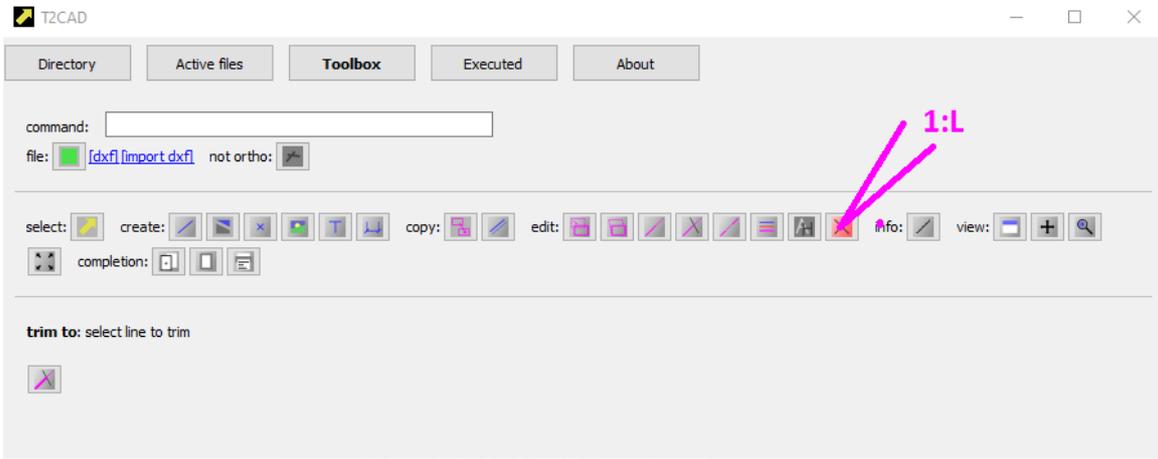
Now use **trim to** to achieve the effect shown in this image:



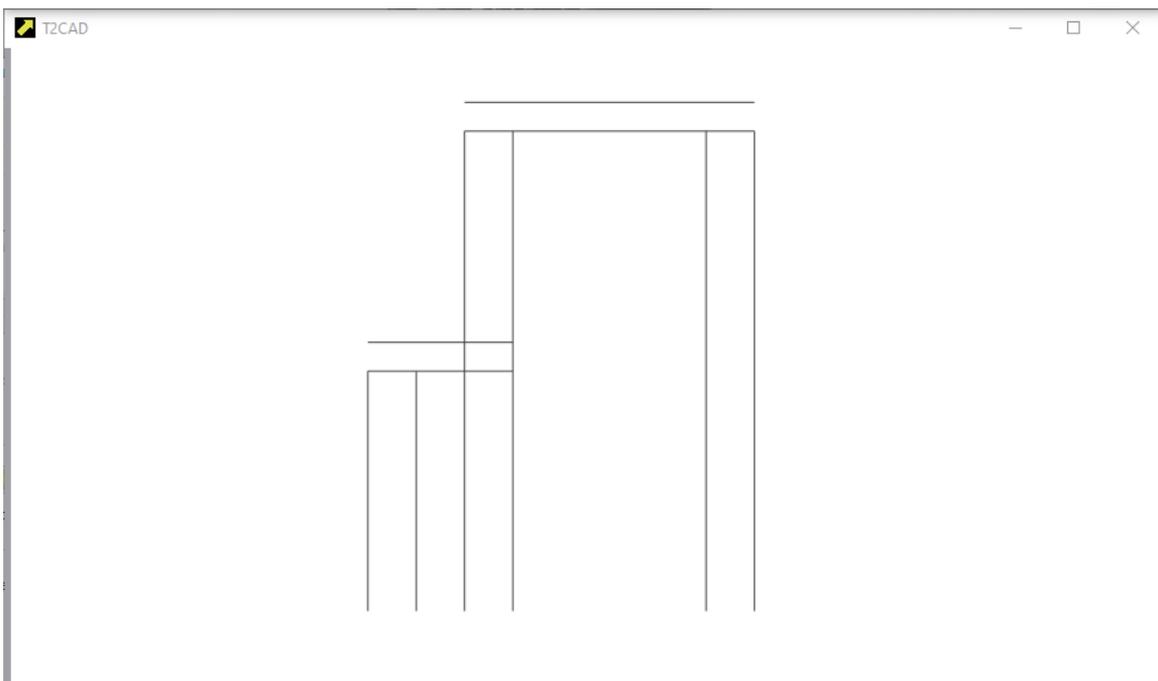
Using **copy parallel** by 35mm you can achieve the following effect:



Now follow these instructions:



And the result should look like this:



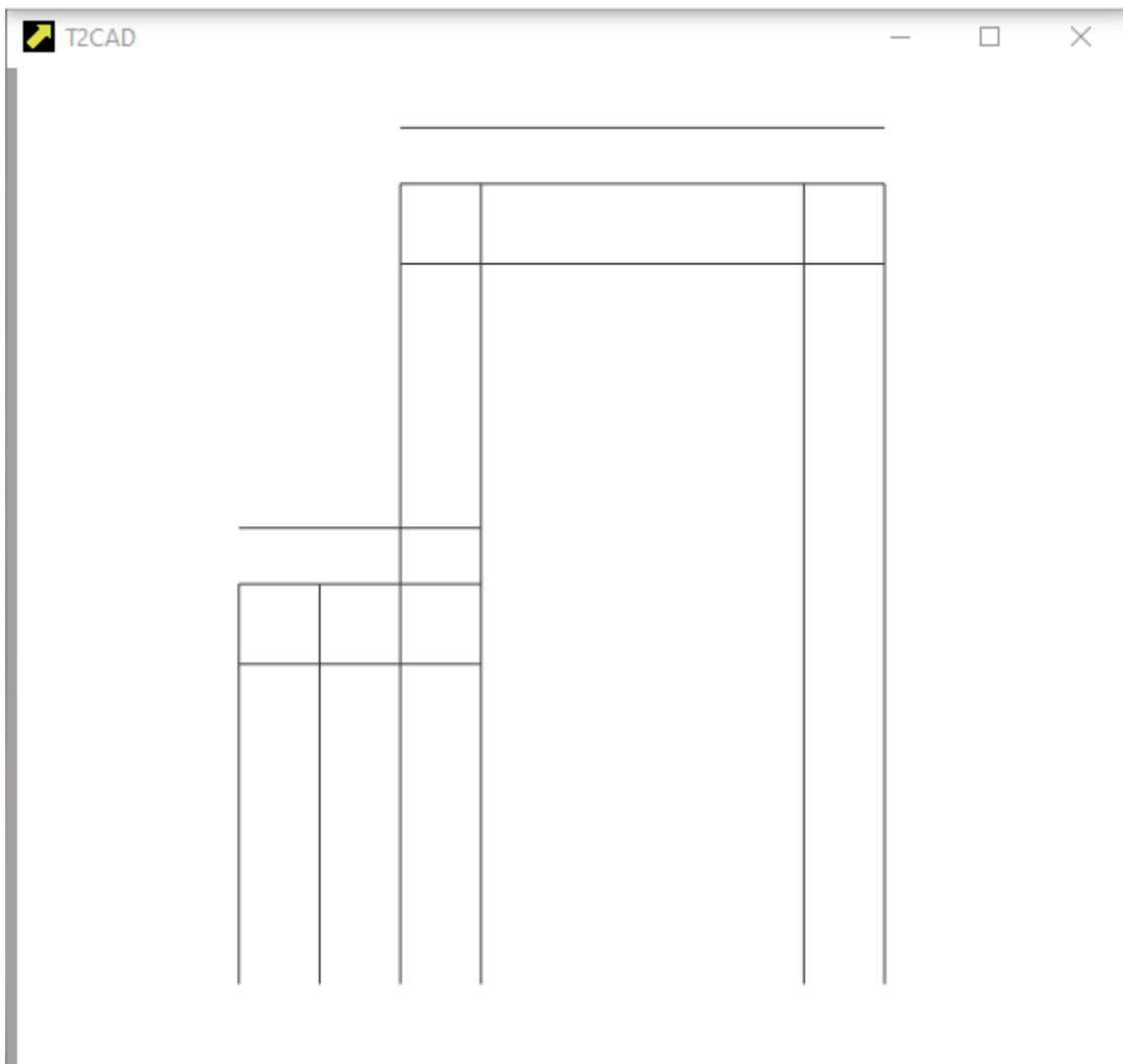
- 1:L - activation COMMAND delete

- 2:L - marking of objects for deletion. If you are not satisfied with the selection, it is possible to use RESET. This will cancel the operation and you can select again.
- 3:L - confirm deleting the selected object.

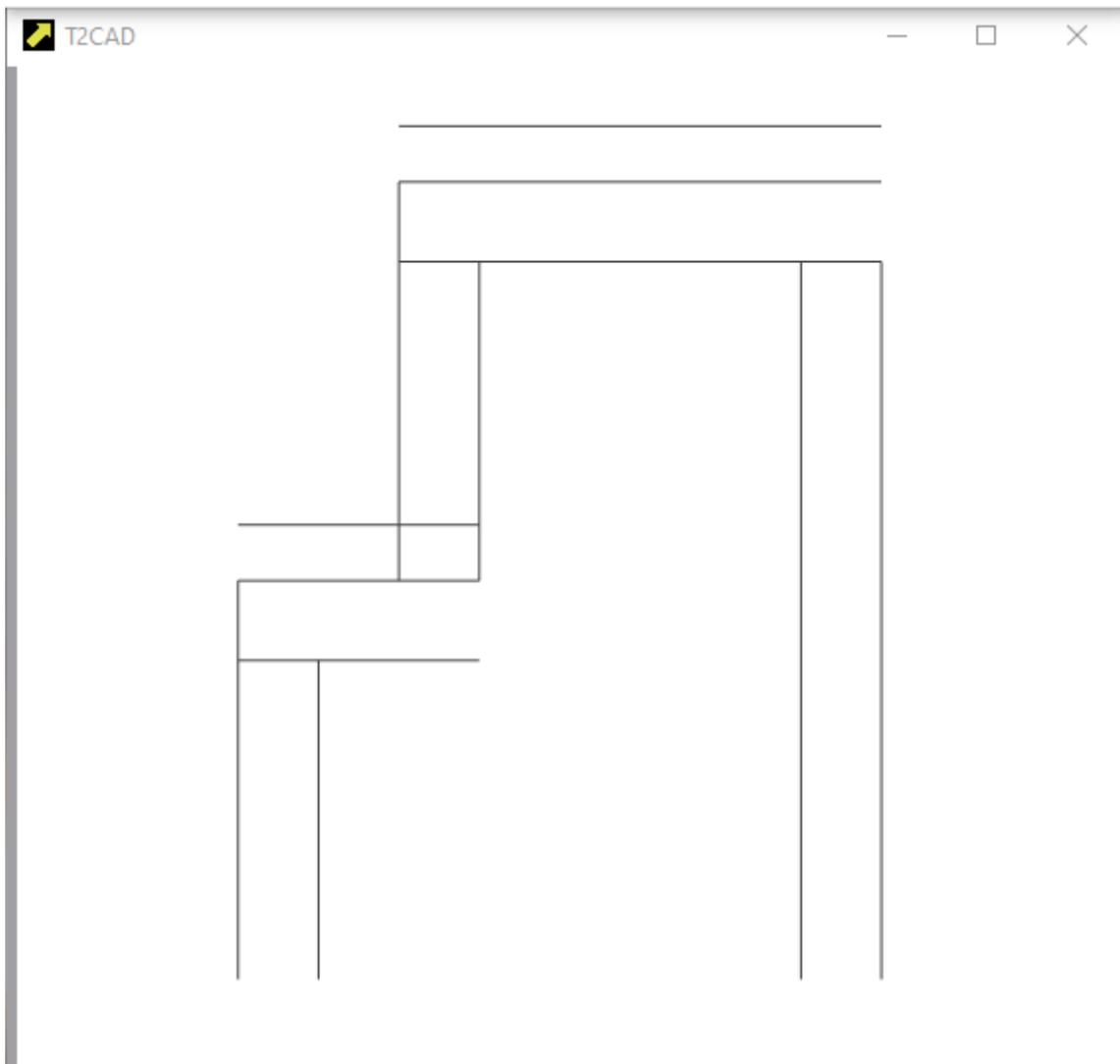
RESET can be used at any time to return COMMAND to its previous state. You do not like the first point when drawing the line? It is possible to cancel it this way. You do not like the selection for trimming the cara? It is possible to deselect it this way too.

But instead of RESET, you can also restart COMMAND, which will also bring it to the initial state.

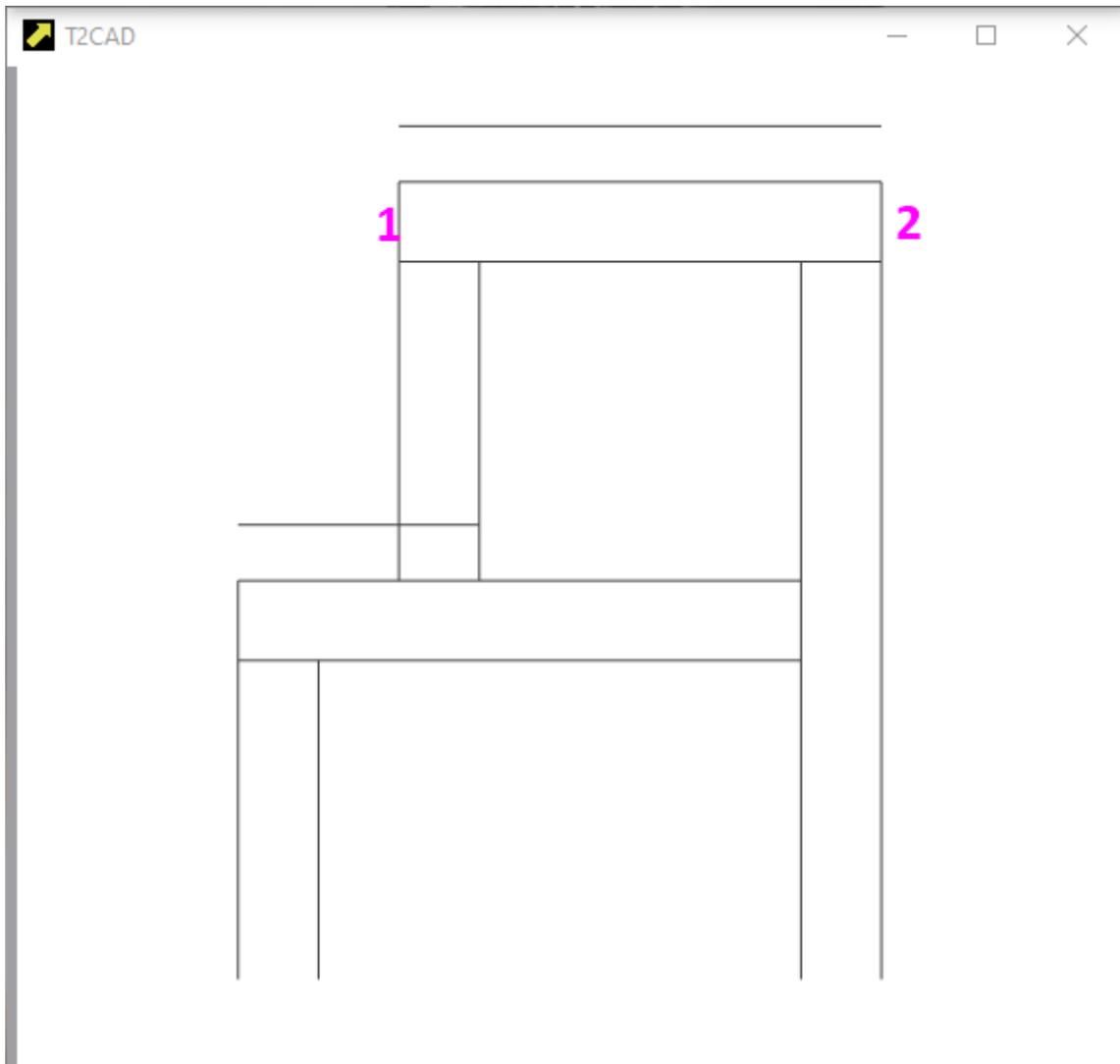
 Make 2x **copy parallel** by 50mm according to the following picture:



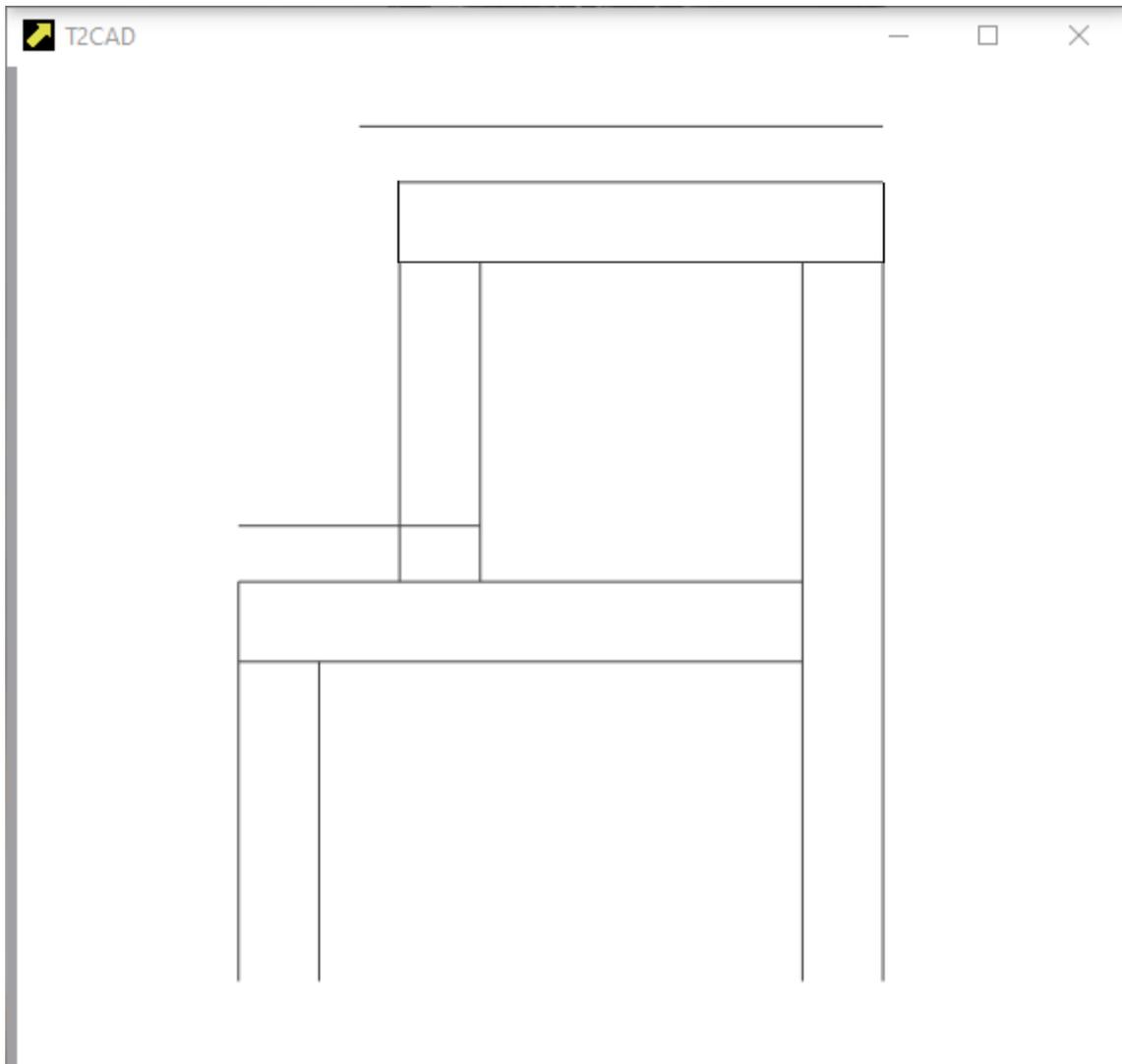
Perform the **trim to** operation to make the result look like this:



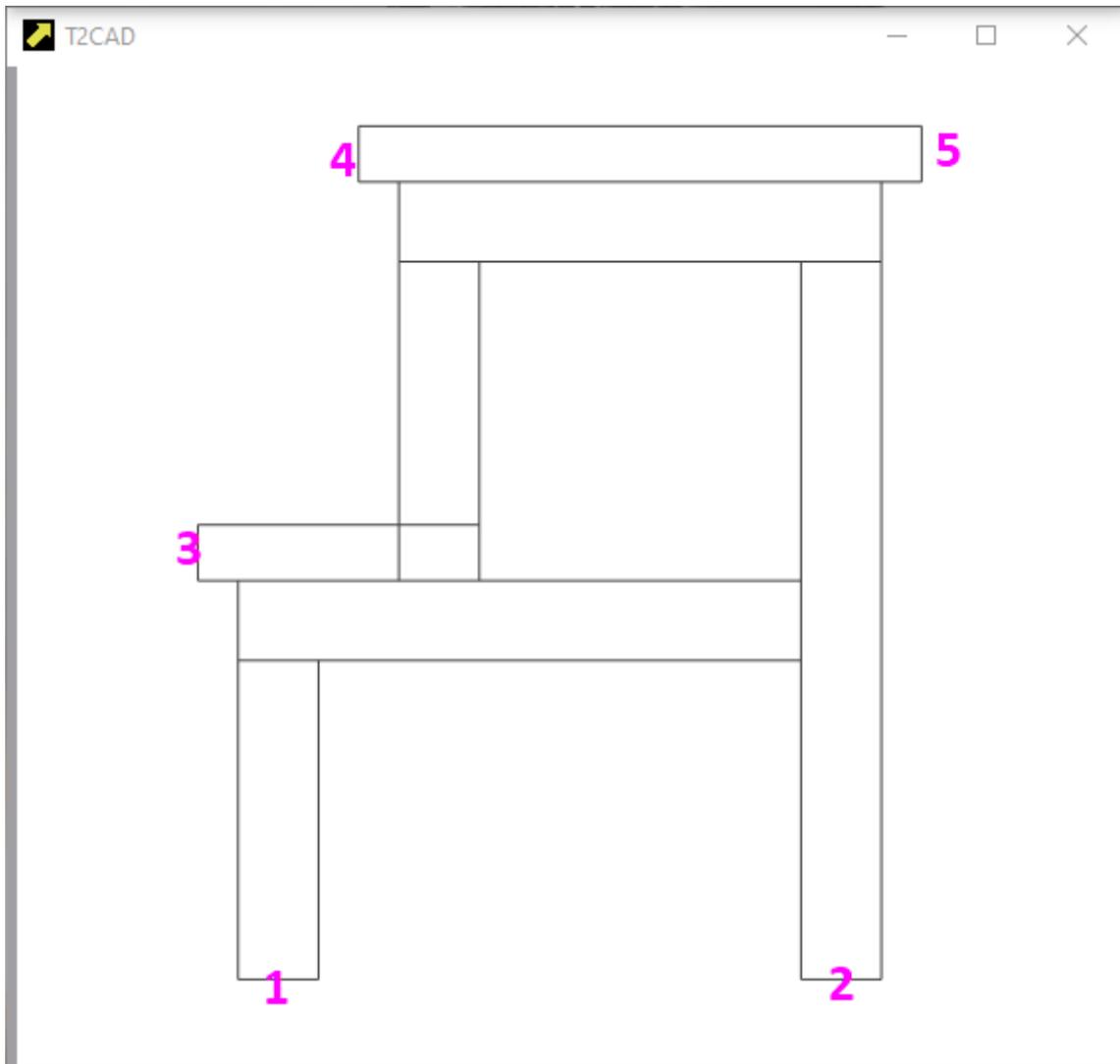
Now use TENTATIVE and COMMAND **place line** to draw these two lines:



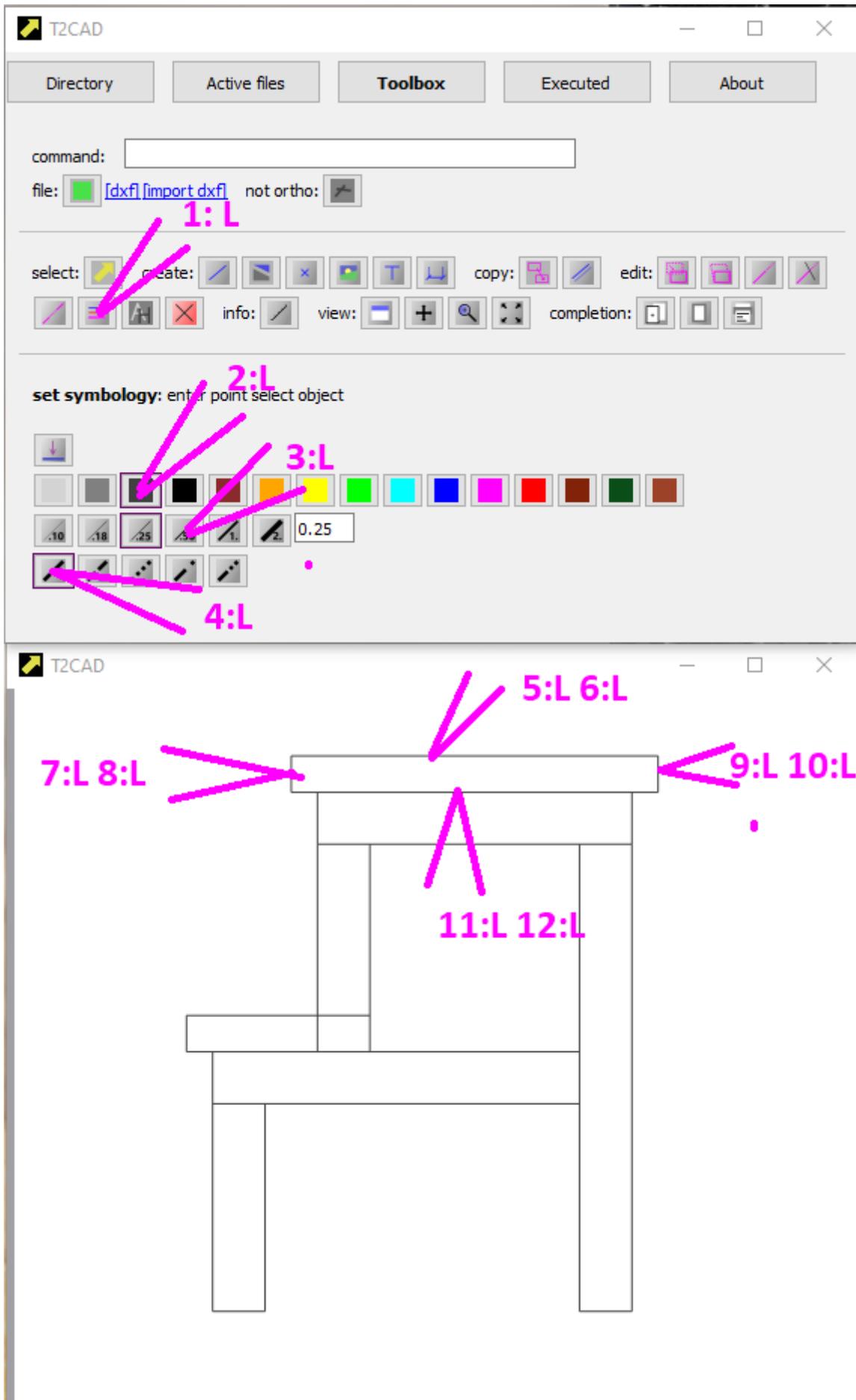
 Follow these instructions:



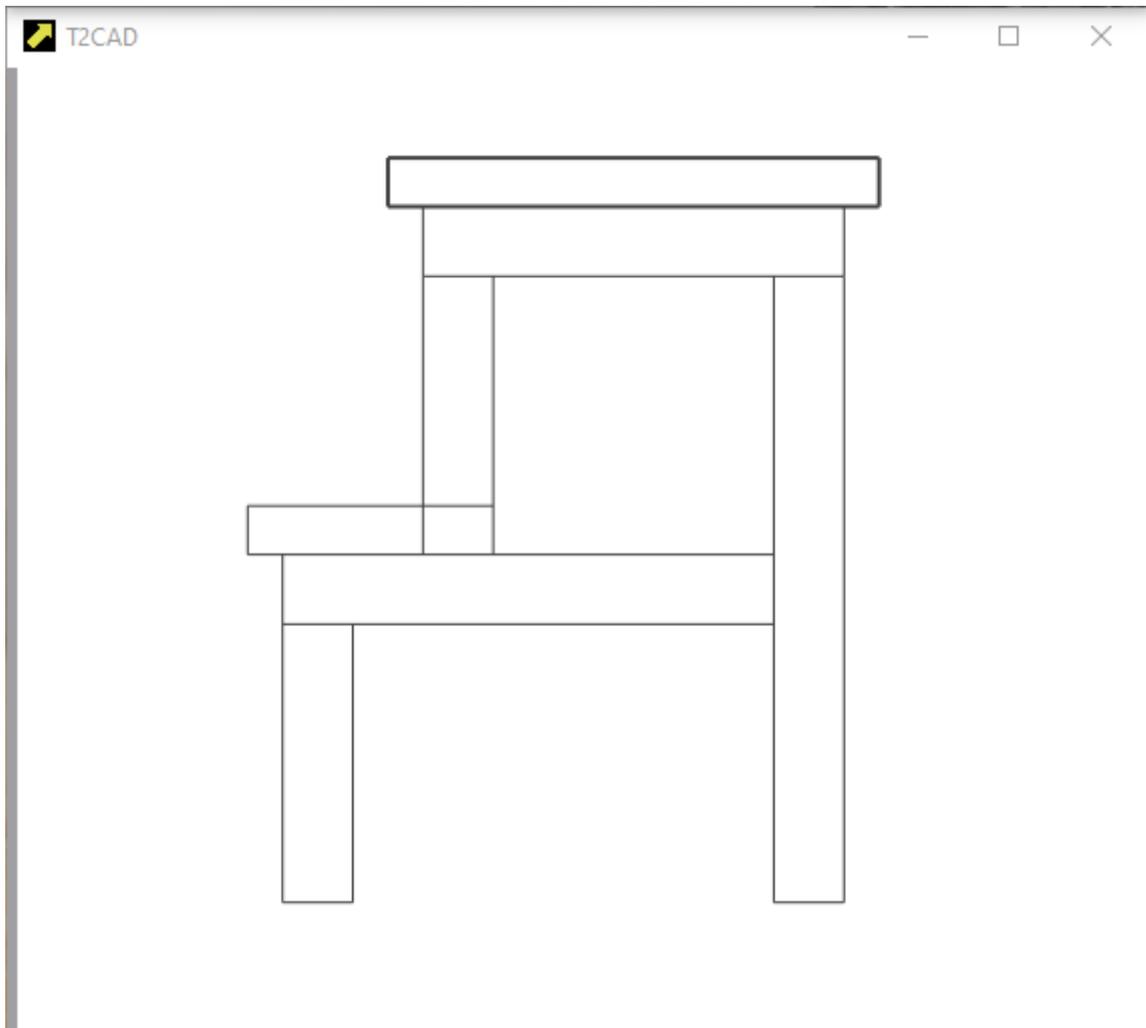
- 1:L - activation COMMAND **trim**.
- 2:L - activation of exact value input.
- 3:L 4:"25" 5:Enter - setting the value of 25mm by which the line is stretched.
- 6:L - select the line and the end of the line to be stretched
- 7:L - confirmation of the operation



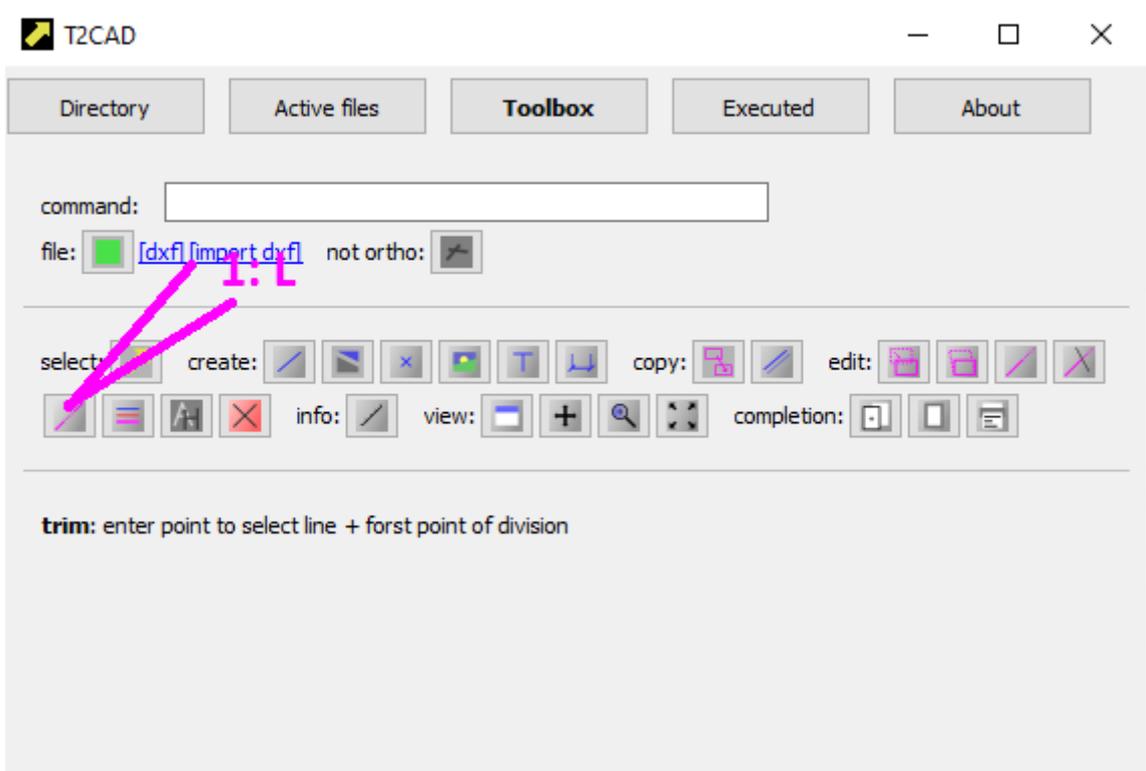
 What we are drawing is a cut in the axis of the stool, so it is necessary to highlight the parts that are in the cut versus the parts that are in the view. Therefore, perform the following instructions to change the line thicknesses:

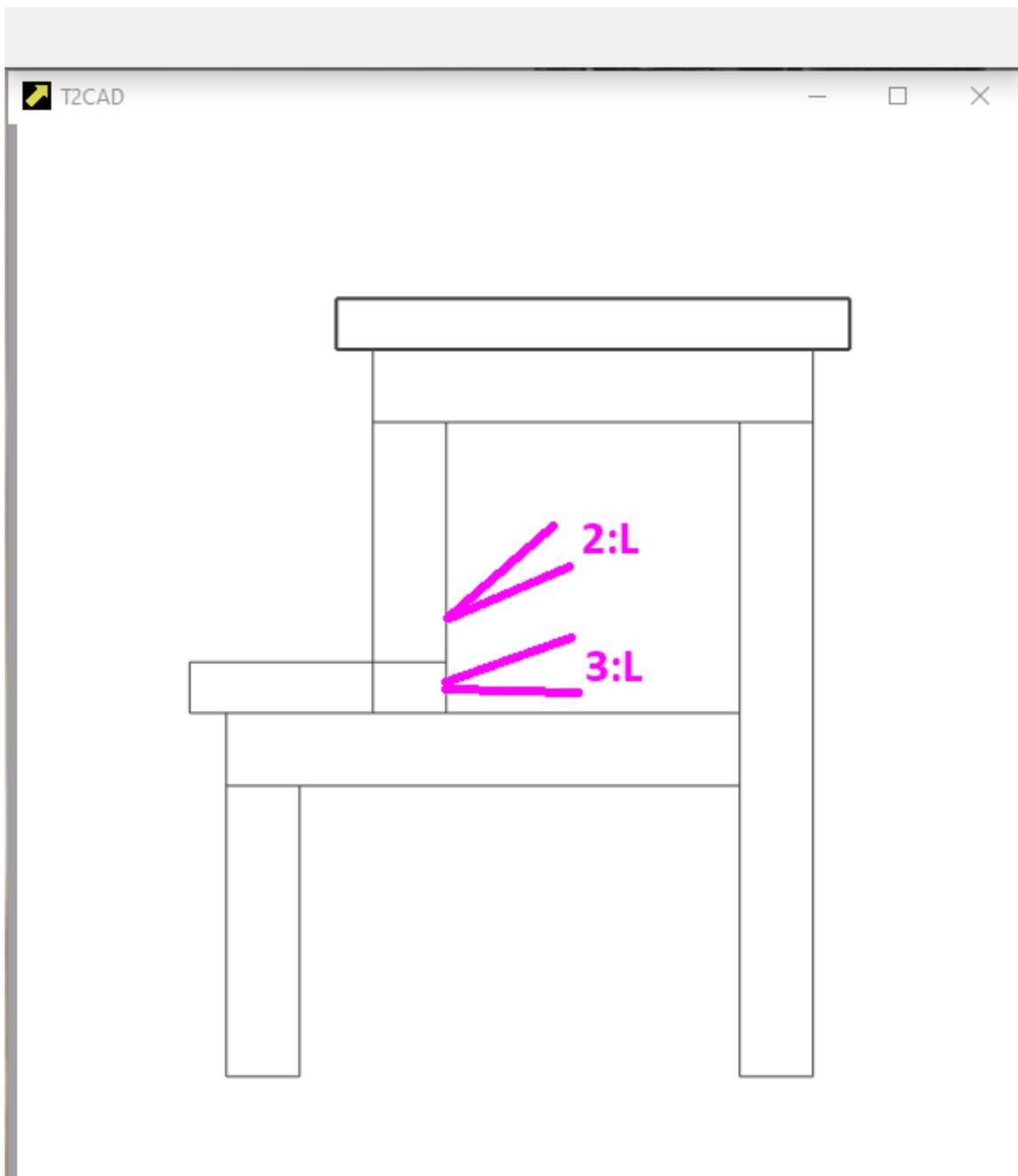


The result will look like this:

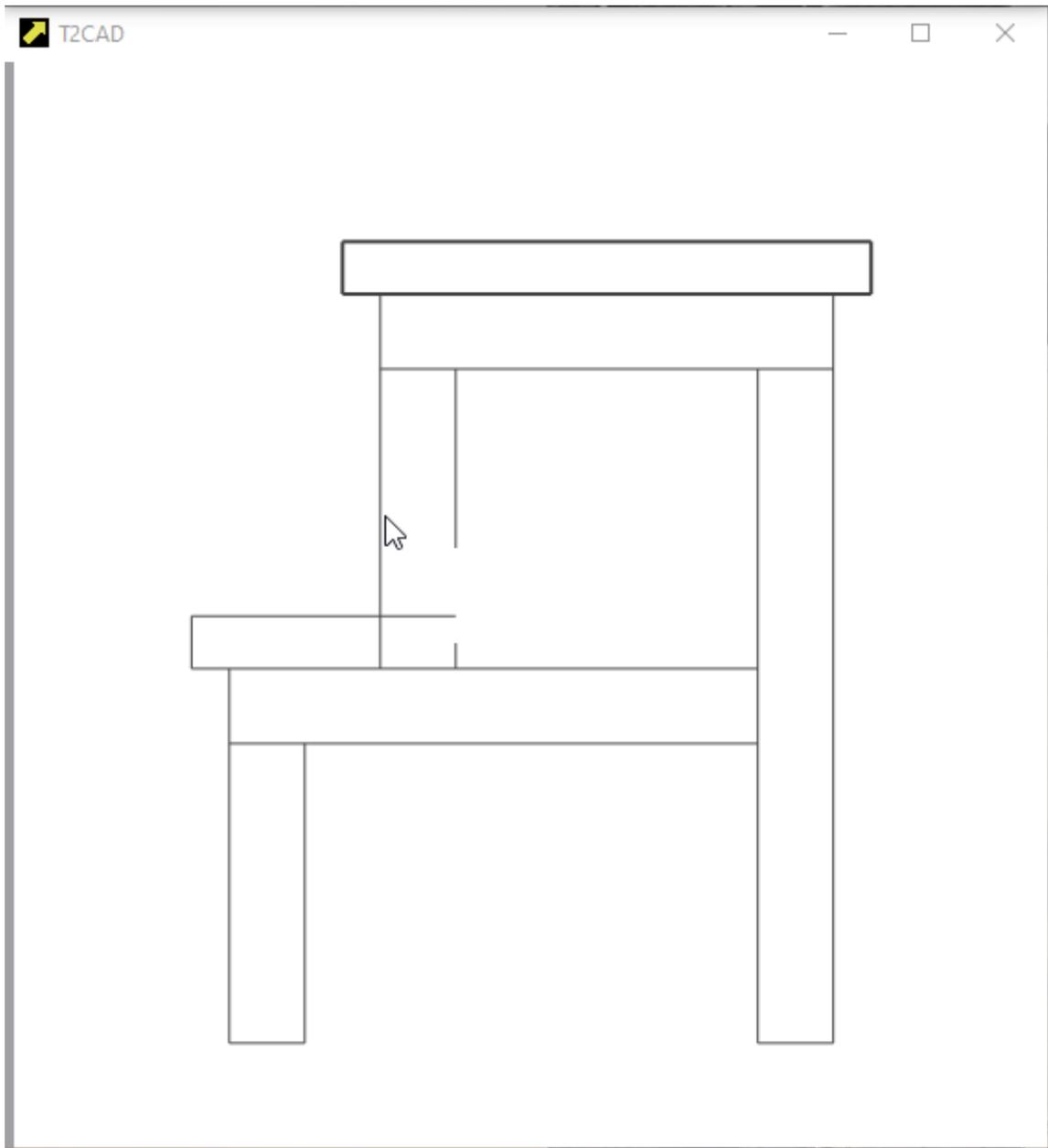


➡ For the second step, we have to make preparations first:

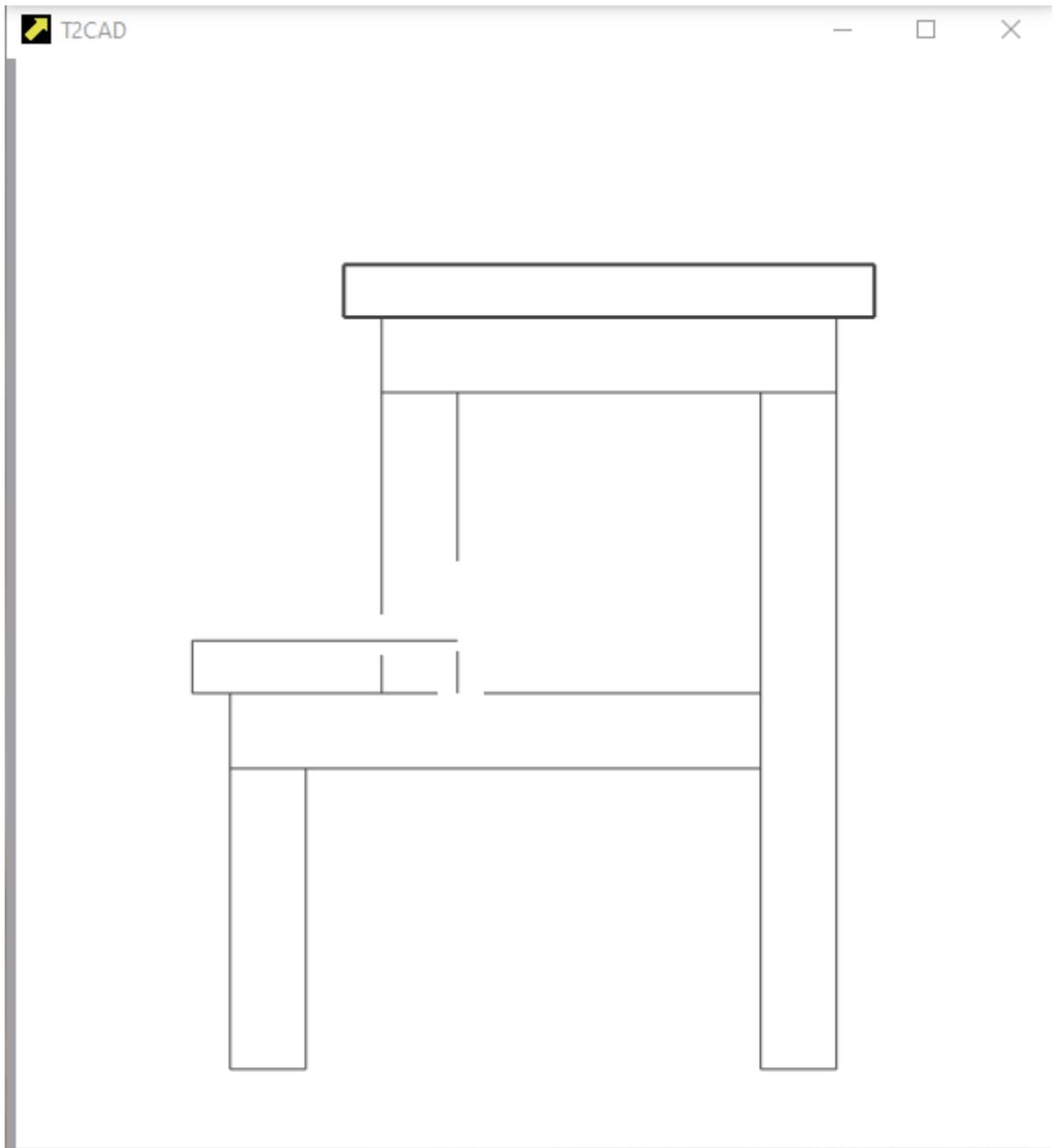




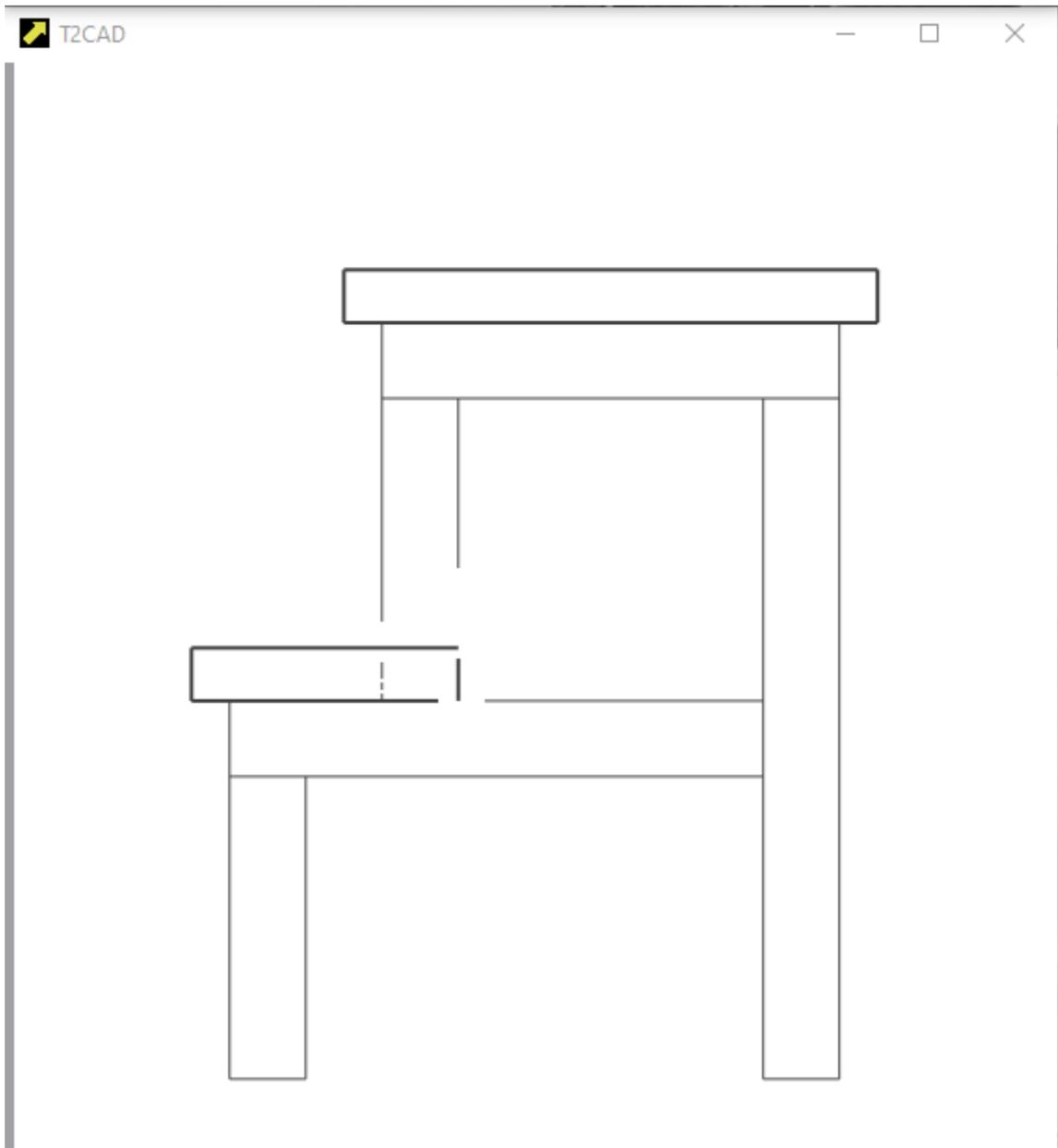
The result will look like this. A line interruption occurs between POINT 2:L and POINT 3:L:



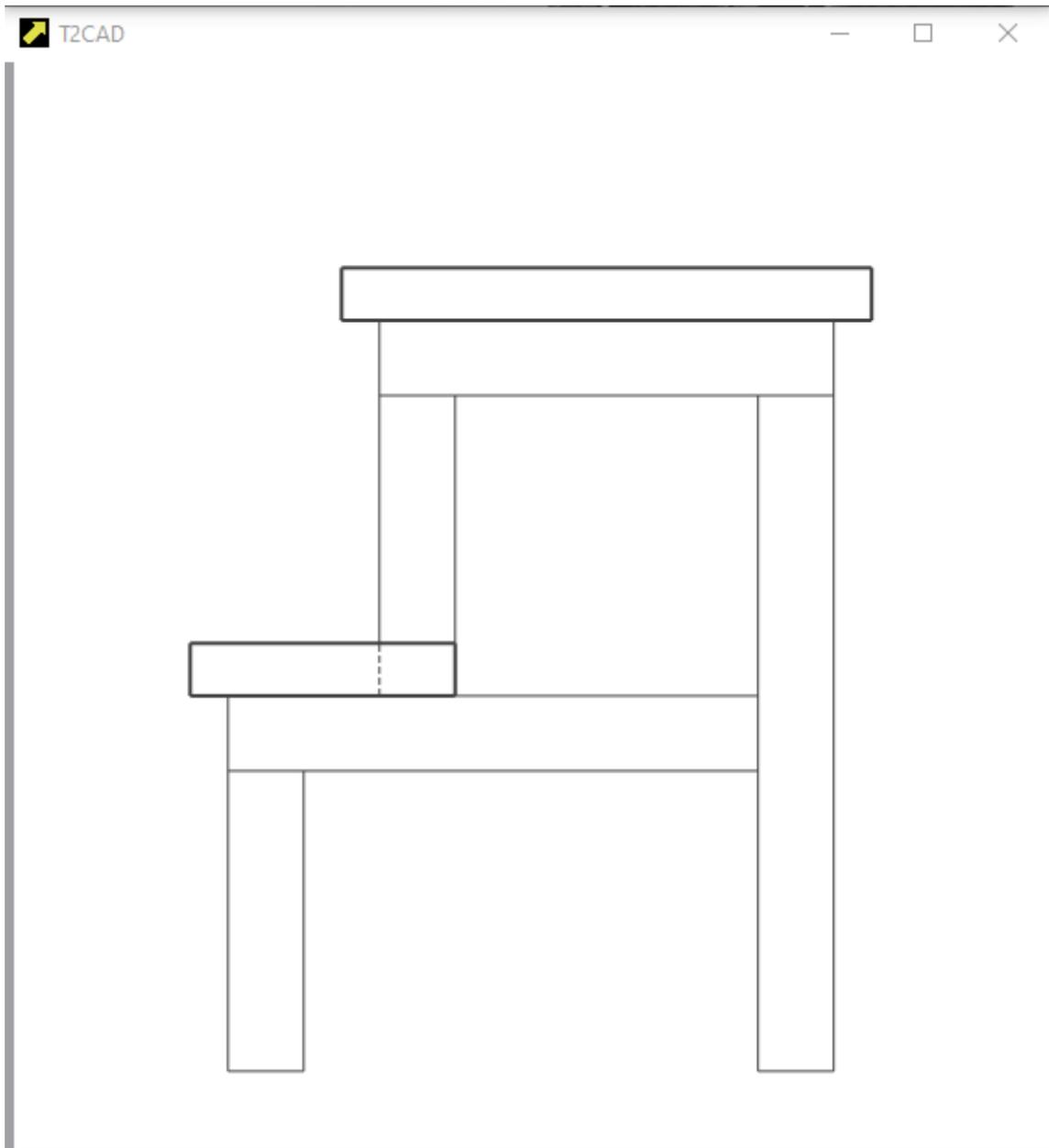
You can easily interrupt other lines yourself:



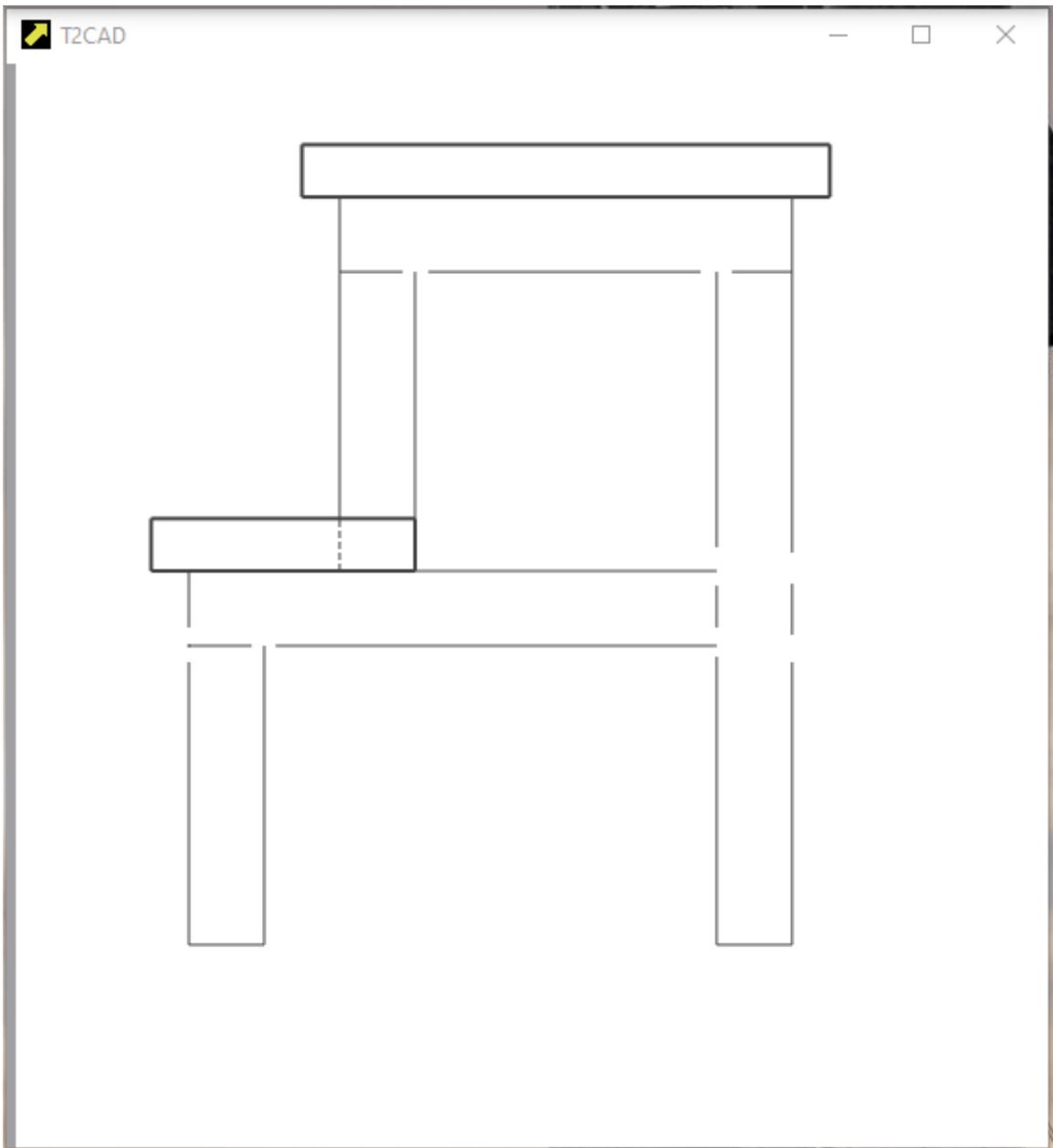
Now change the symbology of the lines:



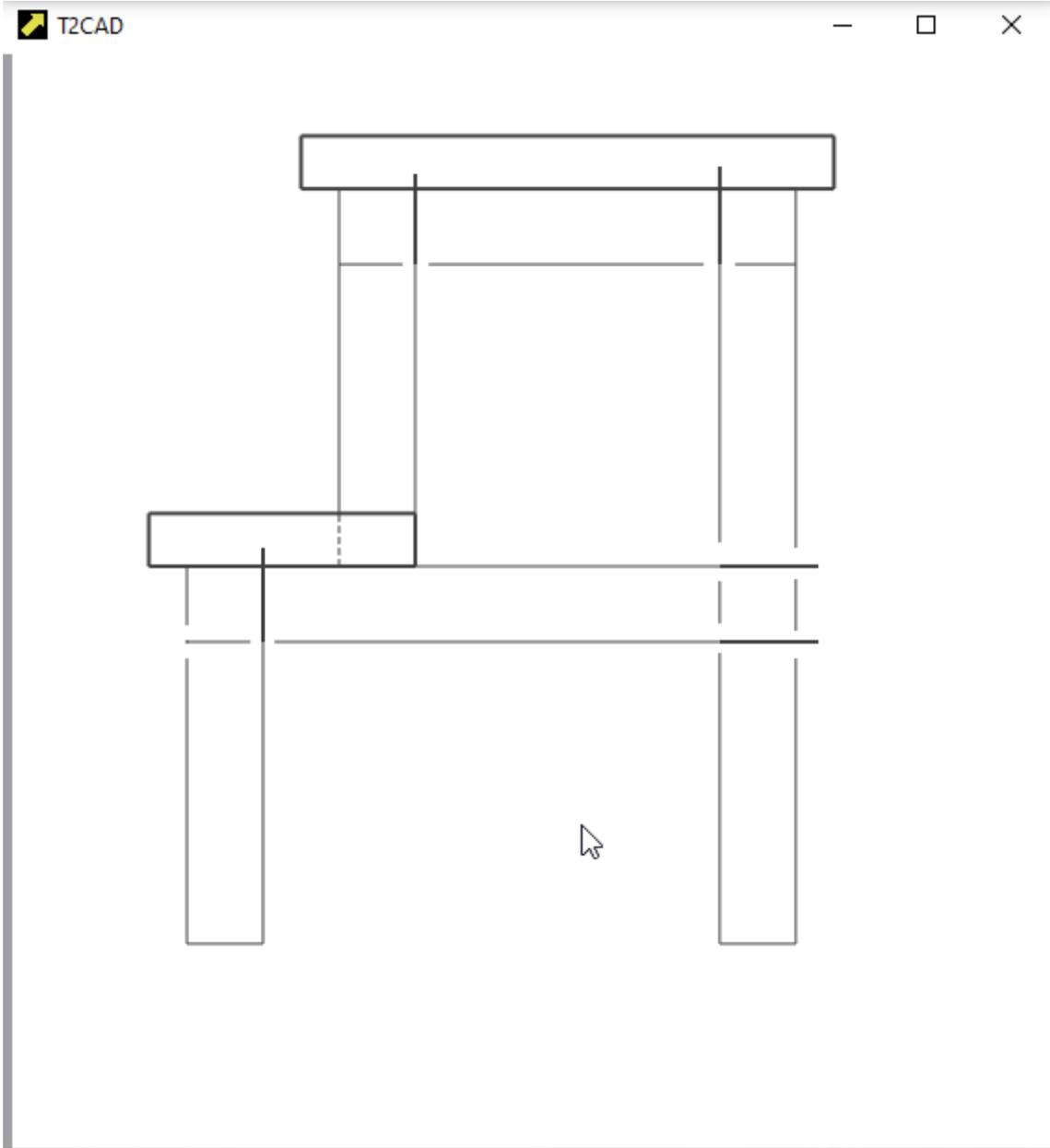
And you cut it all off:



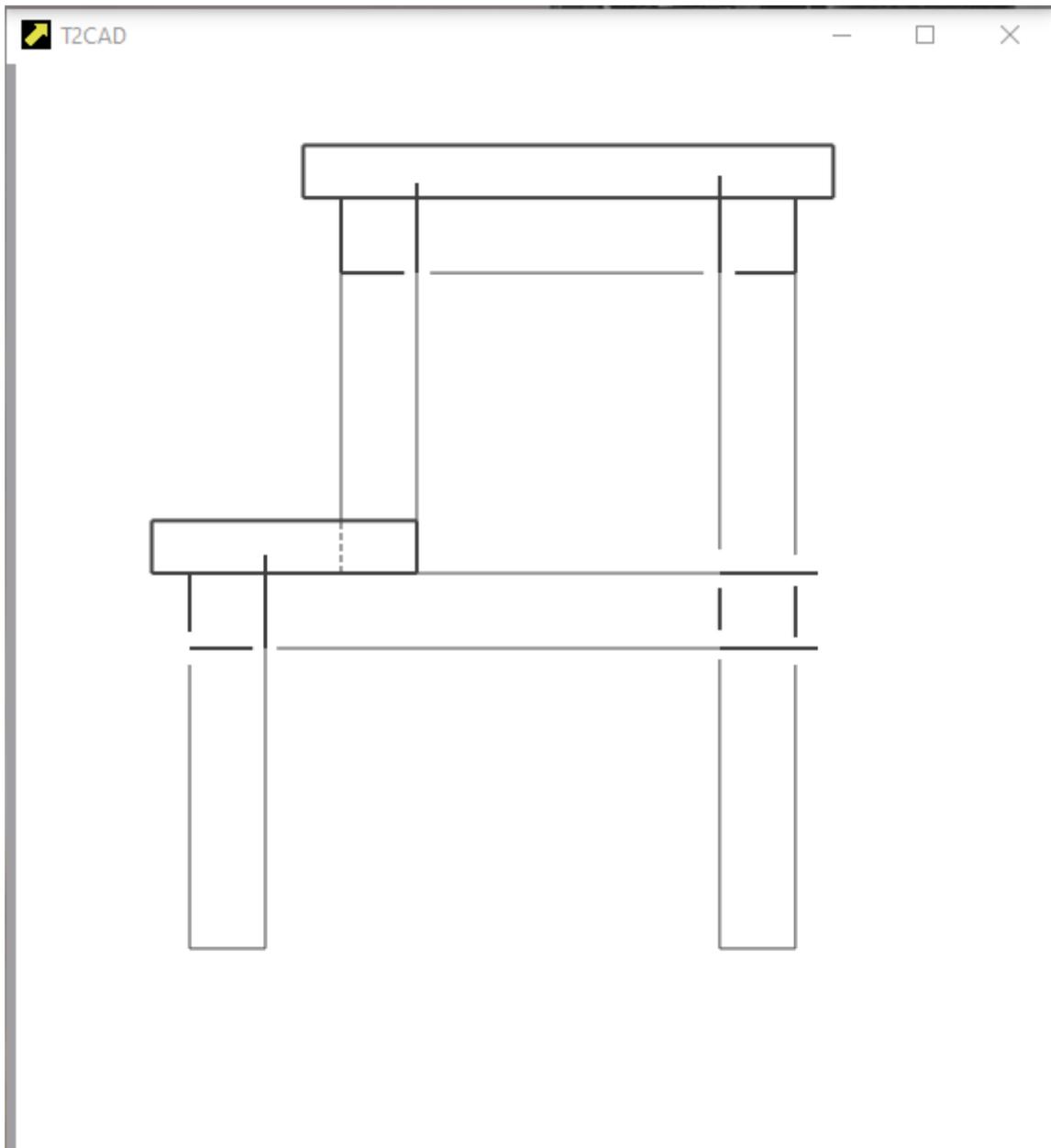
 Now you will draw the steps of stool, which also pass through the cross section and will be drawn thick. First, you will prepare by dividing the necessary lines:



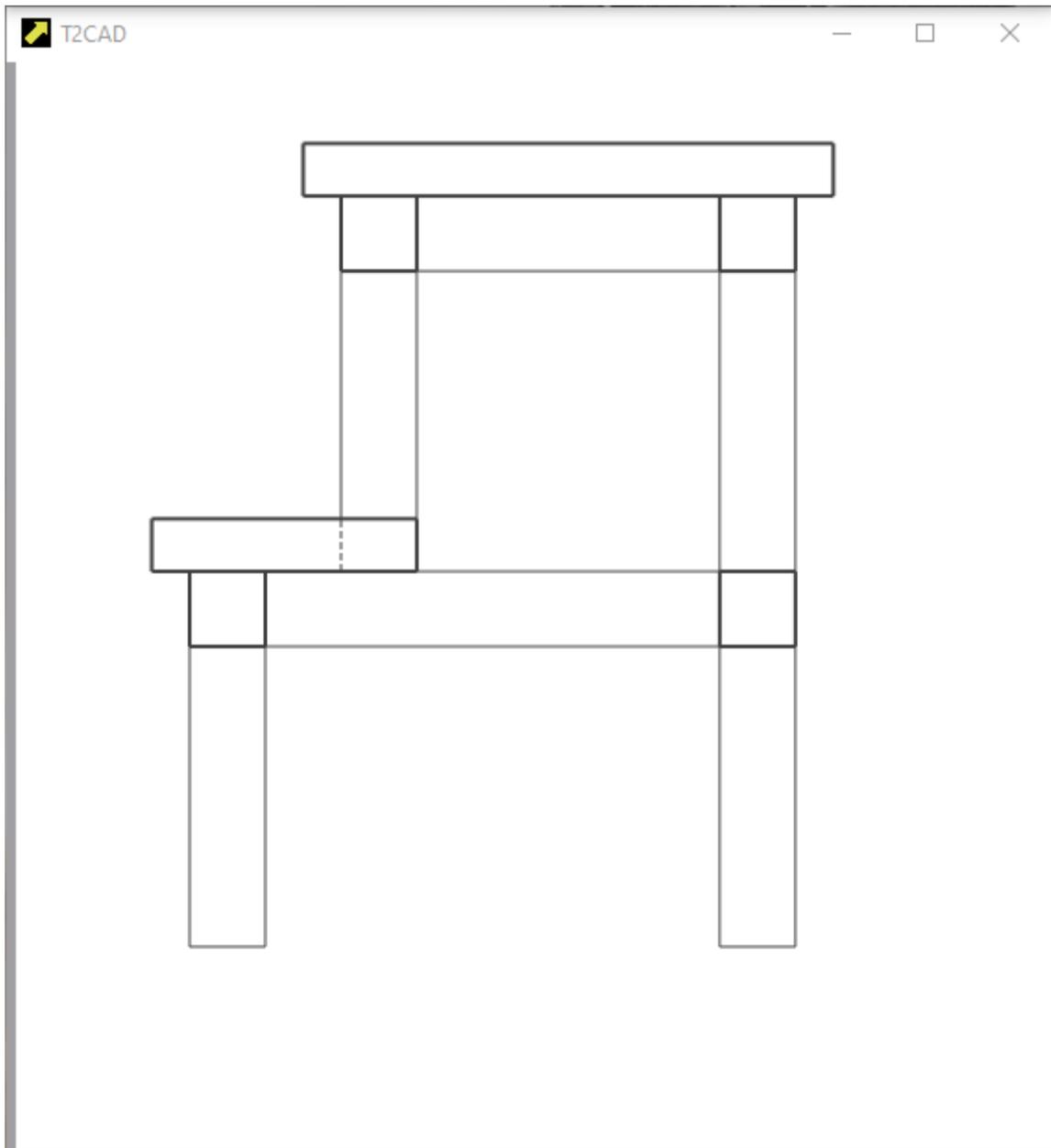
Now let's learn to draw orthographically. Follow these instructions:



Change the thickness of the remaining lines:



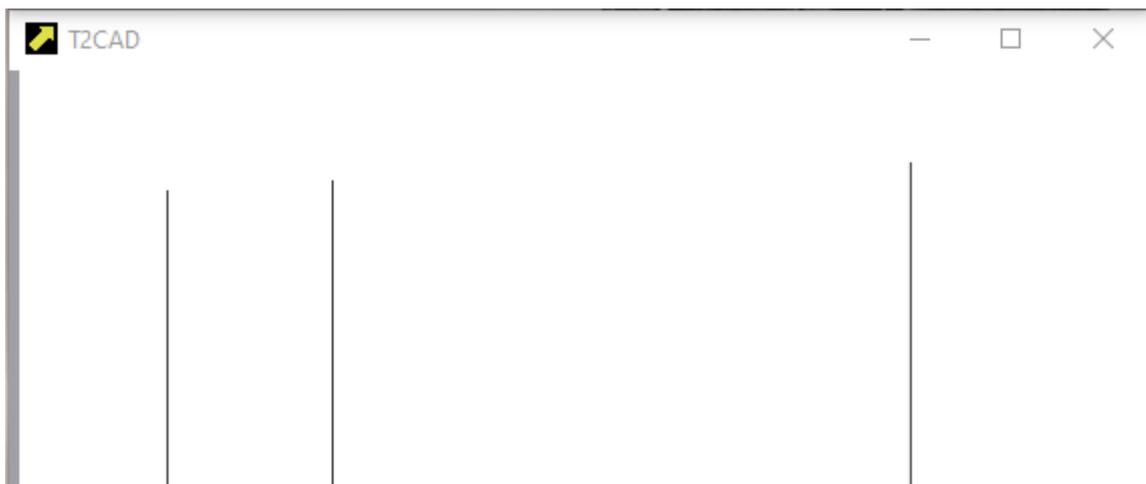
Trim the lines:

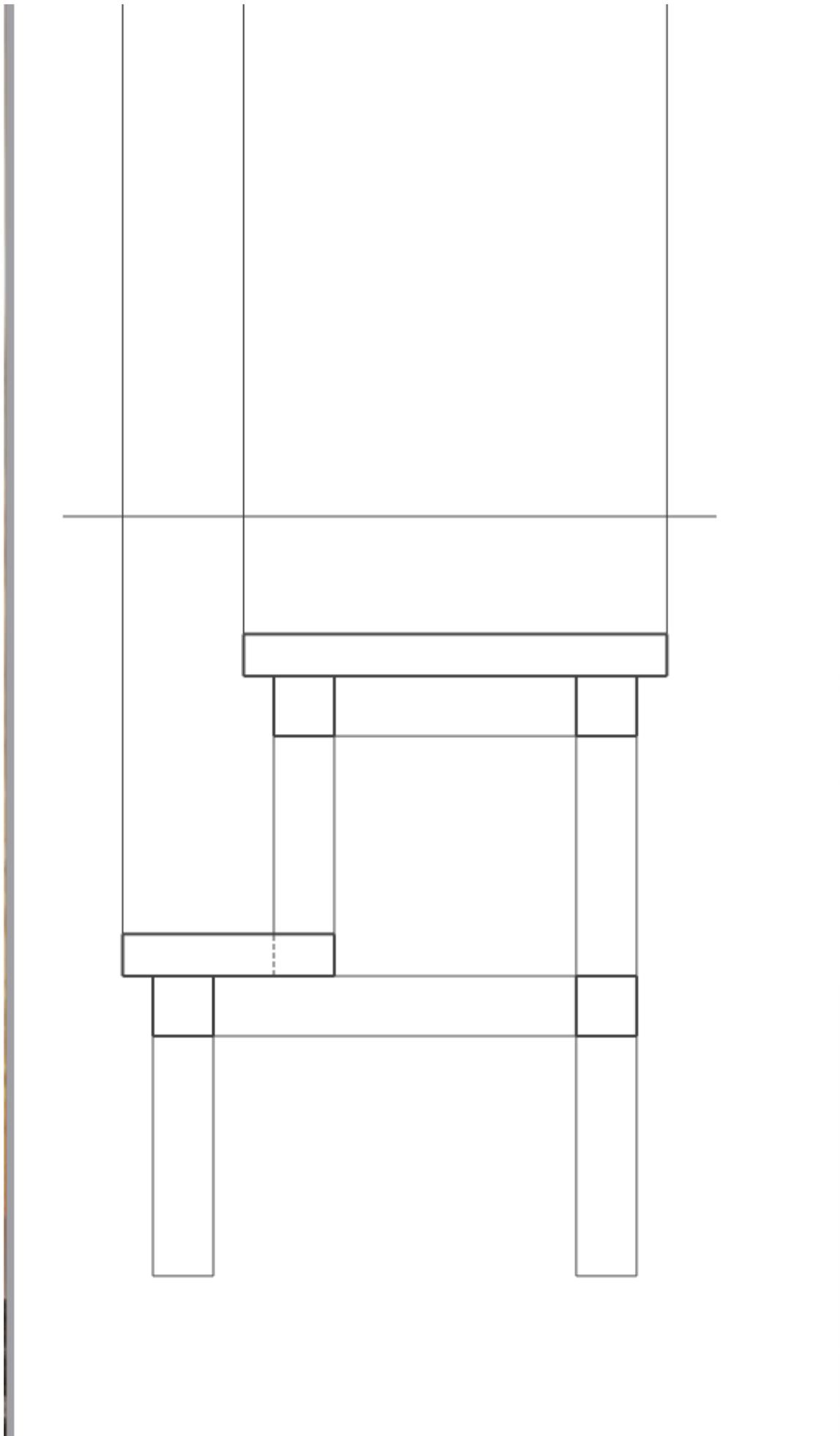


And done.

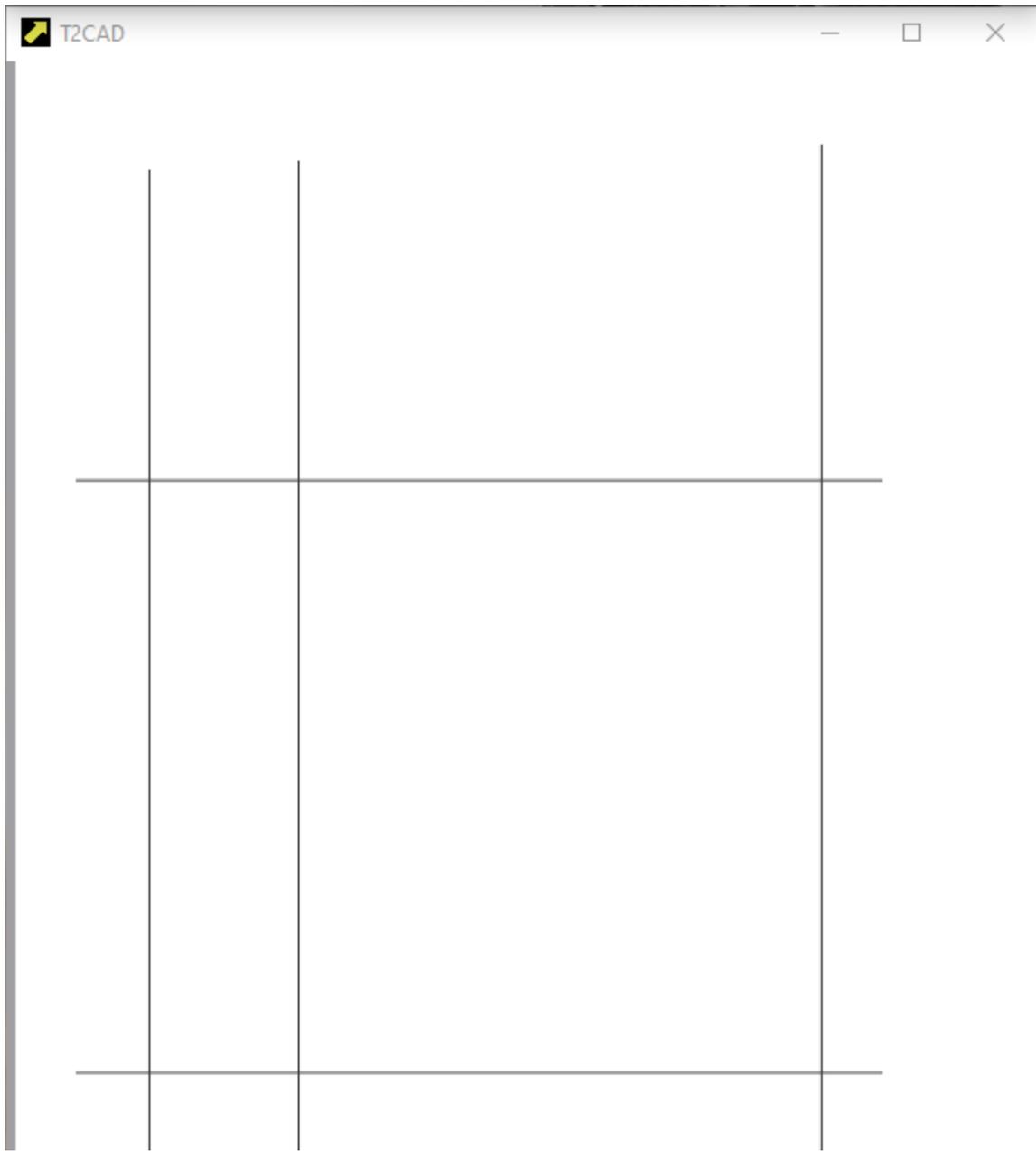
FLOOR PLAN

We will now proceed to drawing the floor plan. Using **ORTHOGONAL**, **TENTATIVE** and **place line** you can do this:

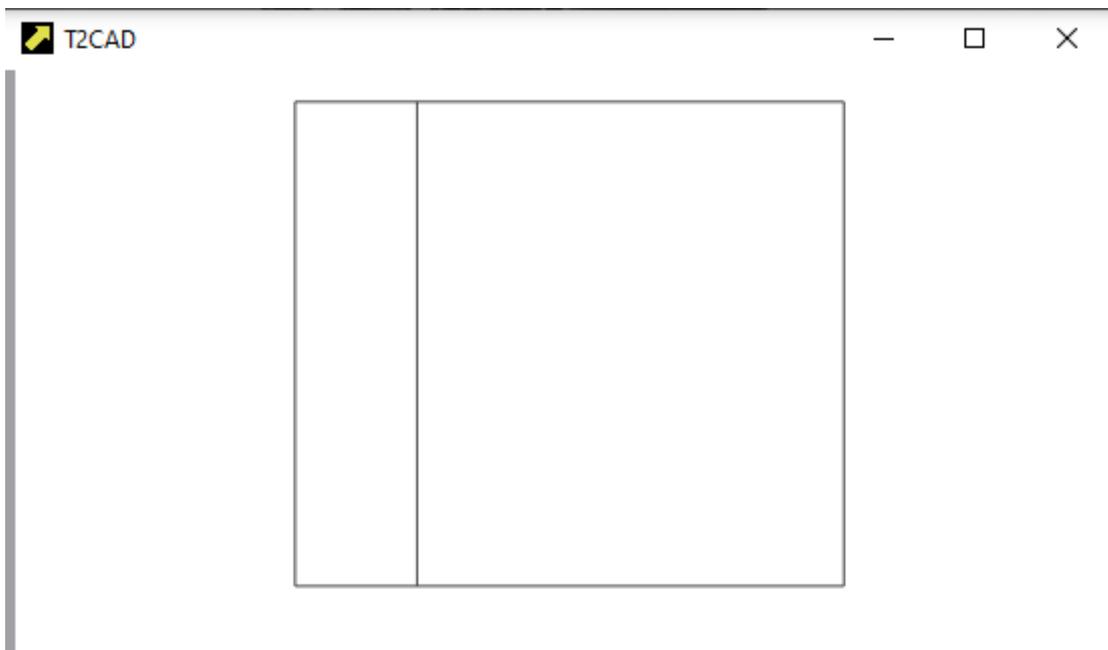




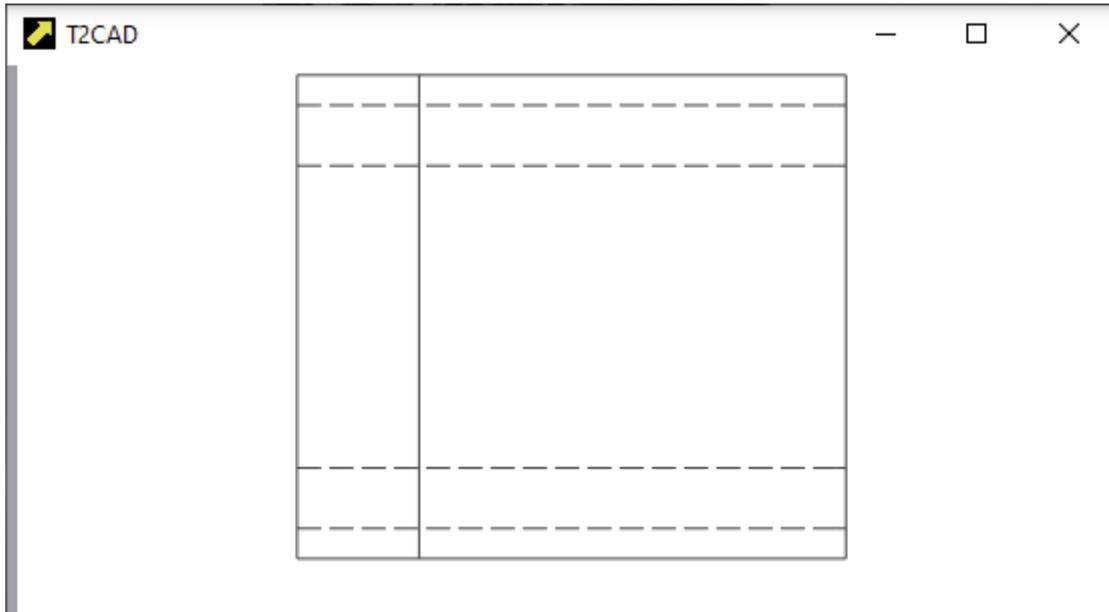
We will now **copy parallel** by 400:



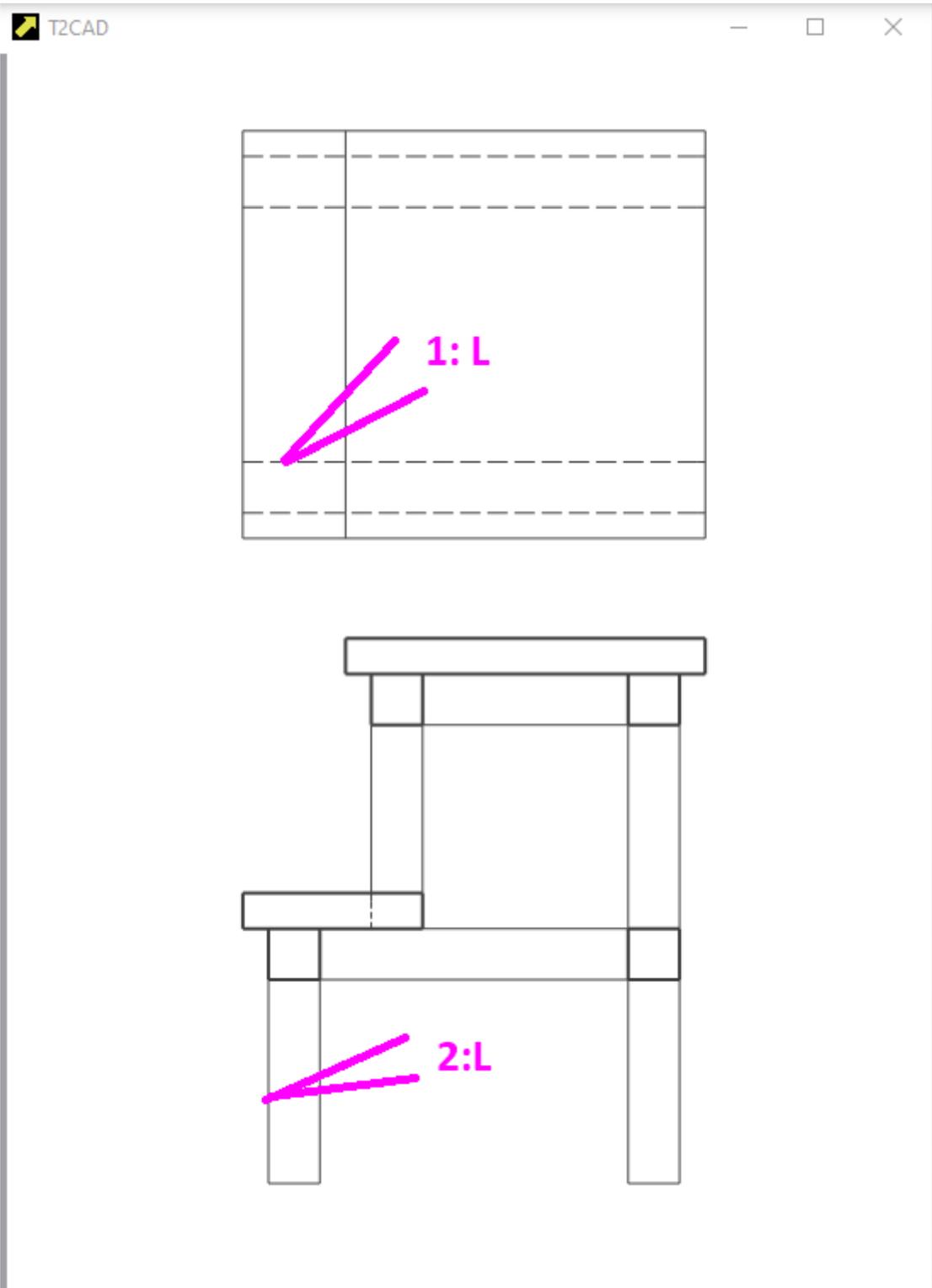
Now make a trim using **trim to:**



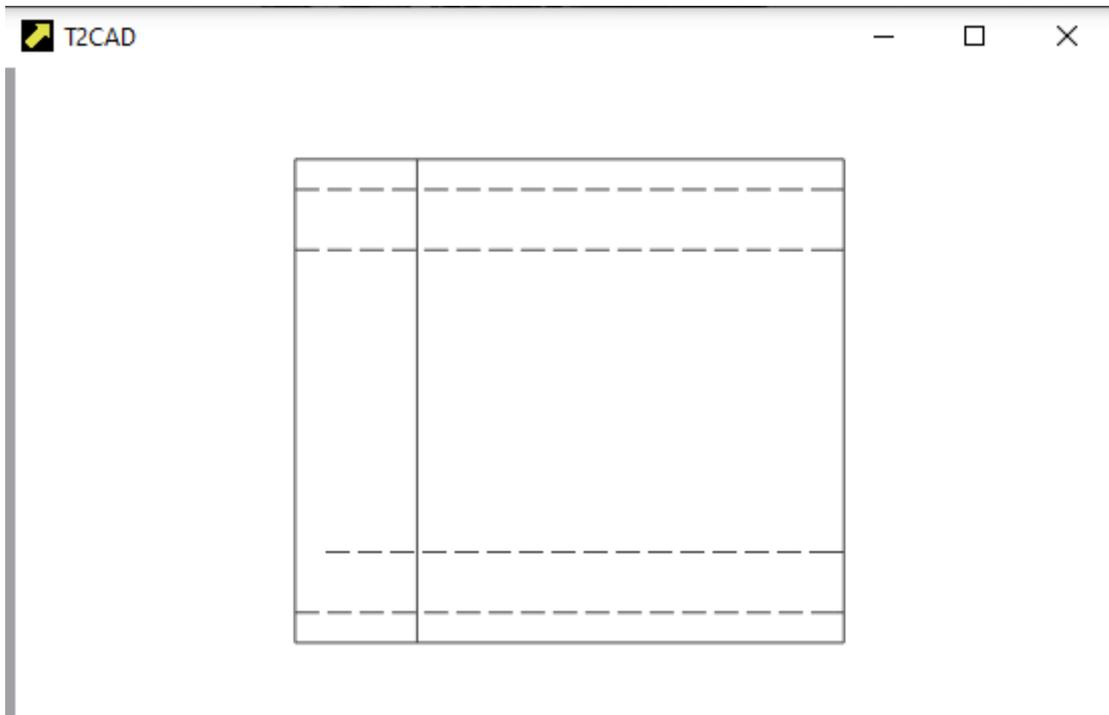
Now perform COMMAND **copy parallel** by 25 mm and then by another 50 mm.
Change the line using **set symbology**.



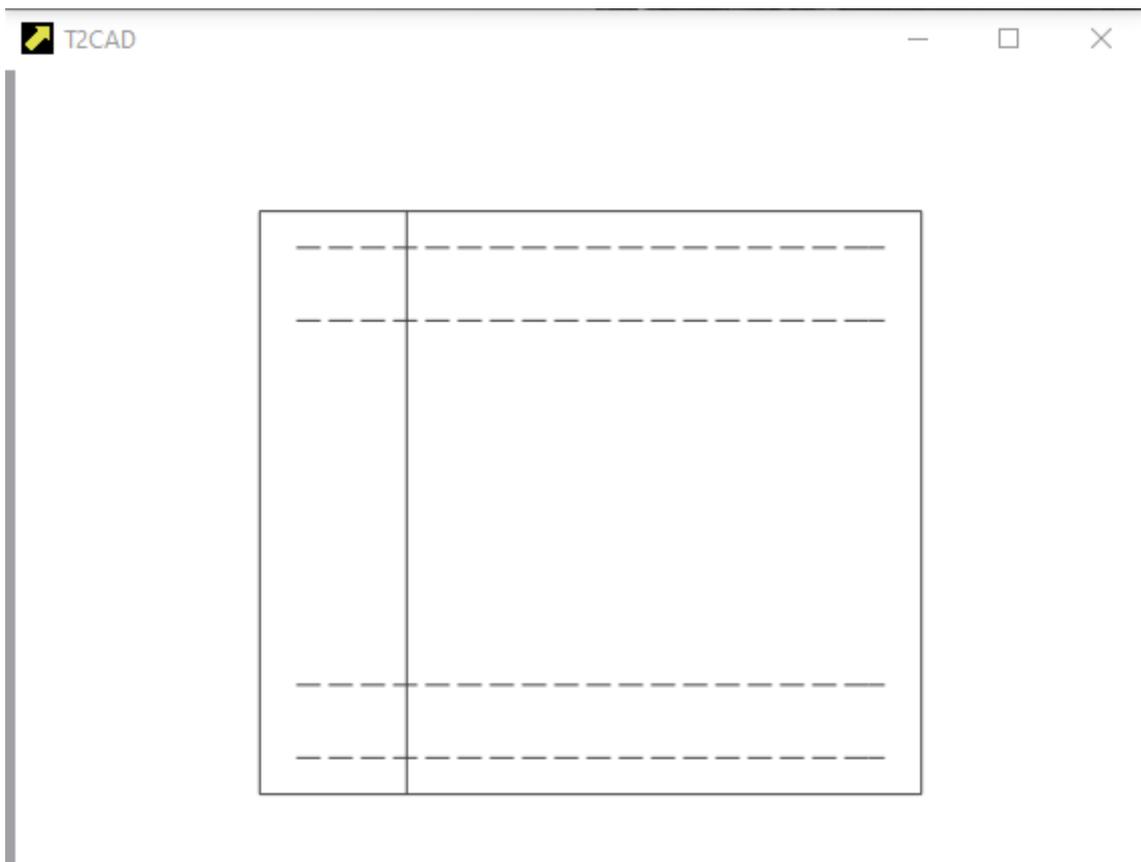
Now do COMMAND **three to** this way:



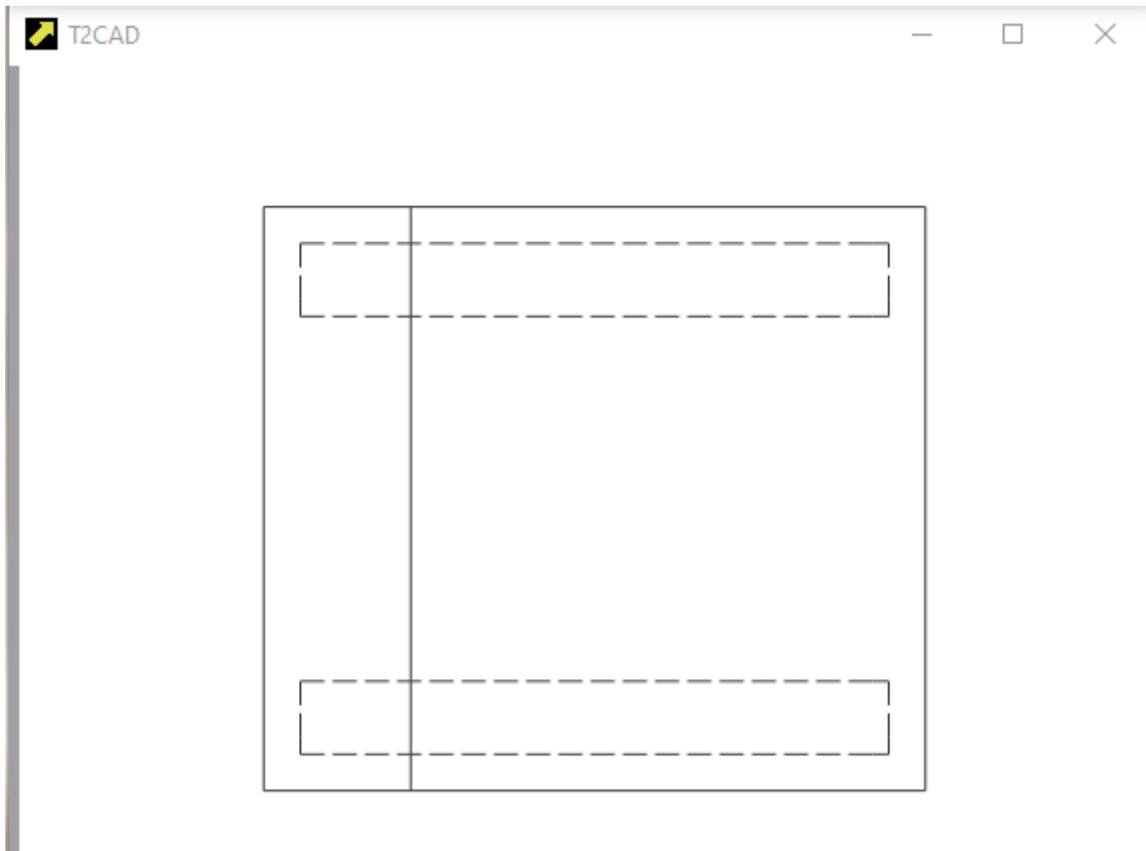
The result will be like this:



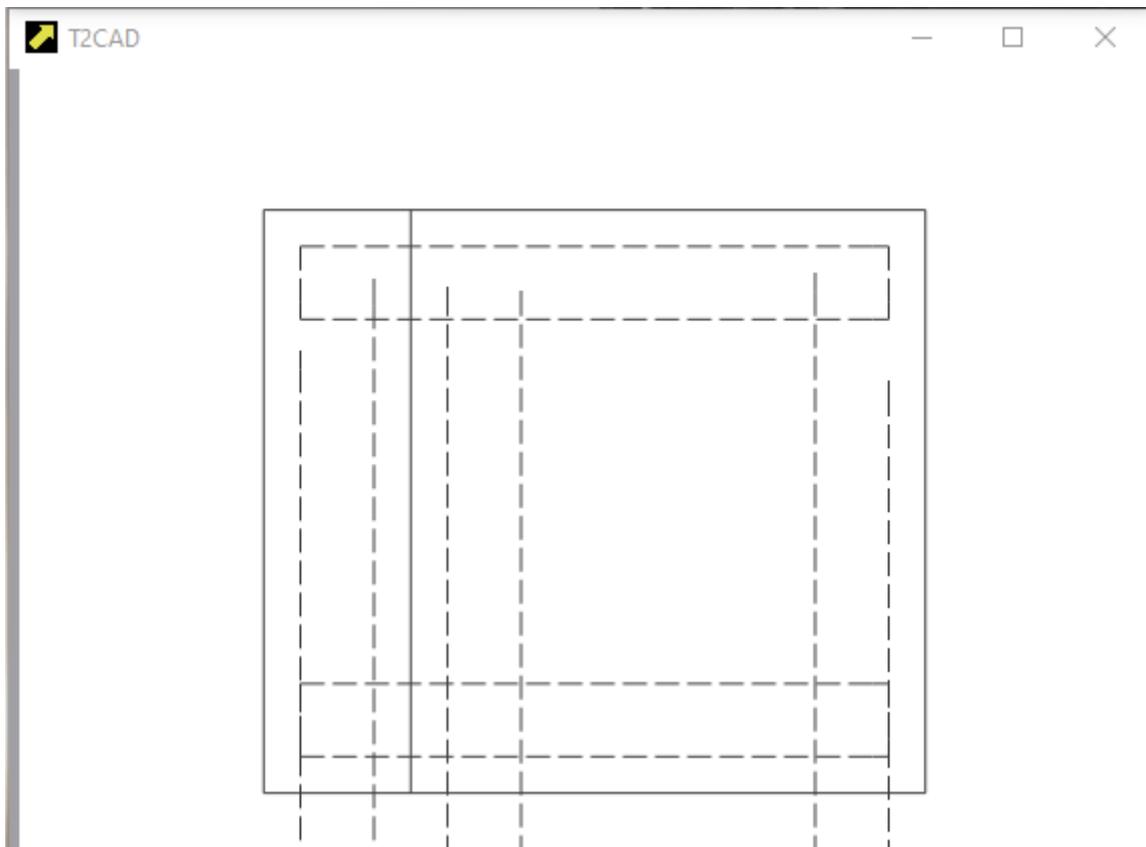
We will perform the operation for the other sides. We can also use **COMMAND extend** in combination with the use of **TENTATIVE**. The result will look like this:



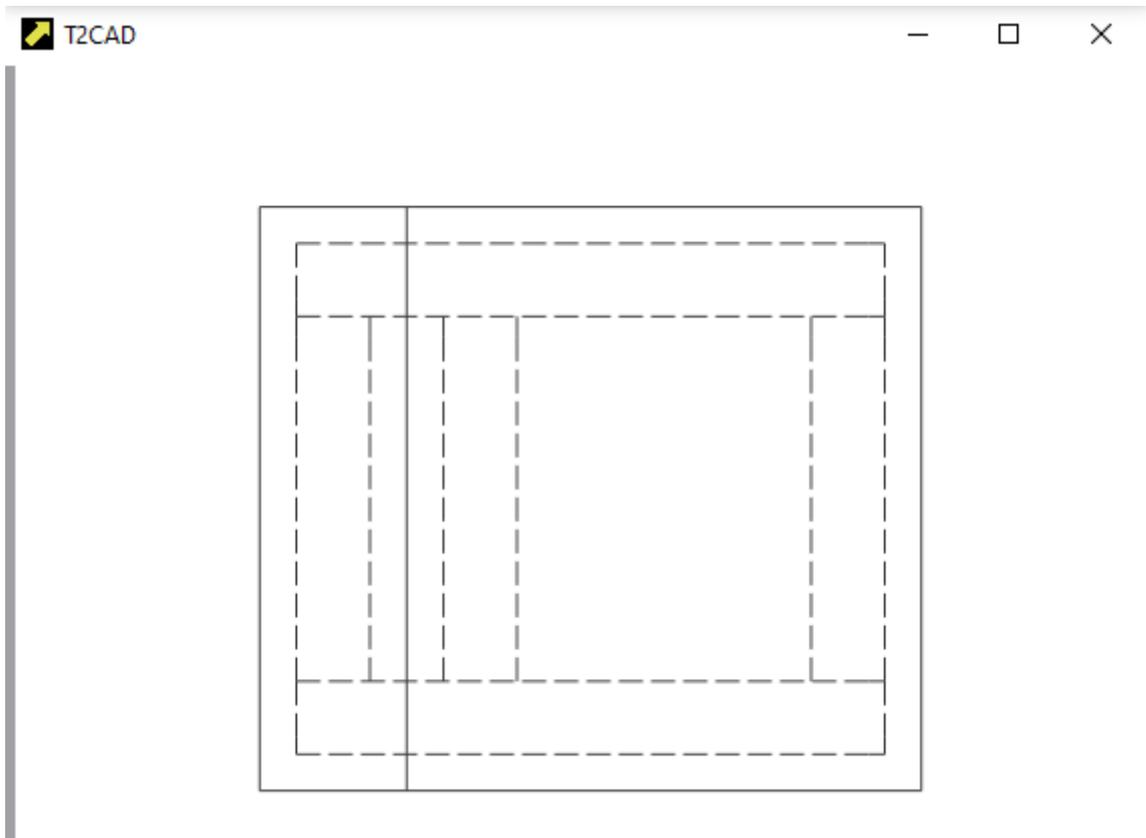
Using **COMMAND place line** and using **TENTATIVE**, complete as follows:



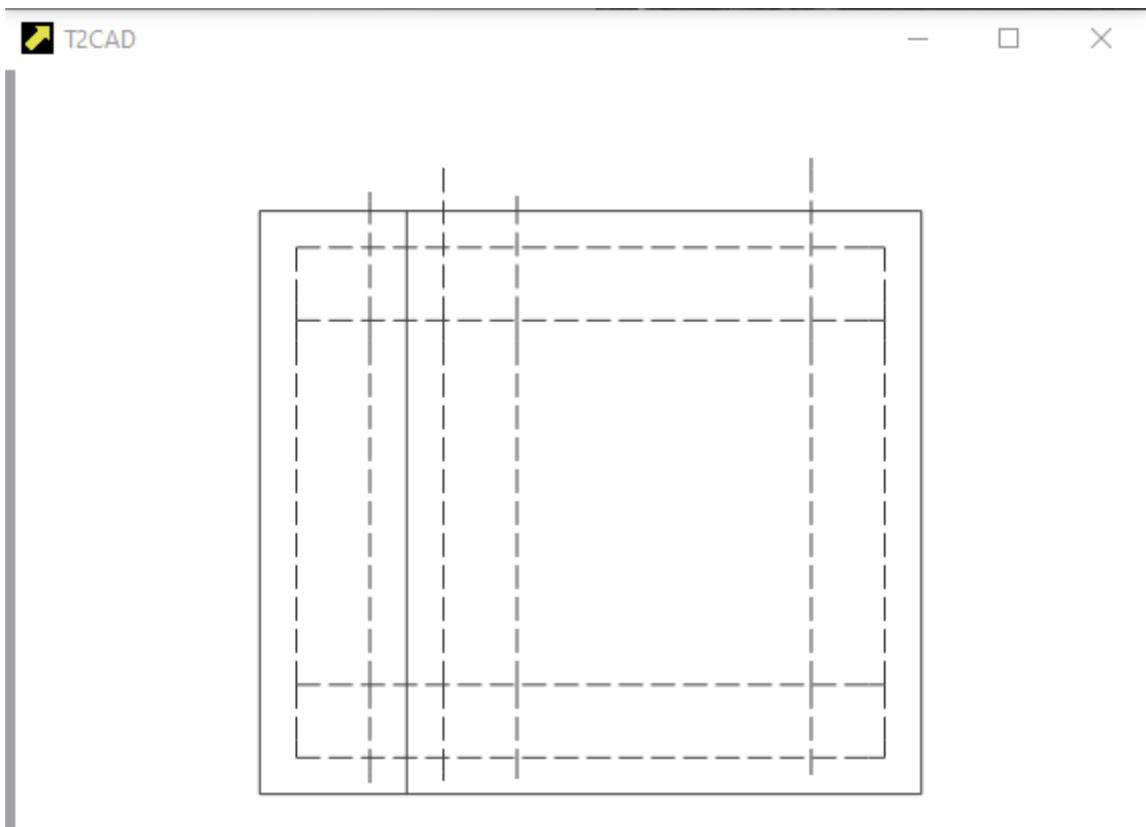
Using **place line** and using TENTATIVE in ORTHOGONAL mode, add the following:



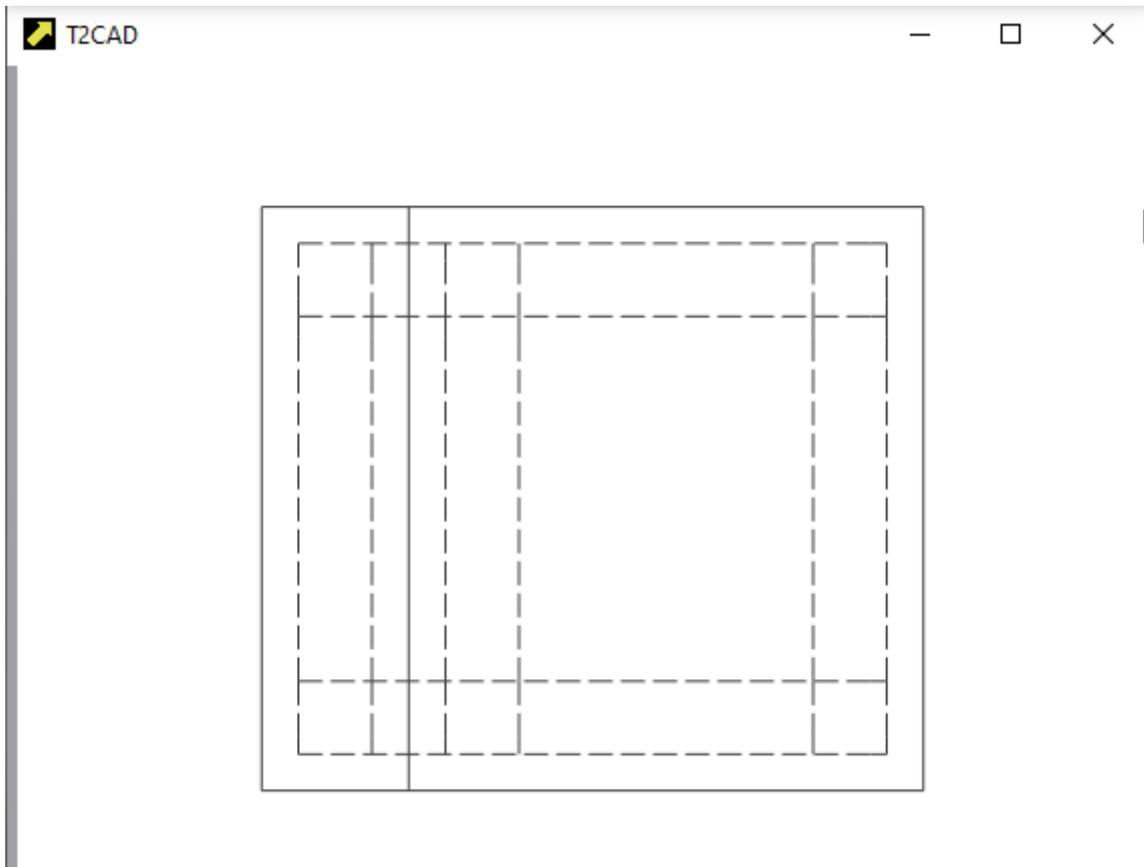
And trim it with COMMAND **trim to**:



Use COMMAND **place line**. Use TENTATIVE and ORTHOGONAL to do the following.



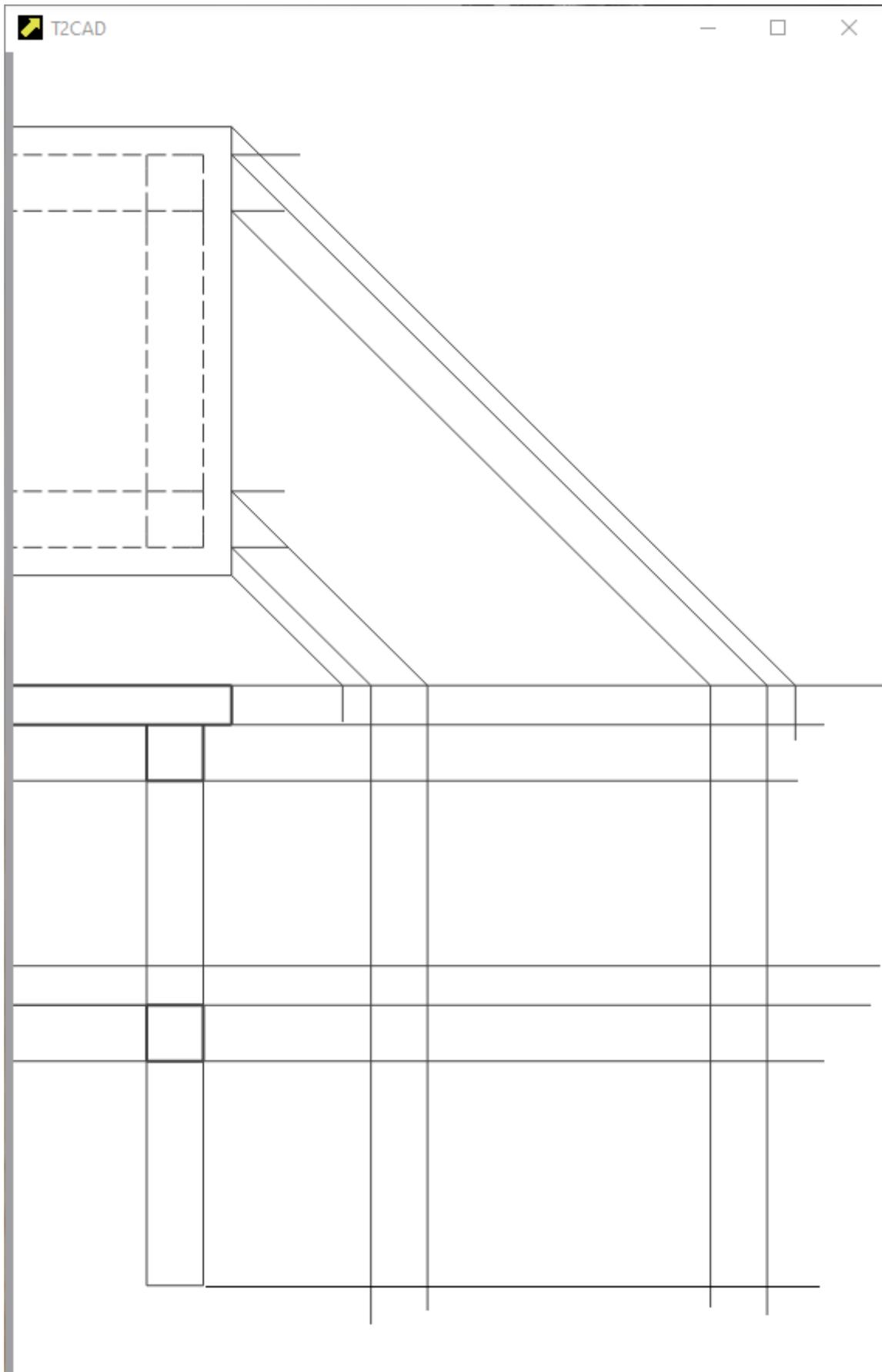
And use COMMAND **trim to** to trim it:



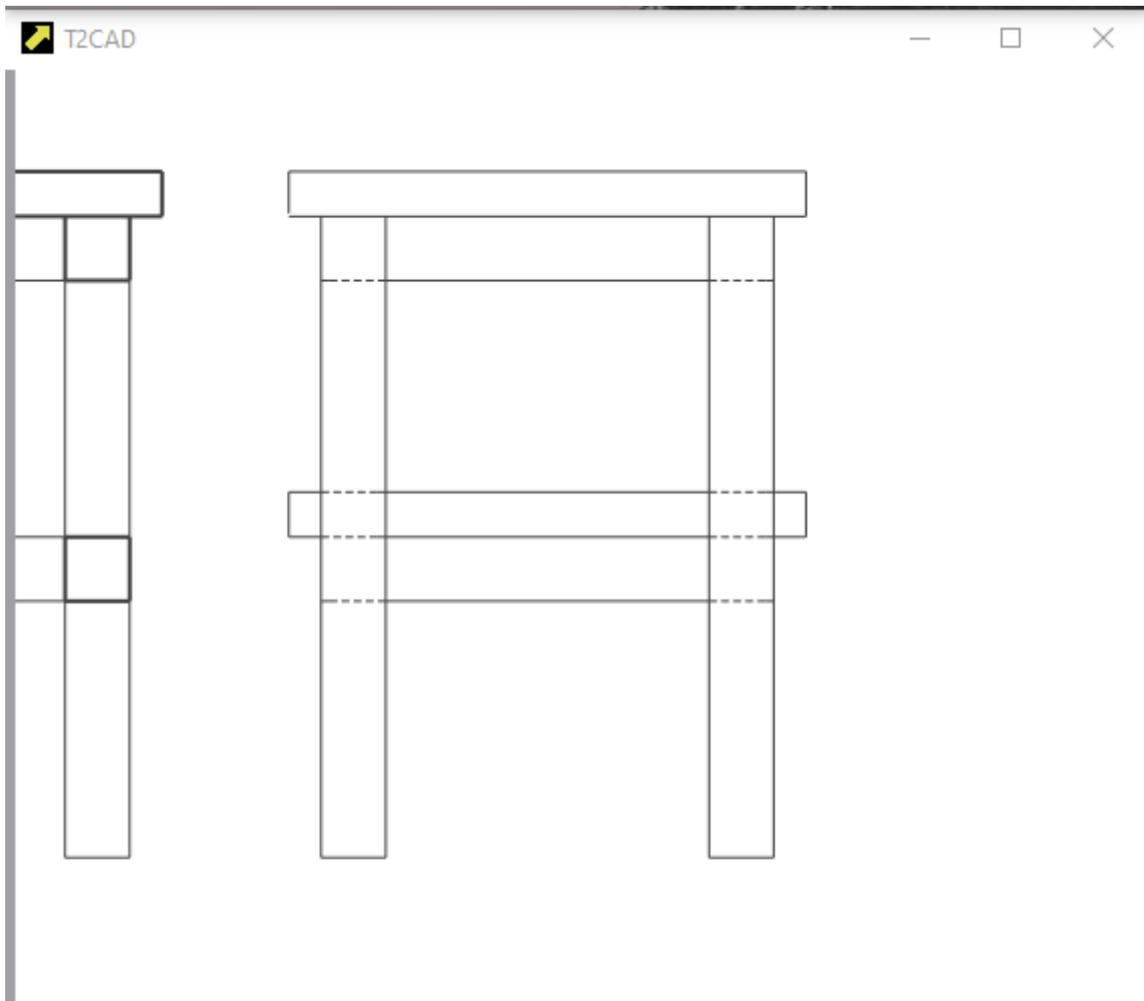
Floor plan of the stool is finished.

SIDE VIEW

In the same way that we can draw a **place line** of a certain length, it is possible to draw at an angle of 315 degrees. This is used when plotting the side view, where we have to combine information from the section and the floor plan:



Next, modify the drawing using **trim to**, **delete**, **trim** and **place line** as follows:

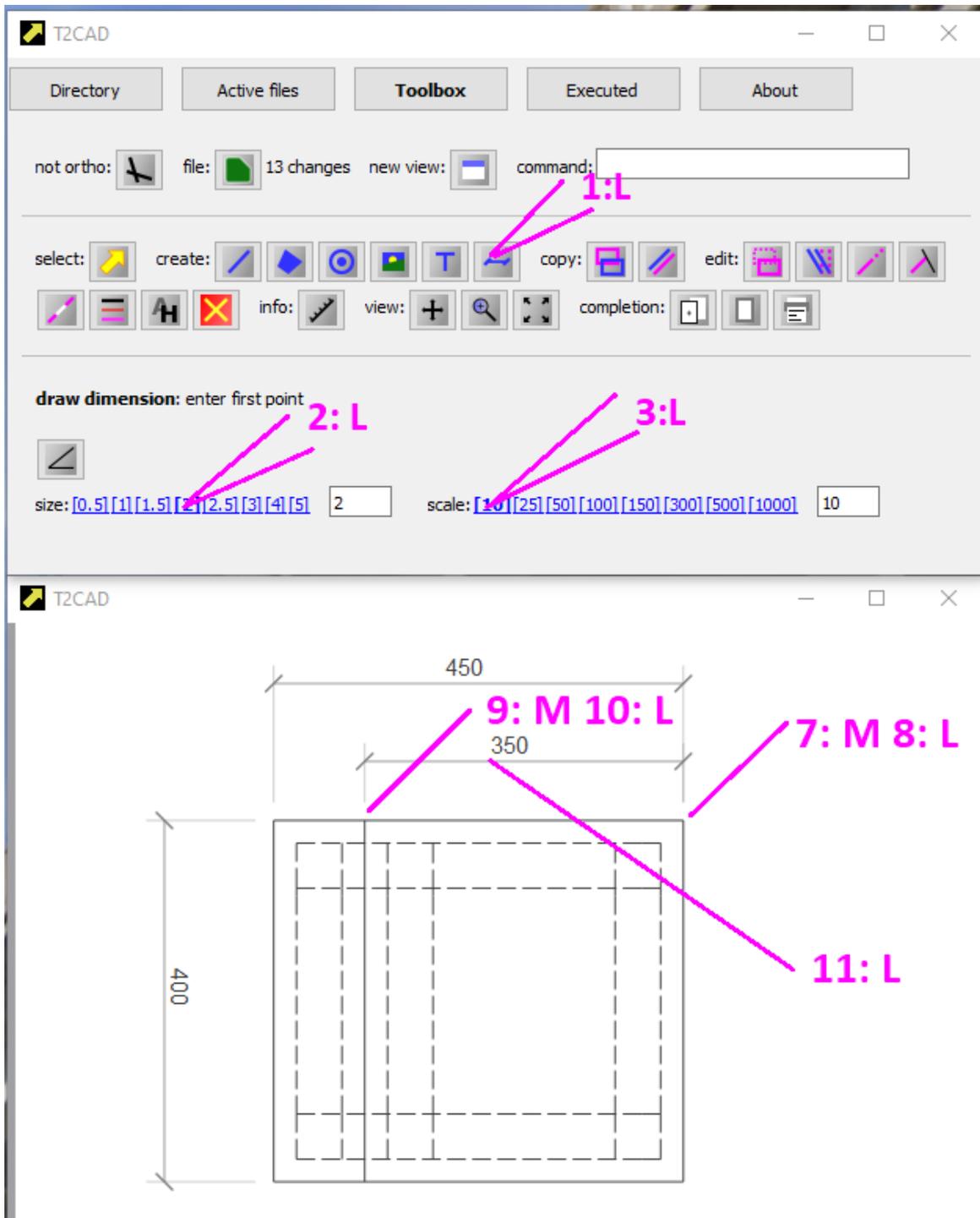


And we are done.

KOTOVANI

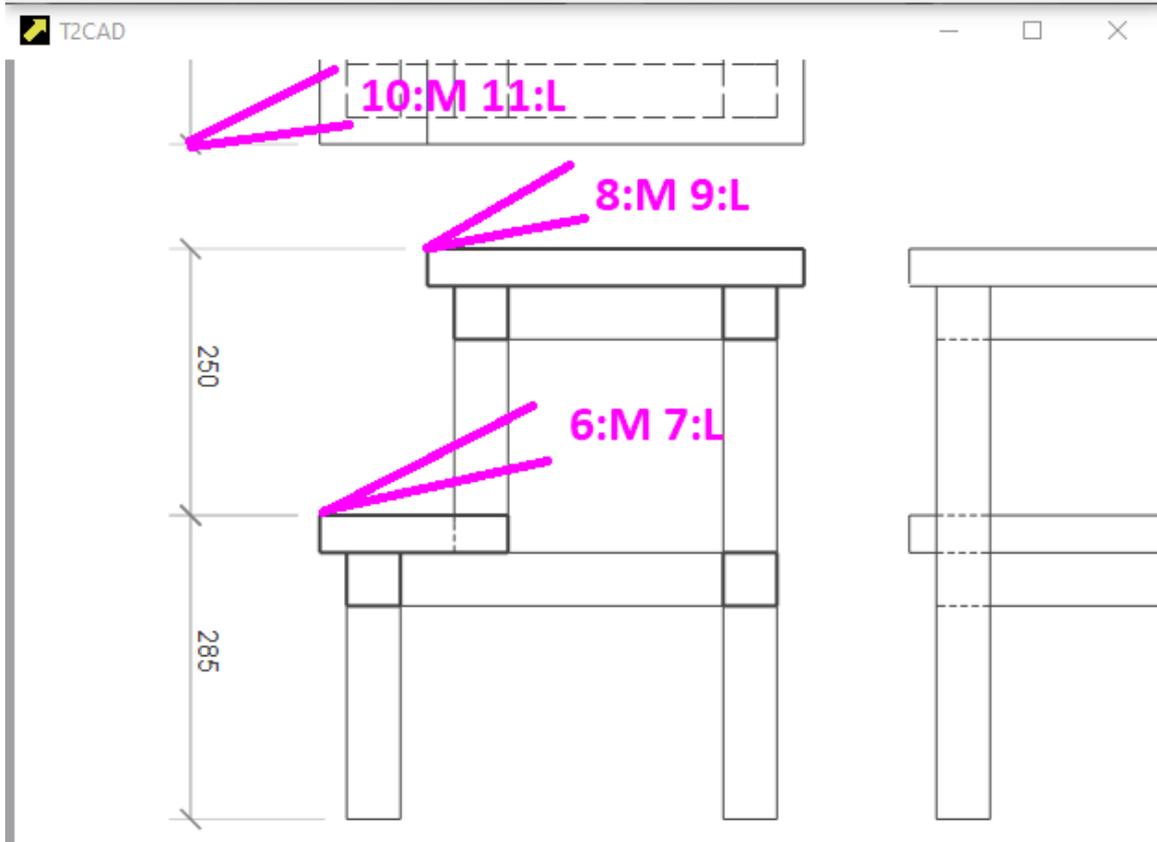
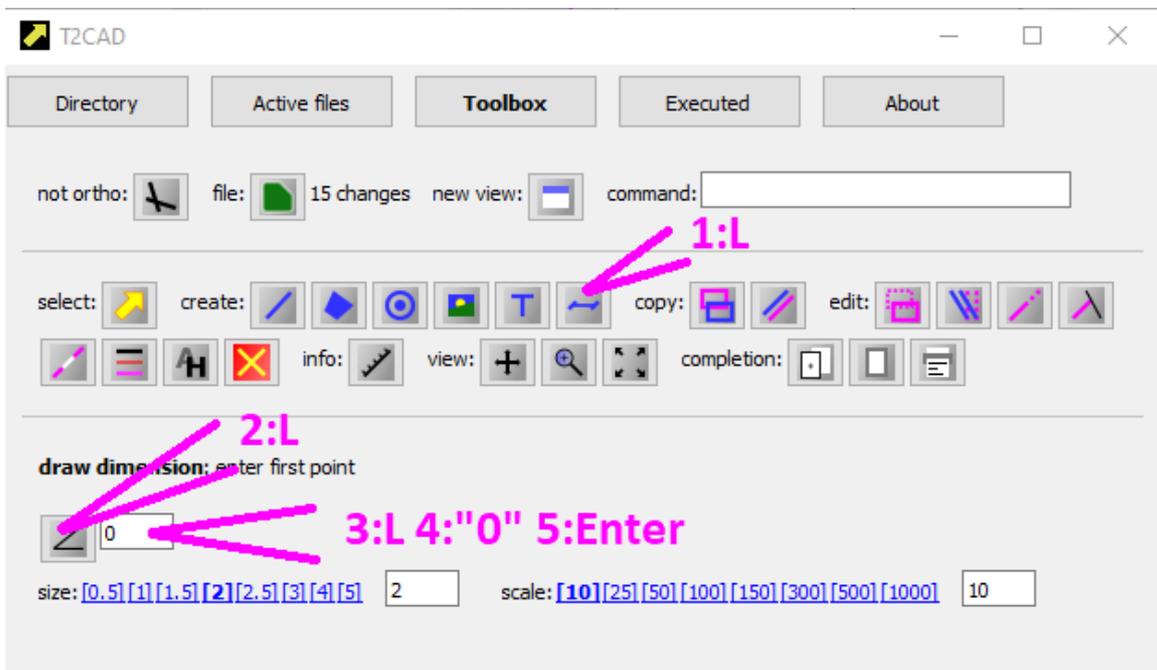
Now it is necessary to draw the dimensions, i.e. to carry out the quotation. Only a simple quote is available at the moment.

Follow these instructions:



You can easily place the other two quotes yourself.

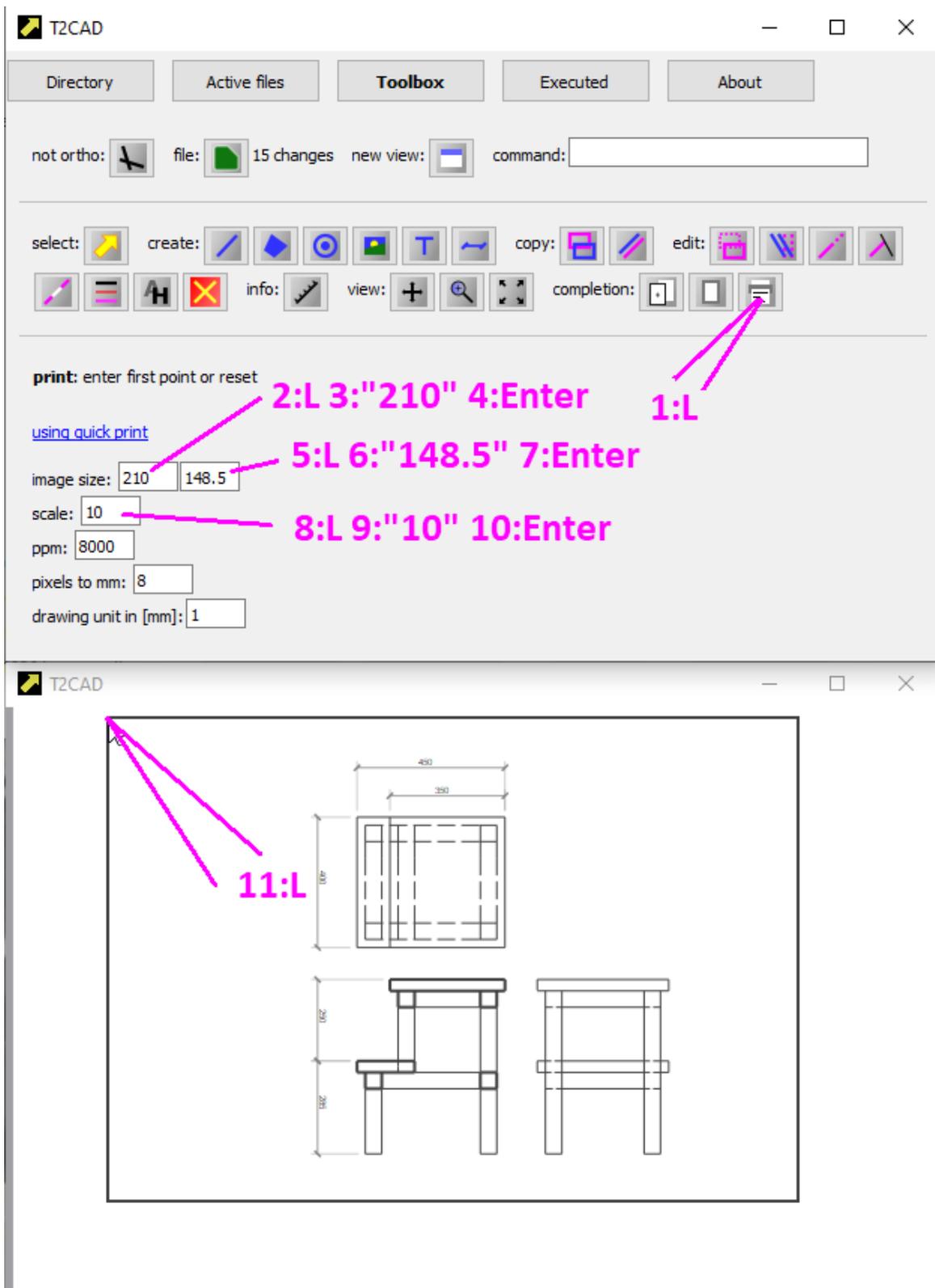
It is different with the following quotes, where the quote angle must be defined first. Therefore, carry out the following instructions:



You can also easily place the remaining quote:

PRINTING

We have the drawing, so we can print it. Follow these instructions:



The printed plot can be found in the directory where the open file is located, in the "print" subdirectory.