Methods of obtaining screen views through AutoCAD Introduction

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DOI: https://doi.org/10.52340/building.2024.70.17

Abstract: It became possible to receive screen views in **AutoCAD** versions of the last year, which is a kind of novelty for users interested in this program. Screenshots are one of the best ways to describe an object, which is a good way to visualize it.

Keywords: Viewports screen views; Named Viewports named view; DVIEWBLOCK Dynamic views block.

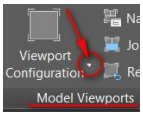
Introduction

AutoCAD is one of the most popular engineering software packages, it allows solving a wide range of engineering tasks faced by the designer quite easily. It allows the creation of drawings and models, as well as the ability to test them.

AutoCAD is a powerful tool for drawing, it has the ability to make the necessary changes in the drawing and gives an accurate final drawing. It has a powerful editing tool that makes it easy to adjust the drawing at any stage of execution.

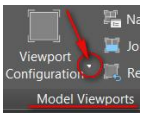
Main part

AutoCAD has many methods of viewing objects. One of the quick and easy methods is the drop-down menu. To do this, point **Tabs** to



Visualize, and then to the **Ribbo** left-click on the thumbnail On the **Viewport Configurations** page, click the triangle icon located on the Model **Viewports** panel and select **Four: Equal** from the drop-down menu (Figure 1).

abs ⇒ **Visualize** ⇒ *Ribbbon* ⇒ **Model**



Viewports ⇒ **Viewport Configurations** ⇒ **Four: Equal** (Figure 1)

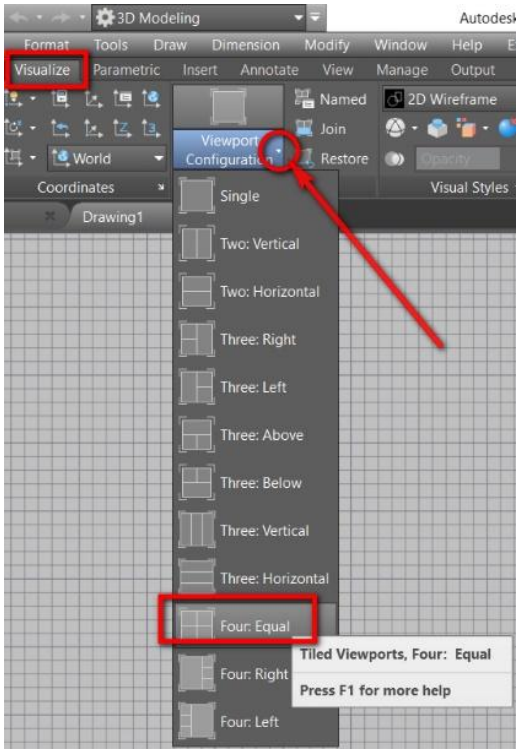


fig. 1

As can be seen from the **Viewport Configurations** menu, it is possible to display on the monitor both a **Single** screen view and, as needed, any number of screen views at the same time with one to four desired layouts. Figure 2 shows the classic (standard) layout of four screen views. It is generally preferable to work on one view, and if necessary, use the keyboard **ALT+V** for quick recall. In the context menu (Fig. 3) indicate the option we want. Here it is possible to indicate **New Viewports** (Fig. 4), where it is possible to select different parameters, both for **2D** and **3D**. Select **Four: Equal.** If we specify the appropriate properties, we get the screen view shown in Figure 2. Any viewport can be saved by giving it a new unique name in **New Name**, and can later be called via **Named Viewports.**

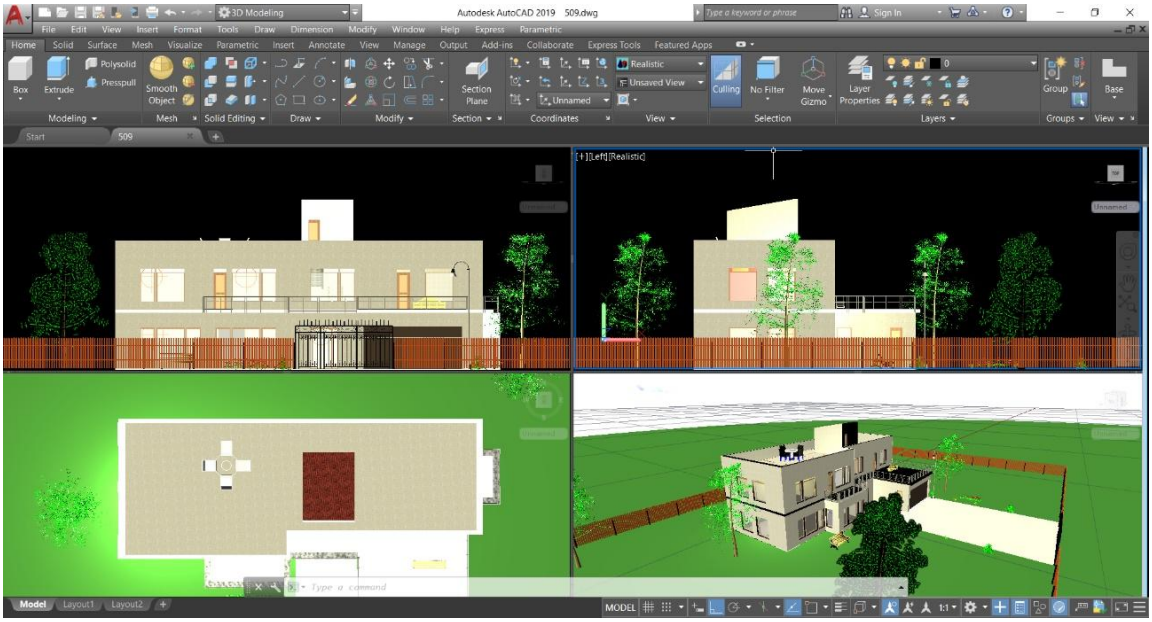


fig. 2

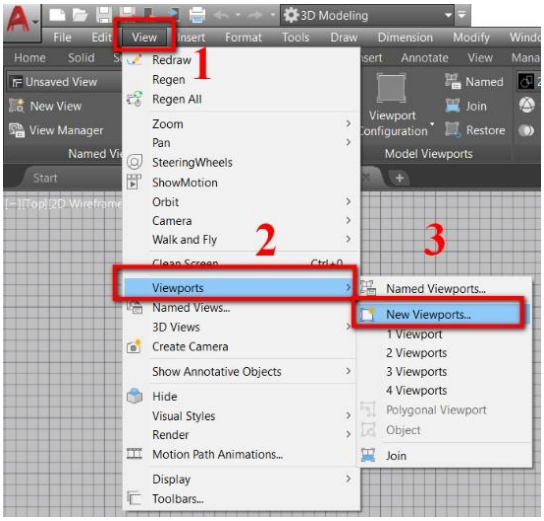


fig. 3

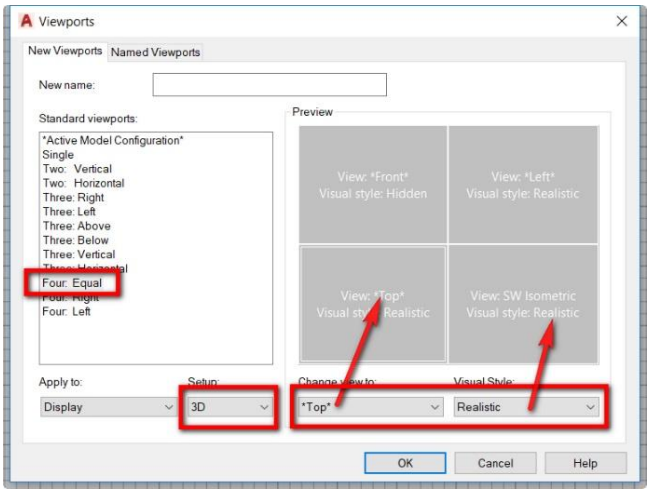


fig. 4

In addition to the method discussed above, there is also another method, which is possible

through the command **DVIEW (DYNAMIC VIEW),** which allows more control of object views. This method also allows to individually select the point of view. When choosing a point of view, the main thing is to choose a virtual camera and a target, in the same way as when taking a photograph. In this case, it is necessary to optimally select the location of the camera and the shooting object.

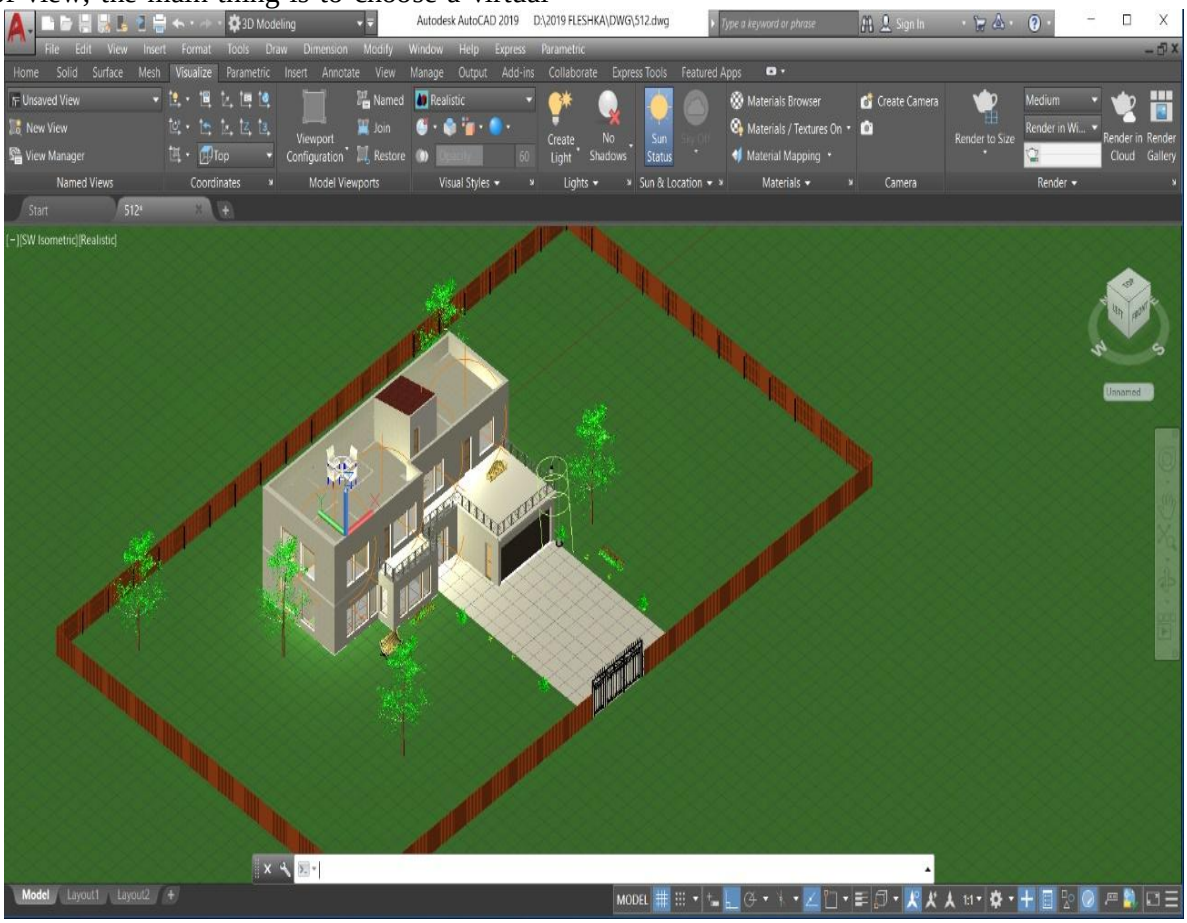
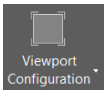


fig. 5

Through **Viewports**, let's go to **Single** unit screen view and through **Views** specify **SW Isometric** (Fig. 5)

Tabs ⇒ **View** ⇒ *Ribbon* ⇒ **Model**

Viewports ⇒ 

Viewport Configurations ⇒ **Single** And then *Tabs* ⇒ **View** ⇒ *Ribbon* ⇒ **Views** ⇒ **SW Isometric**

In the **Command Line**, type the command **DVIEW** and **Enter**, after which **AutoCAD** will give us the following instruction **Select objects or <use DVIEWBLOCK>:** To select an object, you can select all or the desired object and press the **Enter** key, the following instruction will be **[Camera Target Distance Points Pan Zoom Twist Clip Hide Off Undo]:** ([Camera Aim Distance Points Pan Zoom Twist Crop Hide Disable Cancel]:) Here you can select and specify any of the options. Let's consider each of them:

CAmera - type **CA** ⇒ **Enter** or click on this option.

or [Toggle (Anglein)] <30>: (or [Lever (Angle)] Any angle from -900 to +900 can be specified. It is also possible to freely rotate the object using the cursor.

TArget - type **TA** ⇒ **Enter** or click on this option.This command works in the same way as the previous command.

Distance - type **D** ⇒ **Enter** or click am opciaze

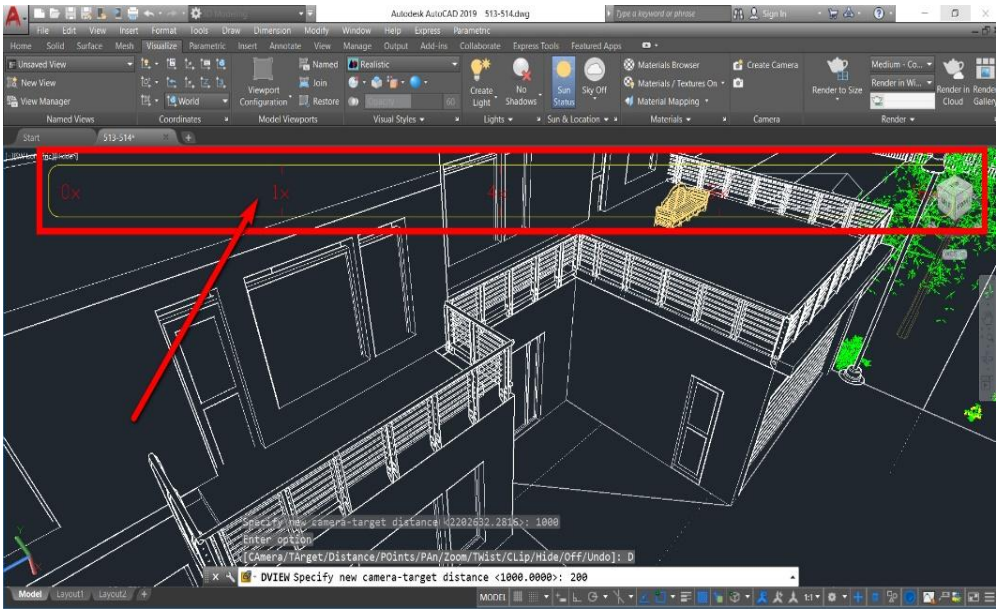


fig. 6

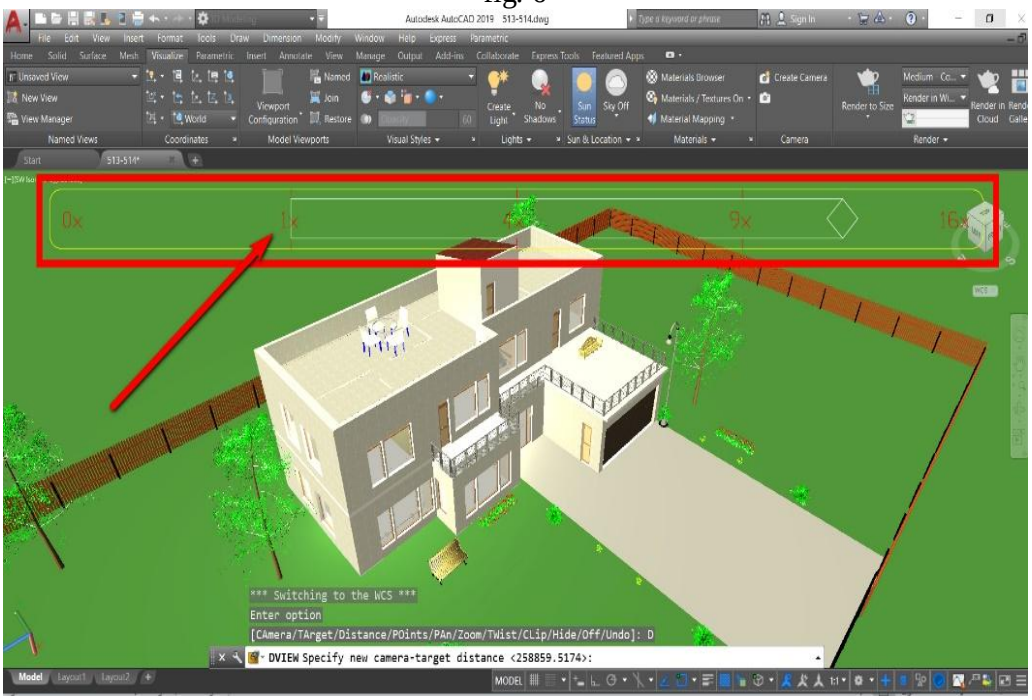


fig. 7

Specify new camera-target distance <100>: (select the distance to the new camera-target) in this case it is possible to specify the distance directly using the keyboard or to specify the desired scale using the slider placed on top of the graphic area. The slide is marked in the picture (Fig. 6, Fig. 7).

POints - type **PO ⇒ Enter** or click on this option **Specify target point <100, 100, 100.>:**. In this case, it is possible to specify the starting point where the target will be located, using the keyboard, then ⇒ **Enter** The next instruction will be **Specify camera point <700, 700, 700.>:** Specify the camera location point using the keyboard and ⇒ **Enter**, after which the operation will be completed. In this case, it is also possible to specify the target and camera points using the cursor.

Figure 8 shows how we pre-selected the target and camera locations, and then used the POints command to get the view shown in

Figure 9.

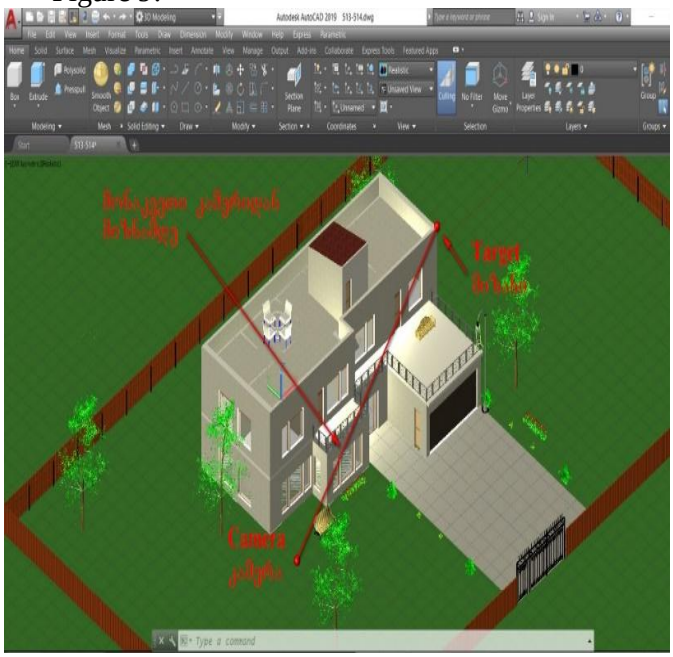


fig. 8

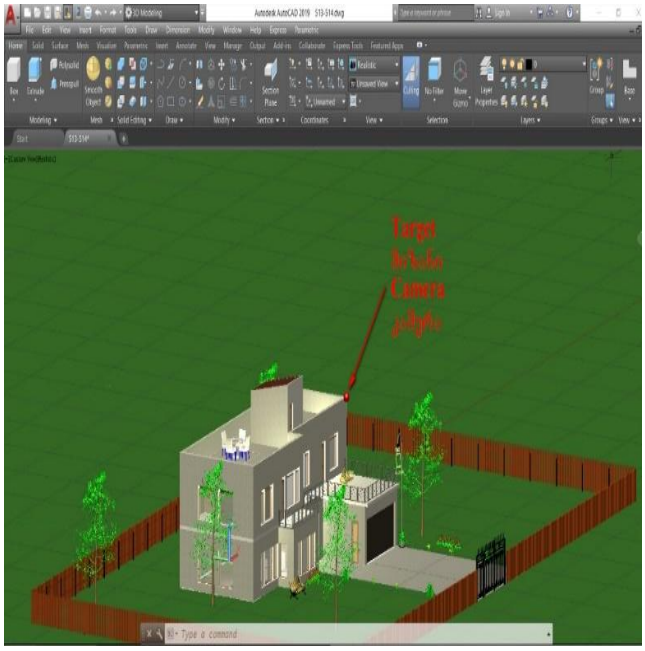


fig. 9

DVIEW ⇒Enter ⇒Select objects or <use DVIEWBLOCK>: Select the section from the camera to the target ⇒ **Enter** ⇒ The following instruction will appear in the command line: **[Camera Target Distance Points Pan Zoom Twist Clip Hide Off Undo]:** Specify P**O ⇒ PO ⇒ Enter⇒Specify target point <-36.800790, -28.437726, 32.543399>:** Select the point labeled **Target** as the target point and click on it ⇒The following instruction will be: **Specify camera point <-246.405836, -238.042772, 242.148445>: (Select camera point <-246.405836, -238.042772, 242.148445>:)** Click on the point **Camera** ⇒ the following instruction will be: **[Camera Target Distance Points Pan Zoom Twist Clip Hide Off Undo]:** After that, any operation can be performed again, and this command can be exited with the **ESC** key.

The rest of the options of the **DVIEW** command work similarly to the examples described above.

In order to save any work we have just done, it is enough to type **V (View Manager) ⇒ Enter** in the command line (Fig. 10). Then in the dialog box, point to **New**, and in the window that appears (Fig. 11) **View name:** give a new unique name. In addition, other properties can also be specified here. If we need to call the saved view, it is enough to type **V ⇒ Enter** in the command line using the keyboard and in the dialog box, which will be similar to the dialog box shown in Figure 10. On the left side of the dialog box, in the **Model Views** field, all memorized nominal views will be displayed. Select the desired one and press the **OK** button, and the selected nominal view will appear in the graphic area.

The same **View Manager** dialog box can also be called using the **Ribbon** (Fig. 12).

Tabs ⇒ **Visualize** ⇒ *Ribbon* ⇒ **Views** ⇒ **View Manager**.

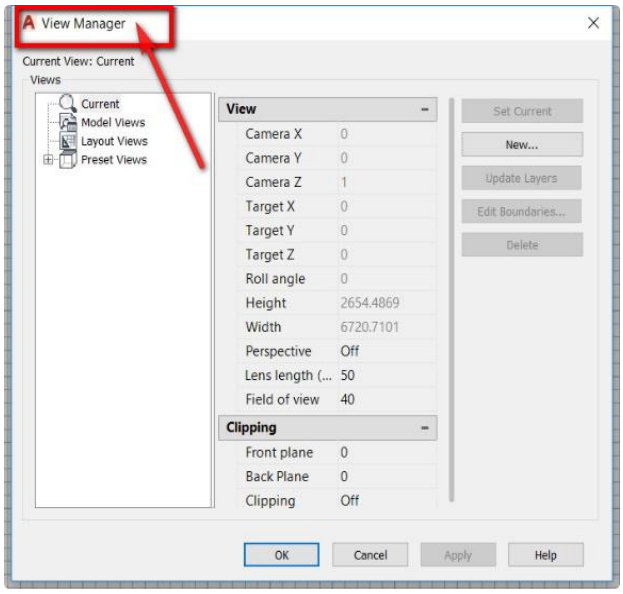


fig. 10

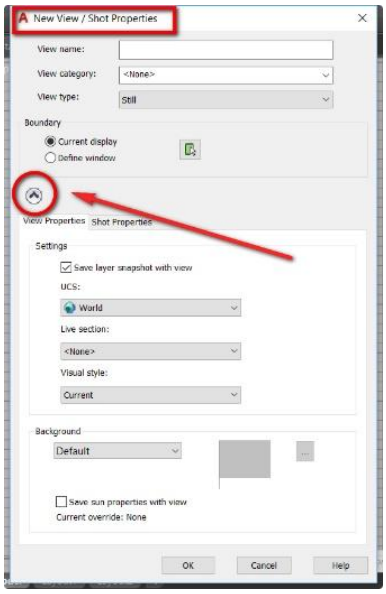


fig.11

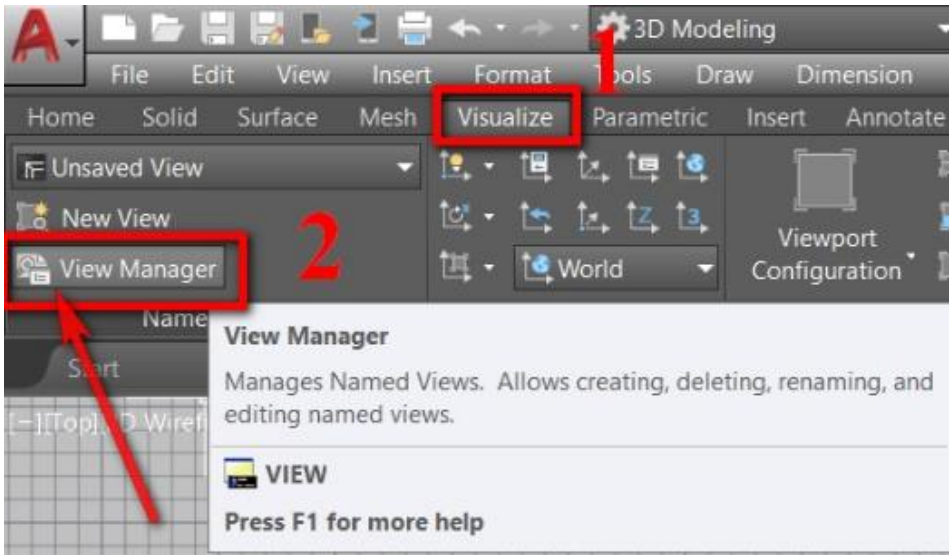


fig. 12

In the **AutoCAD 2019** version, instead of **J ⇒ Enter**, you can move the cursor to the Justify command line and click on it with the left mouse button.

In later versions of **AutoCAD 2013**, instead of typing the letter indicated by the capital letter, it is possible to bring the cursor to the corresponding subcommand in the command line and click on it with the left mouse button.

Conclusion:

The article discusses the methods of obtaining screen views, it should be noted here that screen views can be used both in model space and in paper space, and each of them can have both the same and different scales.

References:

1. George Omura with Brian C . Benton Mastering AutoCAD® 2018 and AutoCAD LT® 2018. Copyright © 2017 by John Wiley & Sons, Inc., Indianapolis, Indiana Published simultaneously in Canada. ISBN: 978-1-119-38679-7 ISBN: 978-1-119-41420-9 (ebk.) ISBN: 978-1-119-41425-4 (ebk.).

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