

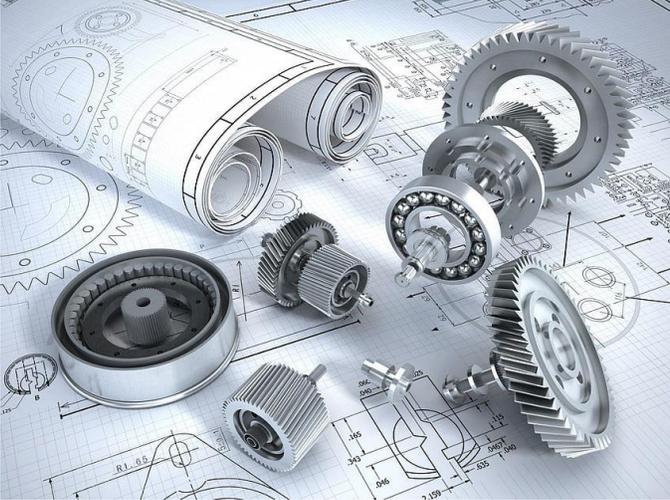


Autocad:

It is a computer-based design program, and is used in many fields, such as: drawing plans for roads, buildings, or bridges. It also provides the appropriate tools for the designer to draw and measure things, and it helps engineers to transfer designs from ideas to reality.

Advantages of using AutoCAD:

There are many advantages that you get when using AutoCAD:

- Speed:** Drawing through AutoCAD is much faster than manual drawing, as it saves effort and time.
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- **Accuracy:** AutoCAD allows drawing with great accuracy and detailed dimensions that cannot be achieved through manual drawing.
 - **Ease of storage and accessibility:** AutoCAD is characterized by the ease of storing and accessing files, as they can be saved on the computer or on storage media, as its files occupy less storage space than the storage space of paper drawings.
 - **Ease of modification and review:** AutoCAD provides the ability to easily modify or delete any details, by using simple commands, such as: measuring, copying, rotating, and others. In addition, it is possible to return to the previous design before modifying it.
 - **It is a free platform** for creativity and innovation.





AutoCAD screen definition

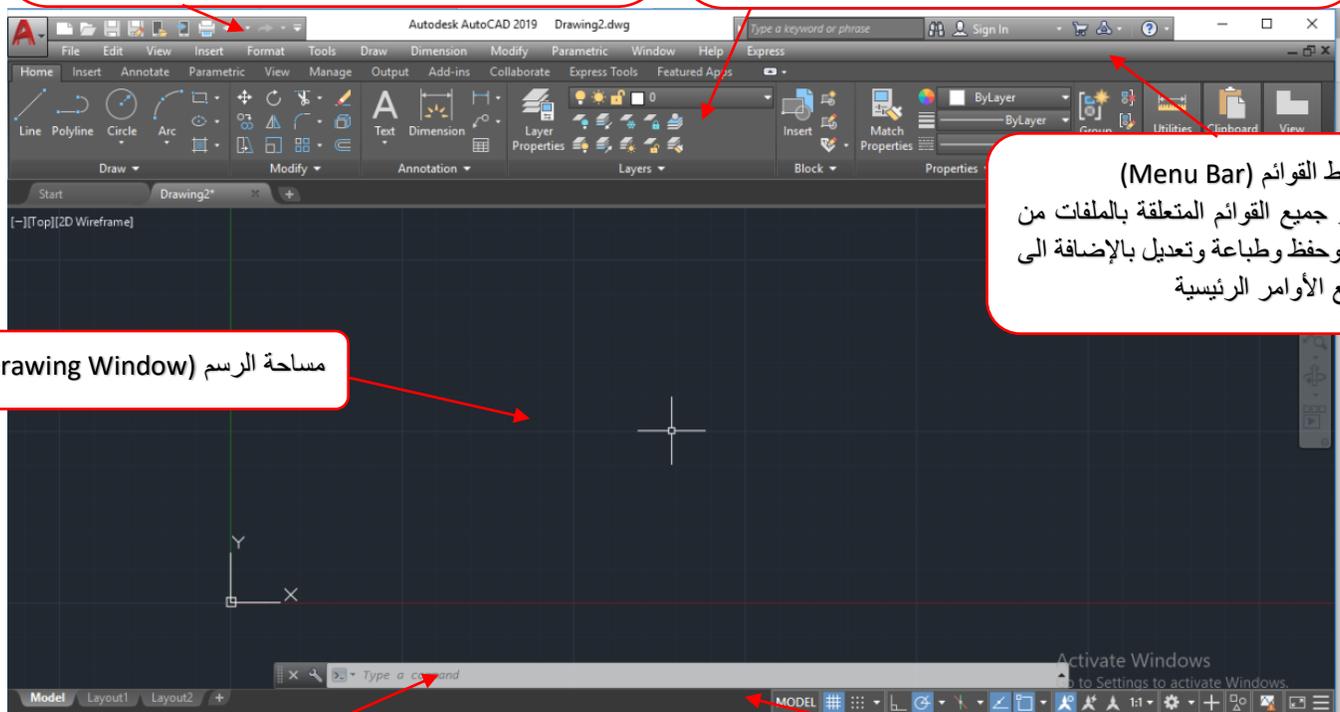
AutoCAD is considered one of the most important engineering drawing programs that contains two-dimensional (2D) and three-dimensional (3D).

Title Bar

contains the program name, year of release, name of the open file, print options, save, open file, open new file.

Ribbon Bar

It provides all the menus related to files such as opening, saving, printing, and editing, in addition to many tools and controls available in the toolbars.



مساحة الرسم (Drawing Window)

شريط القوائم (Menu Bar)

يوفر جميع القوائم المتعلقة بالملفات من فتح وحفظ وطباعة وتعديل بالإضافة الى جميع الأوامر الرئيسية

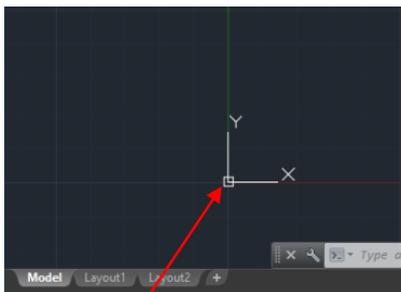
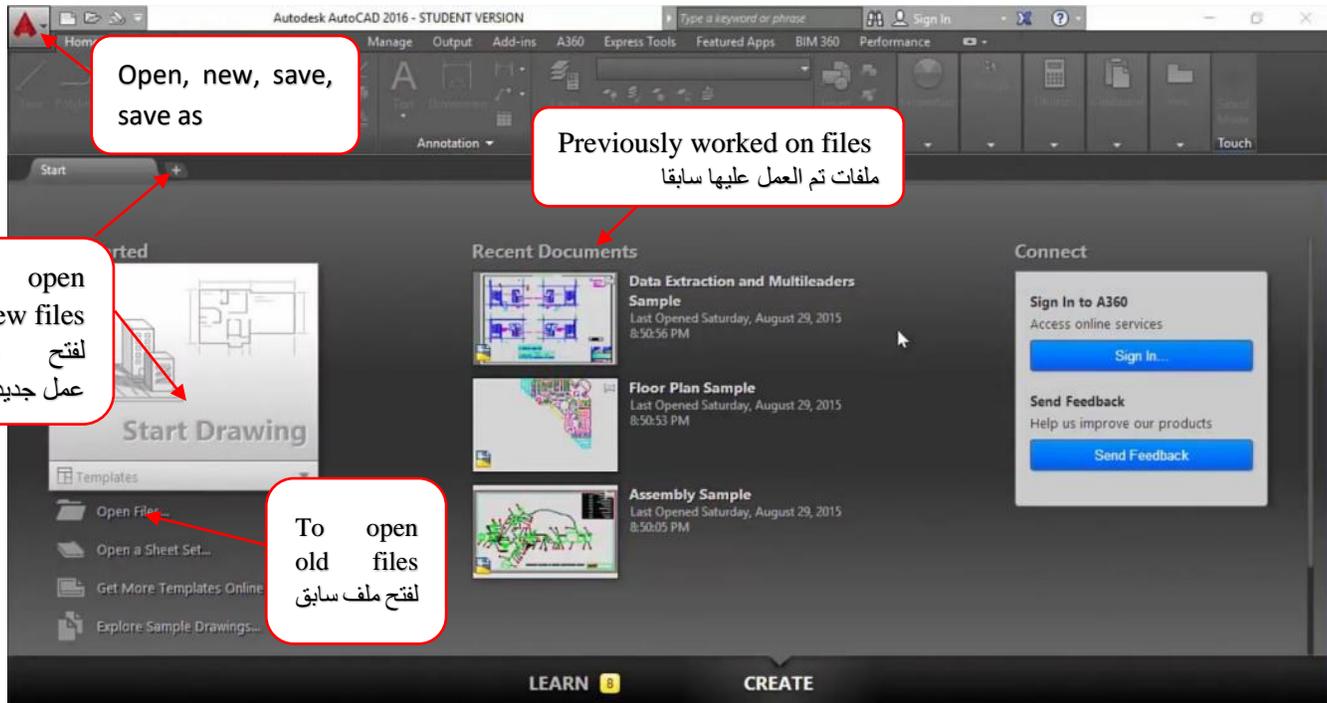
Command Window

It deals with the commands entered into the program and displays the messages displayed by the program.

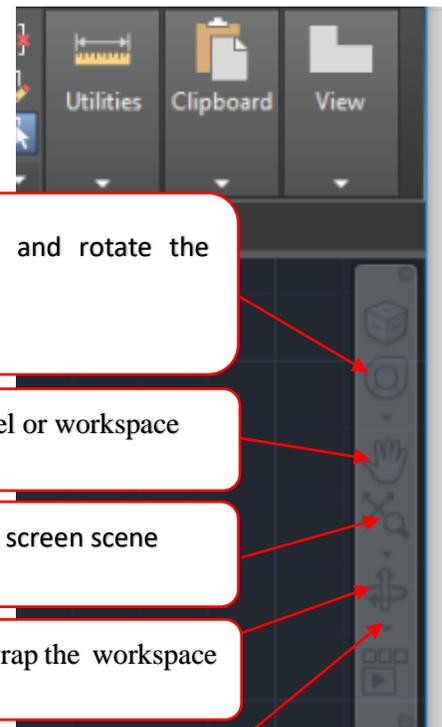
Status Bar

Displays information about the current location of the cursor and shows the location of the cursor in the form of coordinates in addition to many special commands.





Coordinates icon
 Indicates the X Y Z directions in a 3D work environment. Indicates the X Y directions in a 2D work environment.



Zoom in, pan and rotate the workspace

To move a panel or workspace

To view the full screen scene

To rotate and wrap the workspace

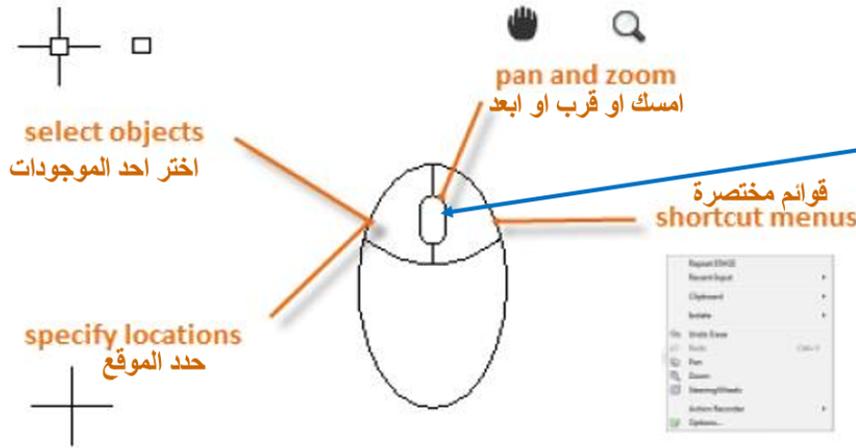
There is an arrow below some icons, indicating that there are other options for the same tool.



Mouse definition التعريف بالماوس

The Mouse

Most people use a mouse as their pointing device, but other devices have equivalent controls.



الفأرة (الماوس)

Scroll

Very Important

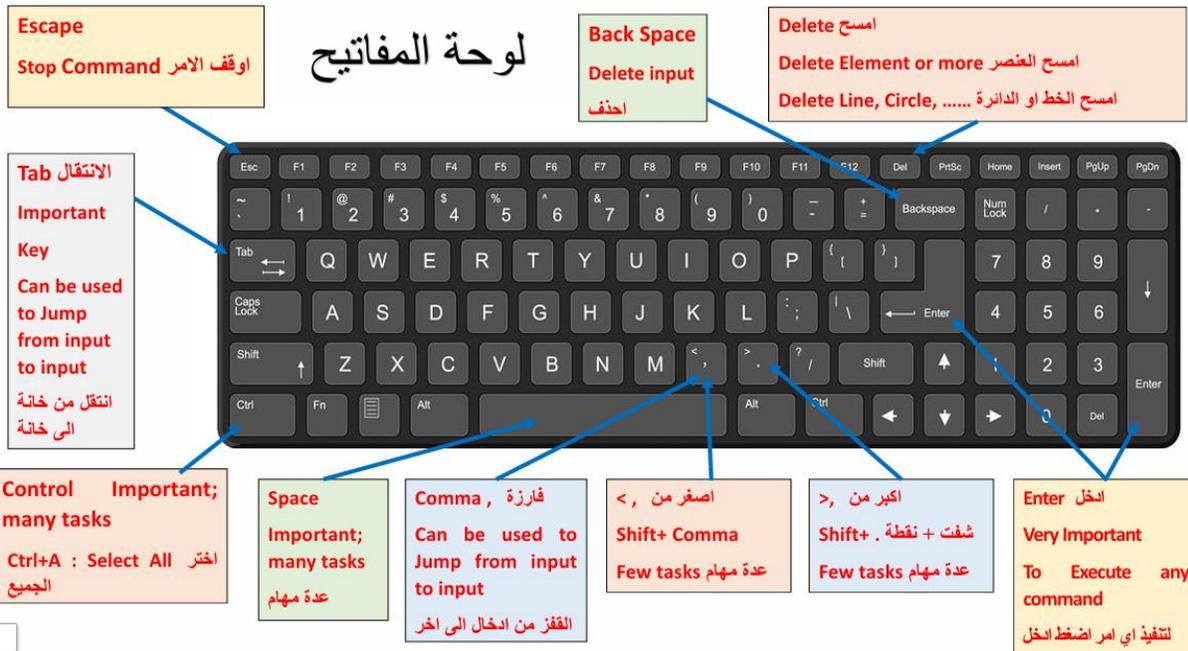
Scroll Forward → Zoom in

Scroll Backward → Zoom out

Hold Scroll → Hold

البكرة: مهمة جدا
 دور البكرة باتجاه الامام --> تقريب الصورة
 دور البكرة باتجاه الخلف --> ابعاد الصورة
 اضغط على البكرة - امسك الرسم و حركه أينما تريد

Keyboard definition التعريف بلوحة المفاتيح



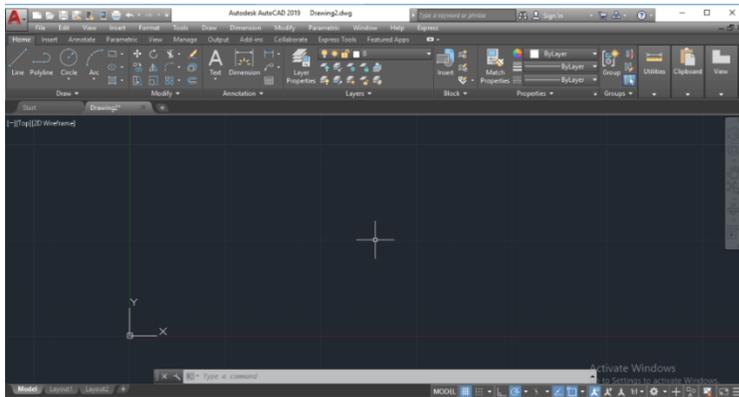


How to execute commands in AutoCAD

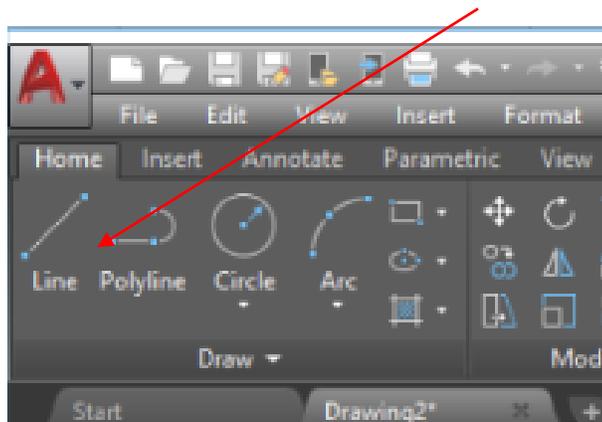
There are two main ways to execute commands in AutoCAD to draw a line

1. **Command bar** → write **line** → **Enter**

For example, to draw a straight line, we write the word line in the command bar and fix the starting point inside the drawing screen, then add the required measurement and press Enter.

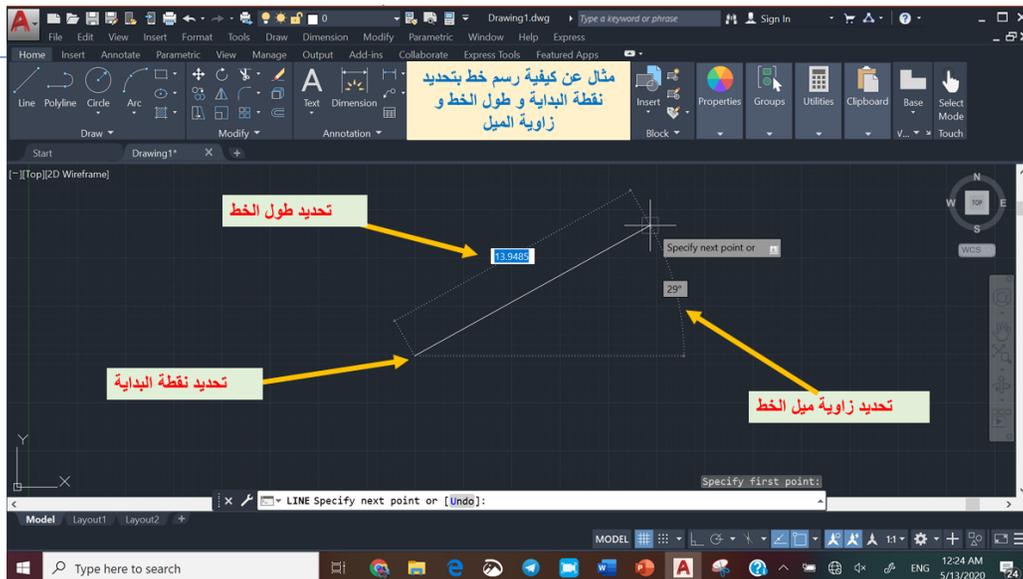


2. From the **Bar Ribbon** and **Home menu** we choose **line**, fix the starting point inside the drawing screen, then add the required measurement and press **Enter**.



Note: AutoCAD opens a new drawing line even after drawing the first line. To stop the command, press **Escape**.





Important instructions:

The following instructions must be observed for the purpose of easy execution of commands in the AutoCAD program and to give accurate and correct results in the work.

1. If any command is executed and we want to terminate this command, we press **Escape**.
2. To repeat any command that has been used, press **Enter**, and the command name appears in the command bar.
3. If you press the F2 button, the command bar will appear on the entire screen, and when you press it again, the command bar will return to its normal size at the bottom of the screen.
4. The drawing scale in AutoCAD is 1:1, but the appropriate drawing scale can be used for printing according to the size of the printing paper.
5. Units: the user must choose the appropriate unit, but the drawing units must be unified during a single drawing.

