



# **AutoCAD Level 1**

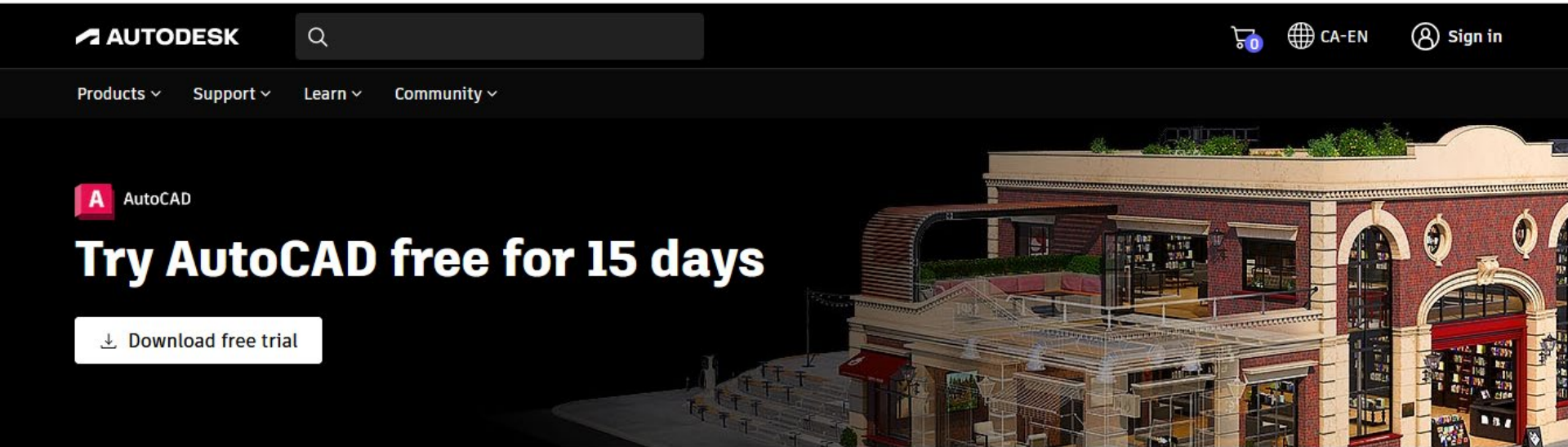
## **Session 1**

# AGENDA

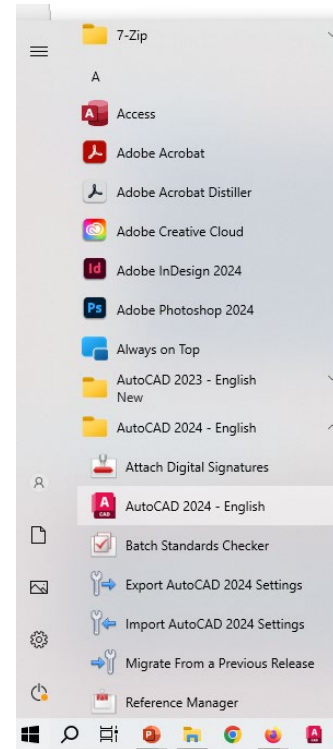
- **Installing Autocad**
- **Starting AutoCAD**
- **AutoCAD's user interface**
- **Navigating around a drawing**
- **Setup procedures- drawing units and limits**
- **Drawing a line**
- **Drawing a line accurately using ABSOLUTE coordinate system (exer.1)**

# Installing AutoCAD

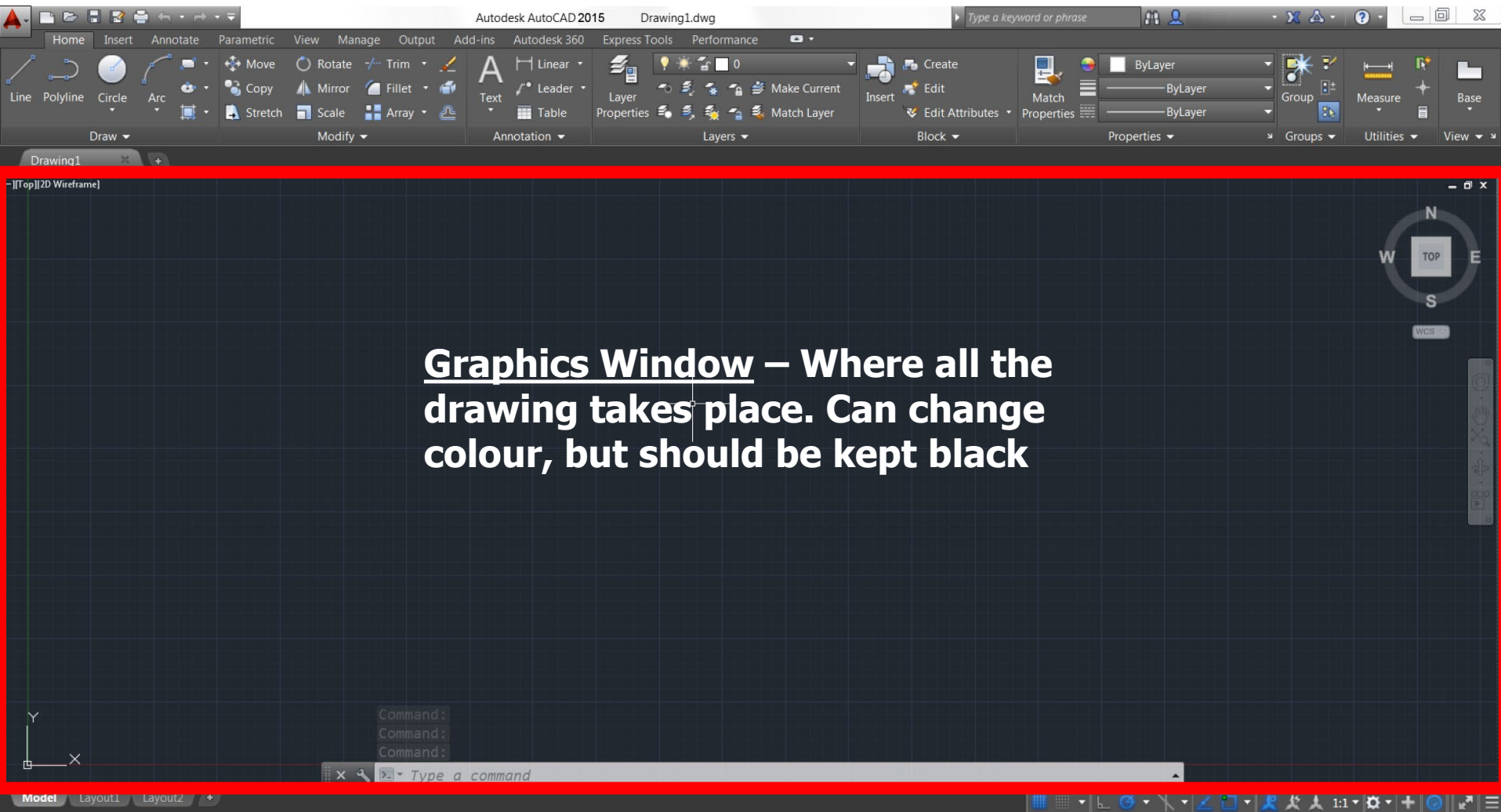
- <https://www.autodesk.com/ca-en/products/autocad/free-trial>



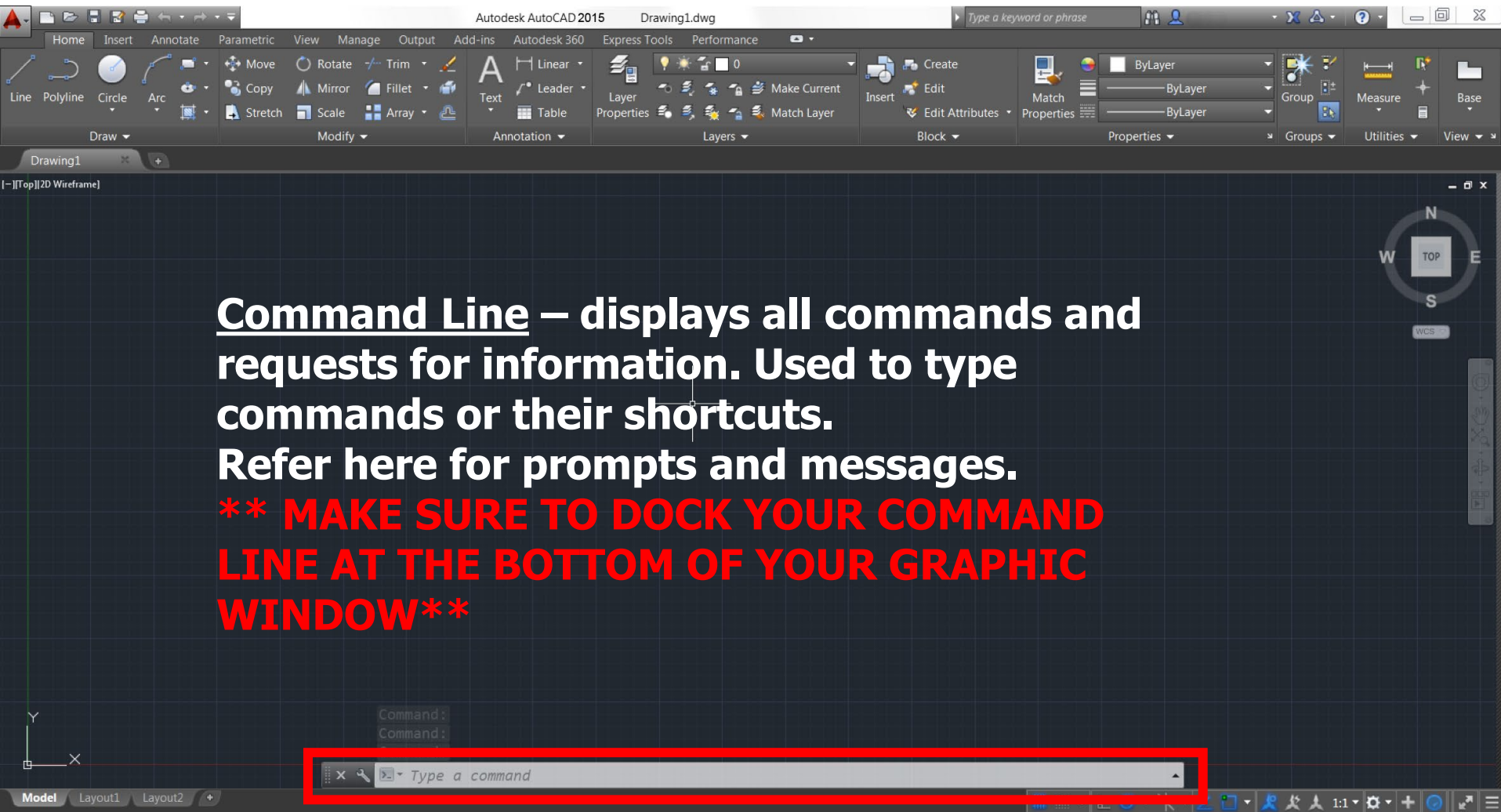
# Starting AutoCAD



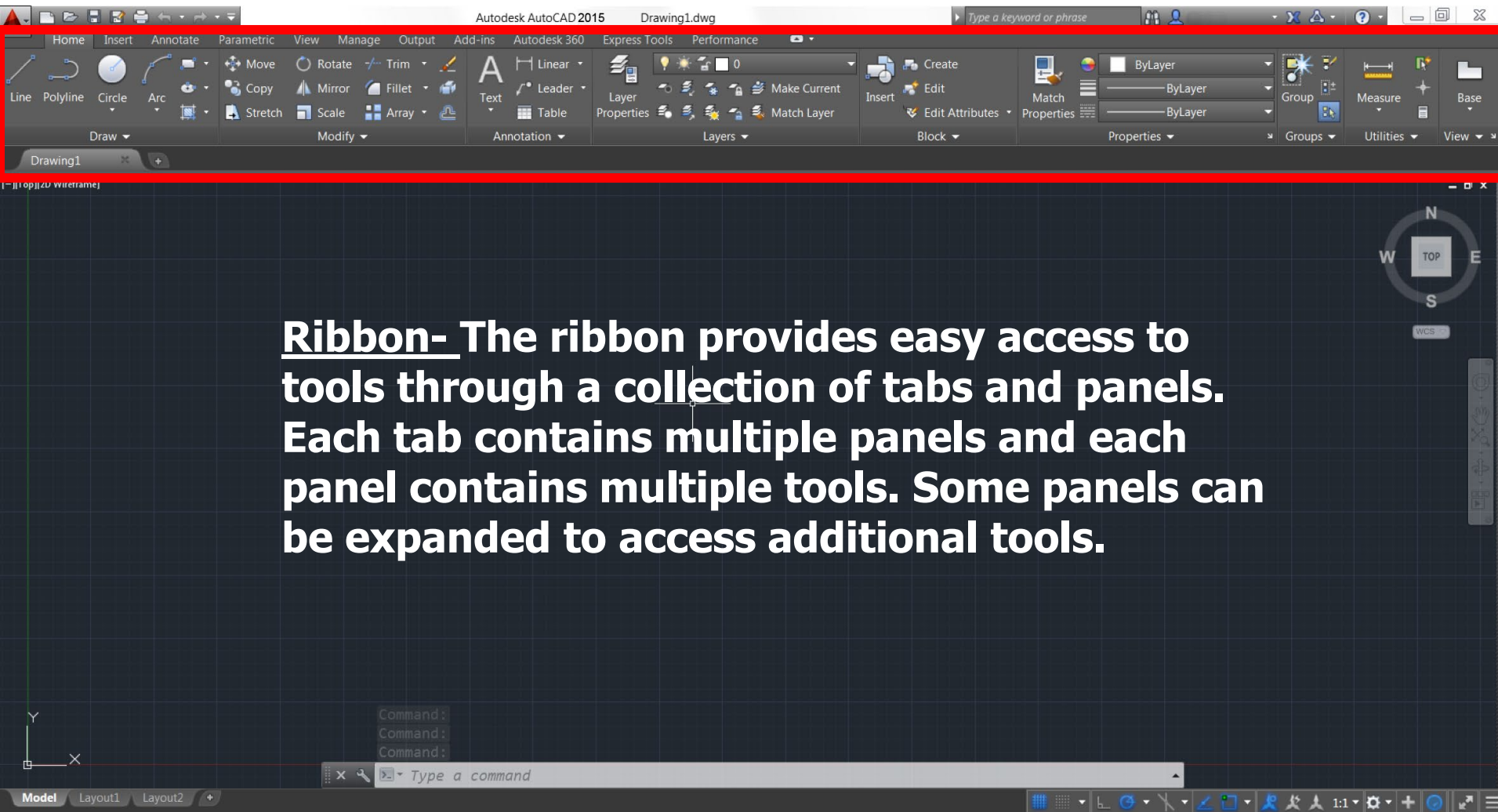
# AutoCAD Screen Layout



# AutoCAD Screen Layout



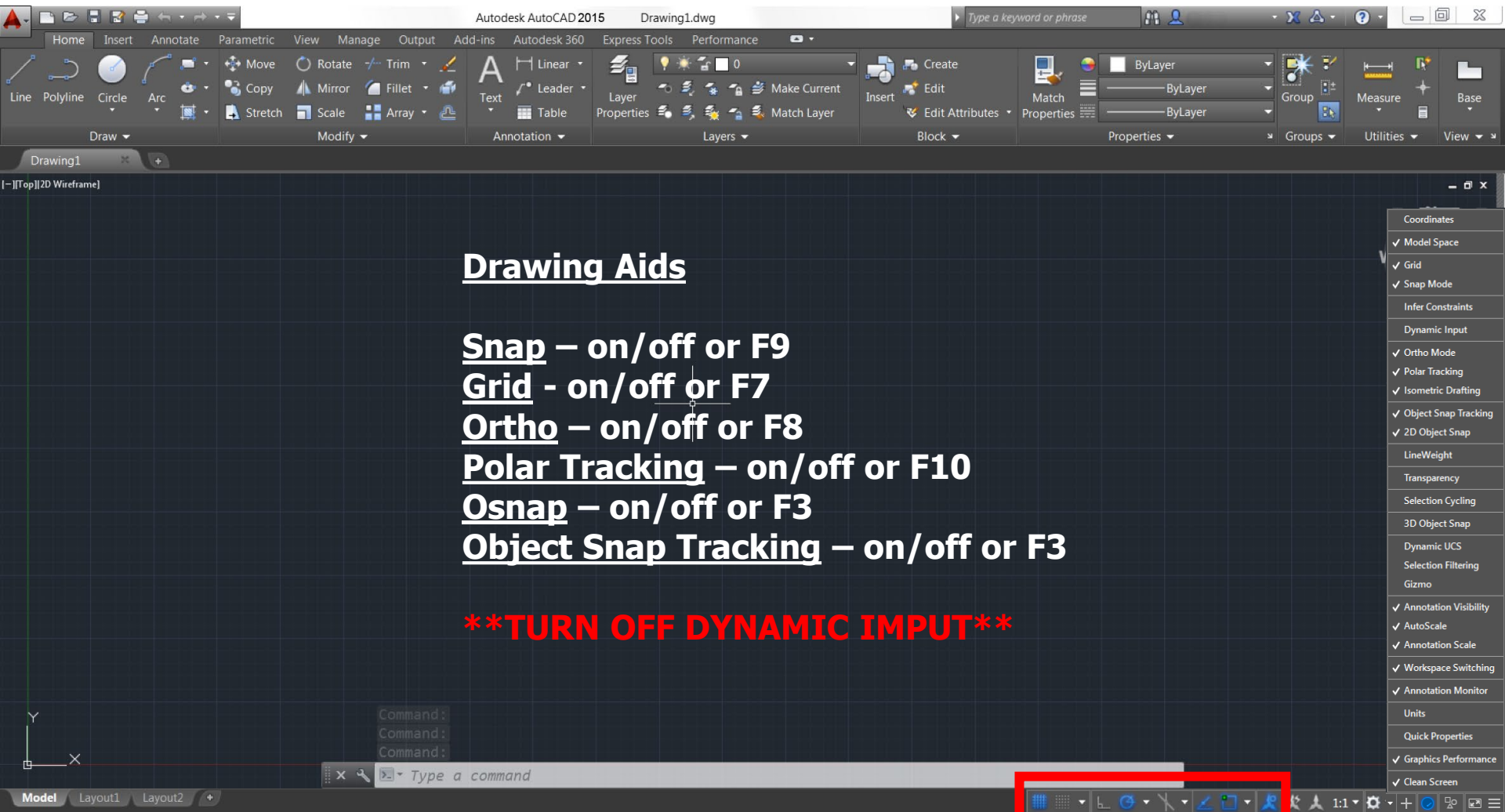
# AutoCAD Screen Layout



**Ribbon**- The ribbon provides easy access to tools through a collection of tabs and panels. Each tab contains multiple panels and each panel contains multiple tools. Some panels can be expanded to access additional tools.



# AutoCAD Screen Layout



## Drawing Aids

Snap – on/off or F9

Grid - on/off or F7

Ortho – on/off or F8

Polar Tracking – on/off or F10

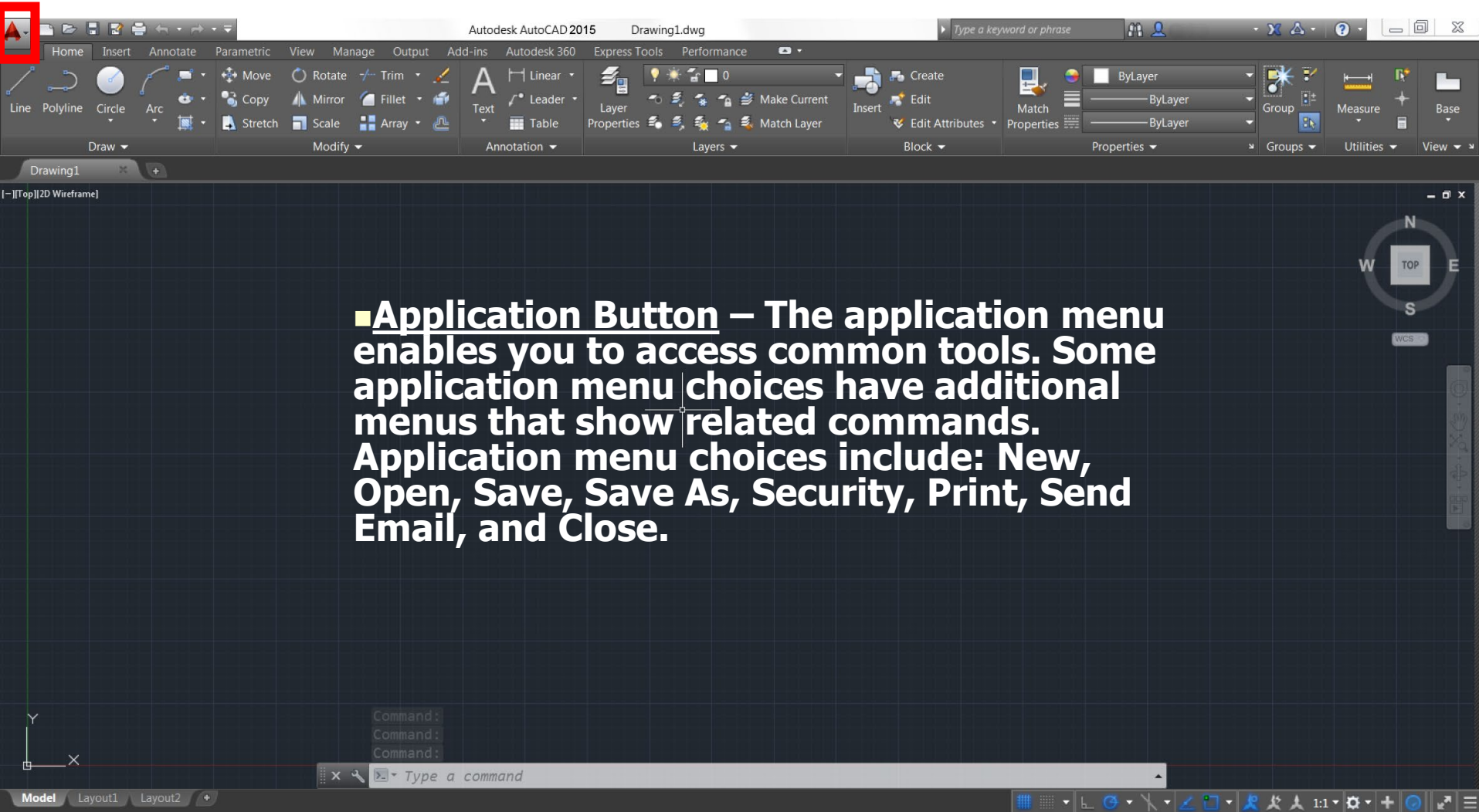
Osnap – on/off or F3

Object Snap Tracking – on/off or F3

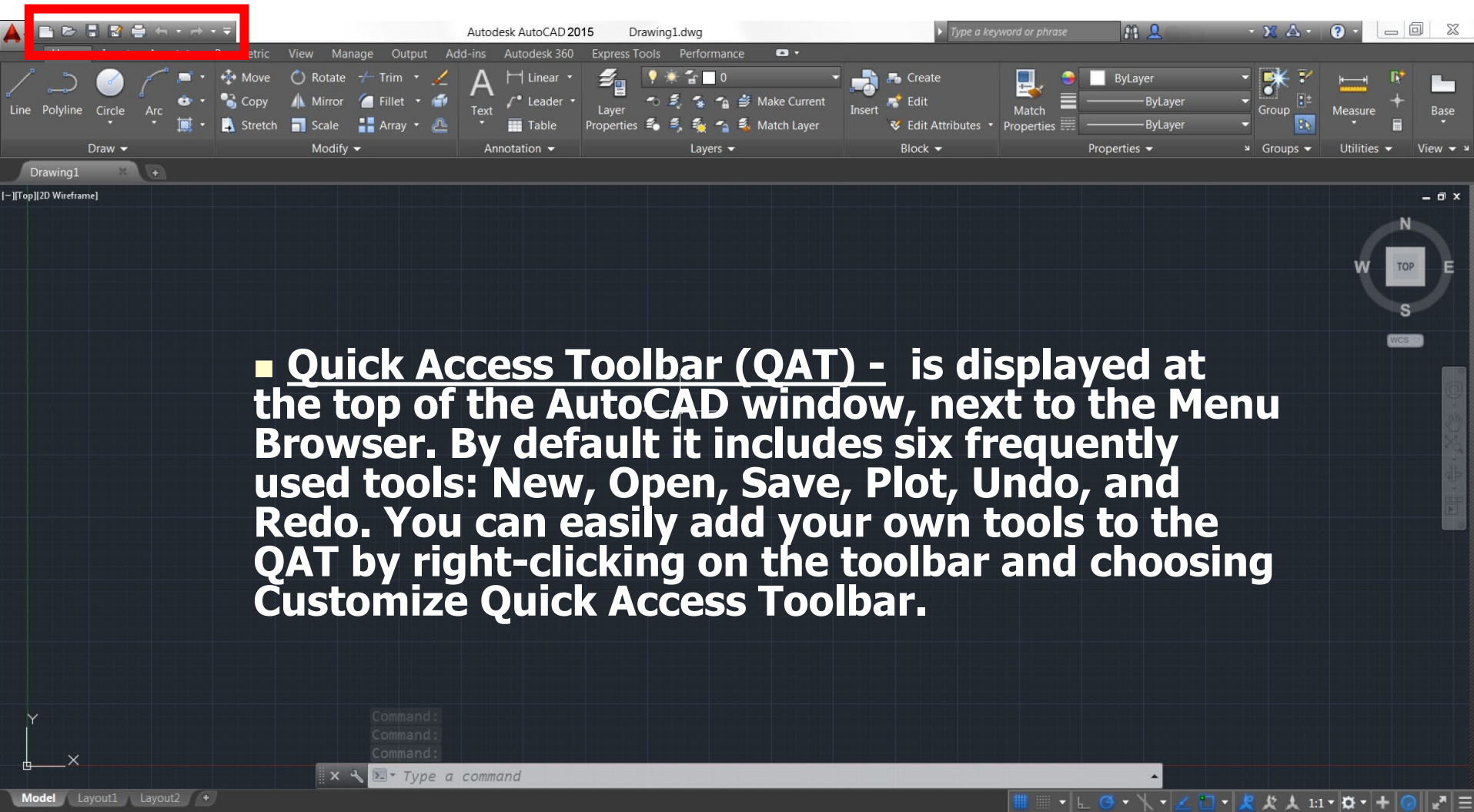
**\*\*TURN OFF DYNAMIC INPUT\*\***



# AutoCAD Screen Layout

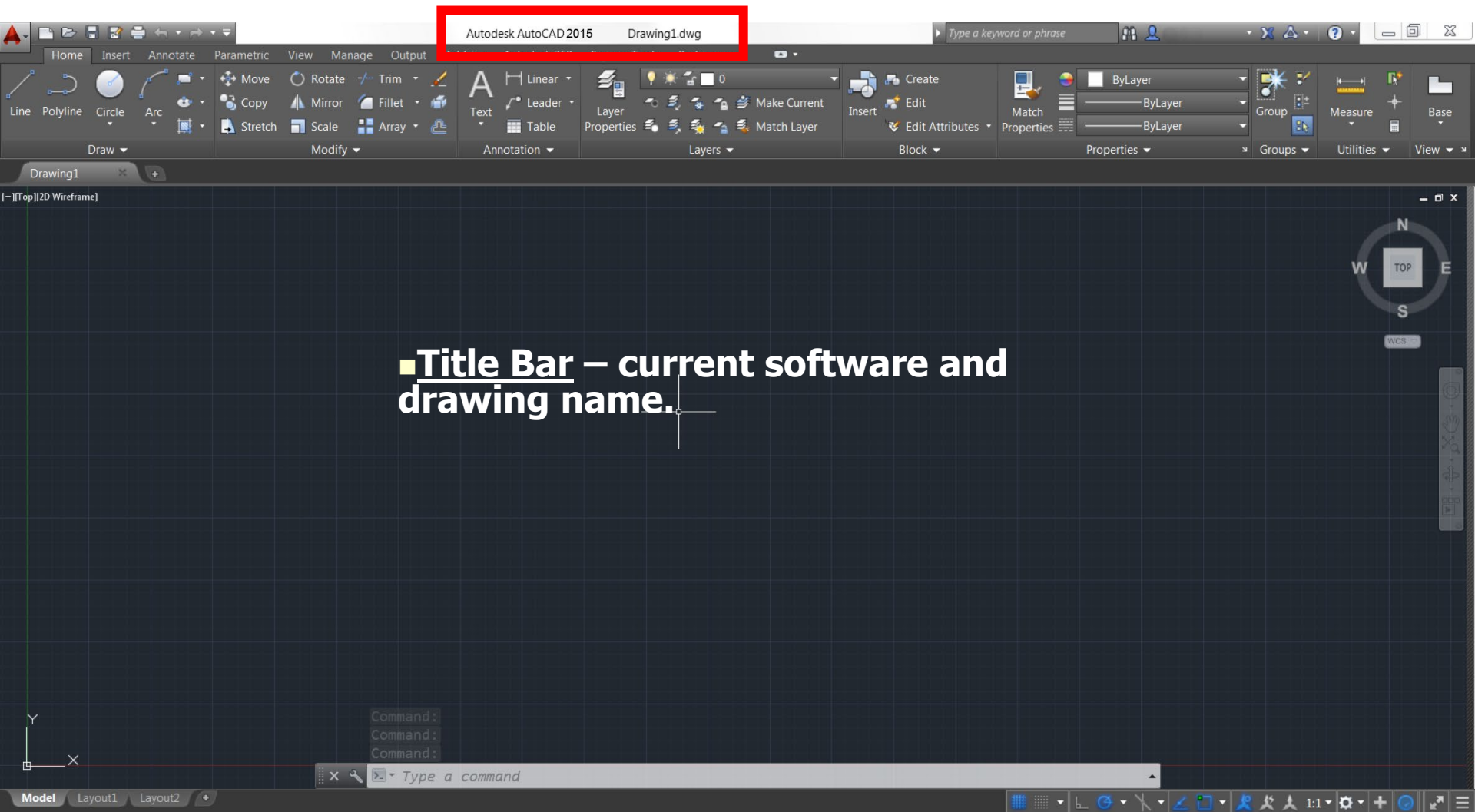


# AutoCAD Screen Layout

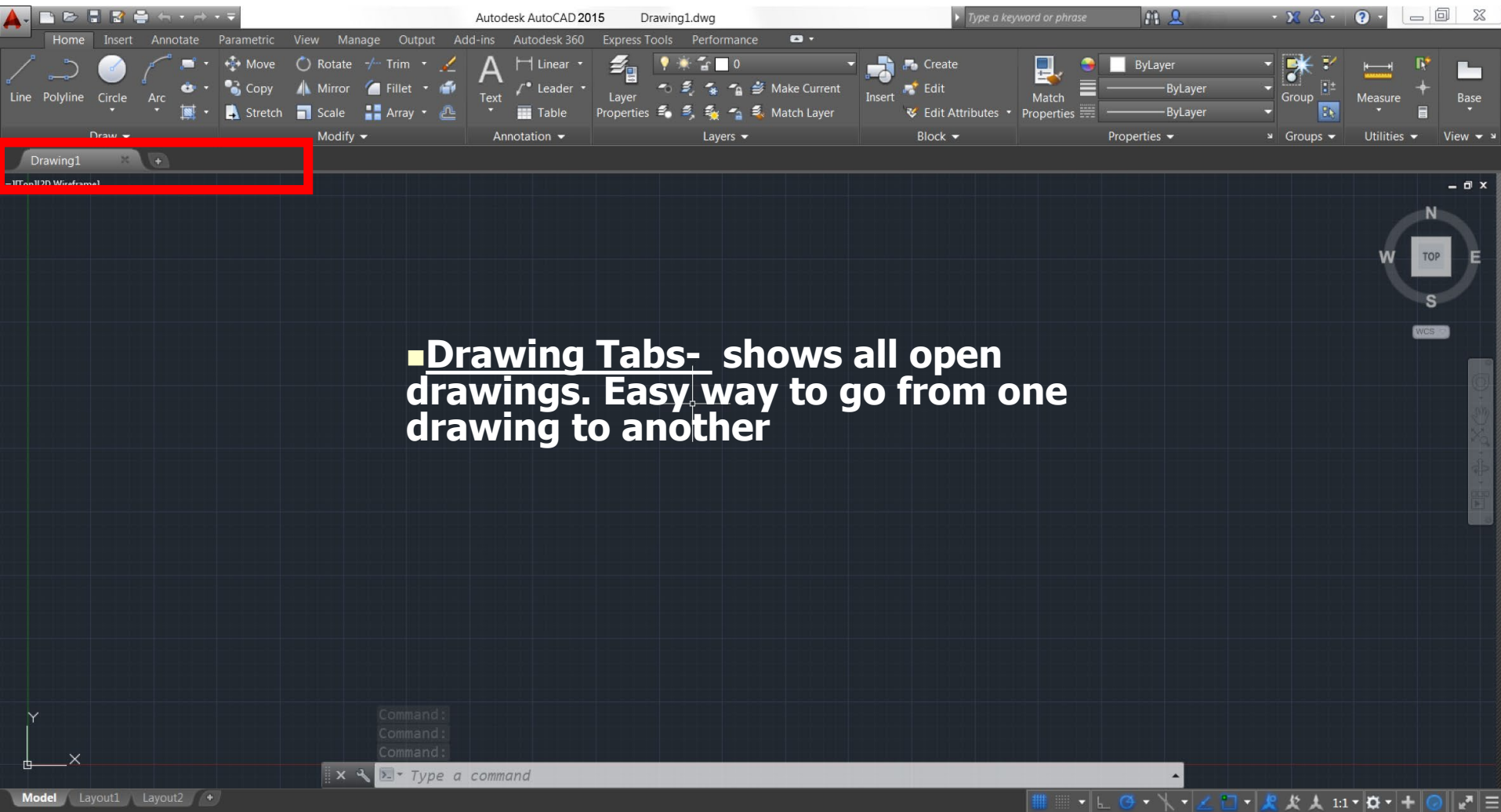


- **Quick Access Toolbar (QAT)** - is displayed at the top of the AutoCAD window, next to the Menu Browser. By default it includes six frequently used tools: New, Open, Save, Plot, Undo, and Redo. You can easily add your own tools to the QAT by right-clicking on the toolbar and choosing Customize Quick Access Toolbar.

# AutoCAD Screen Layout

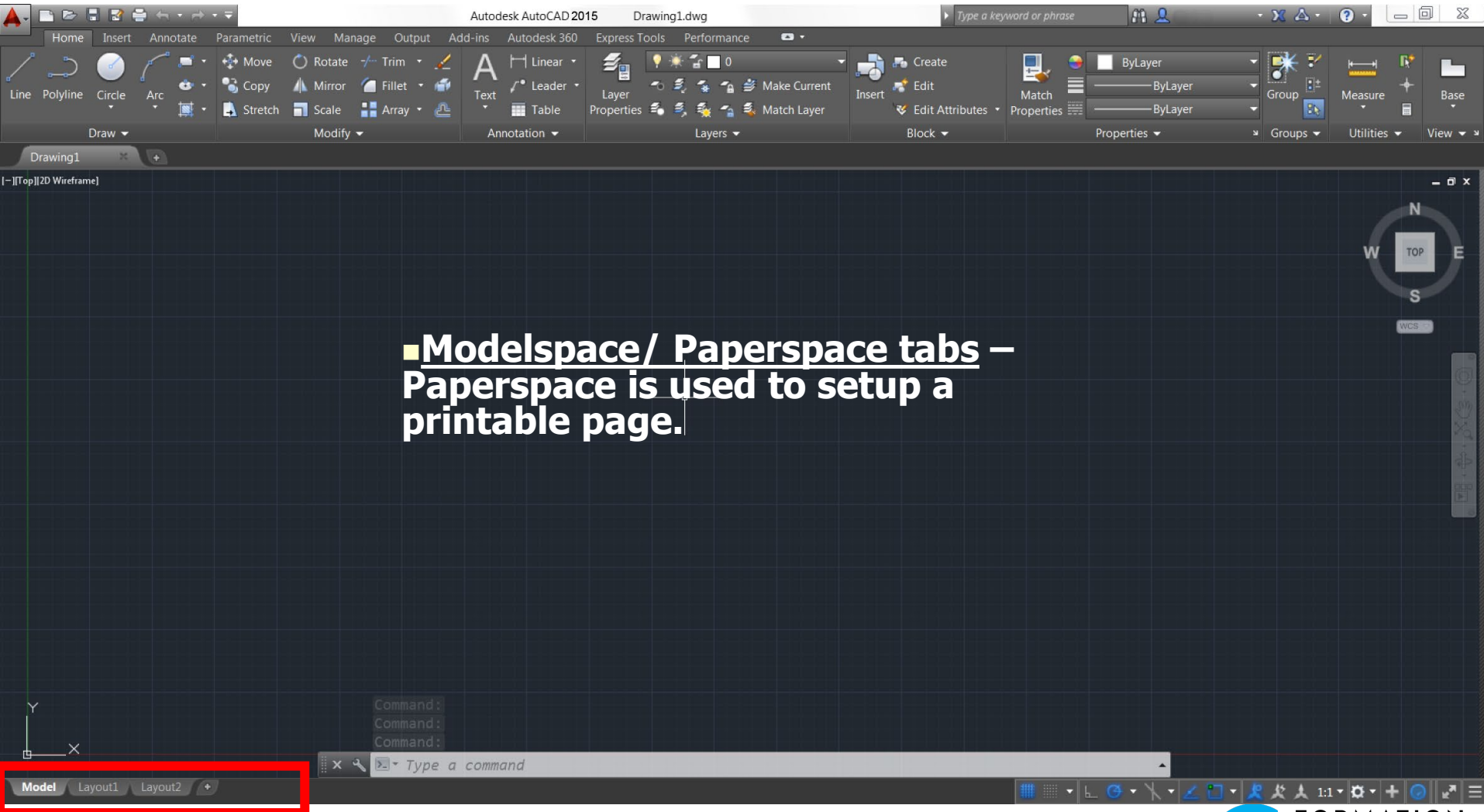


# AutoCAD Screen Layout



■ Drawing Tabs- shows all open drawings. Easy way to go from one drawing to another

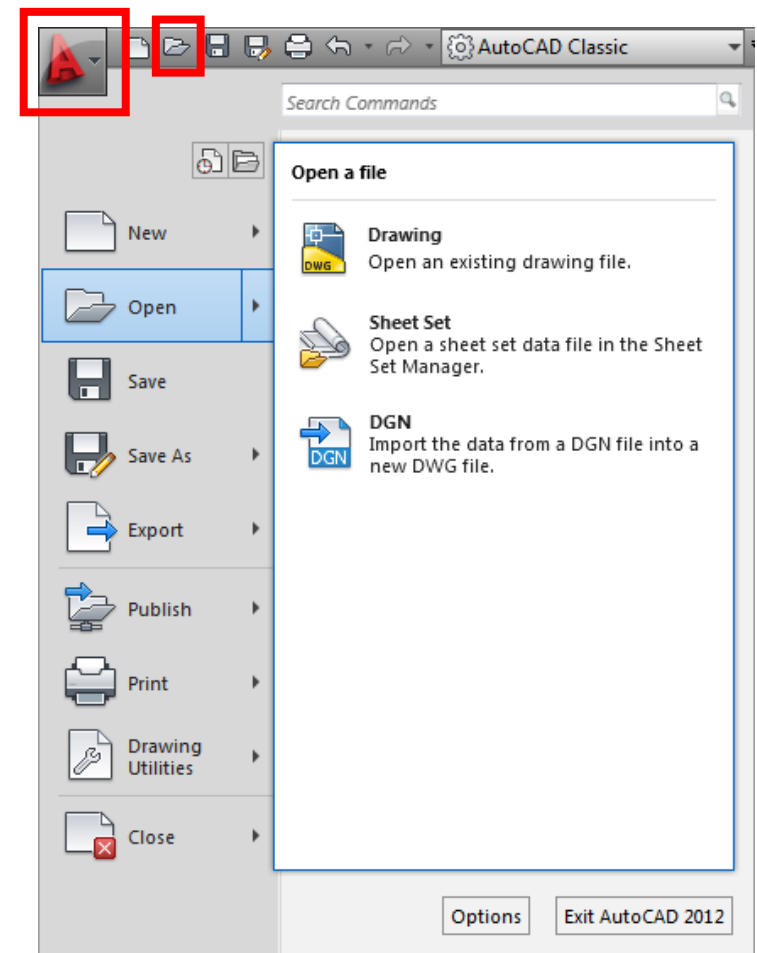
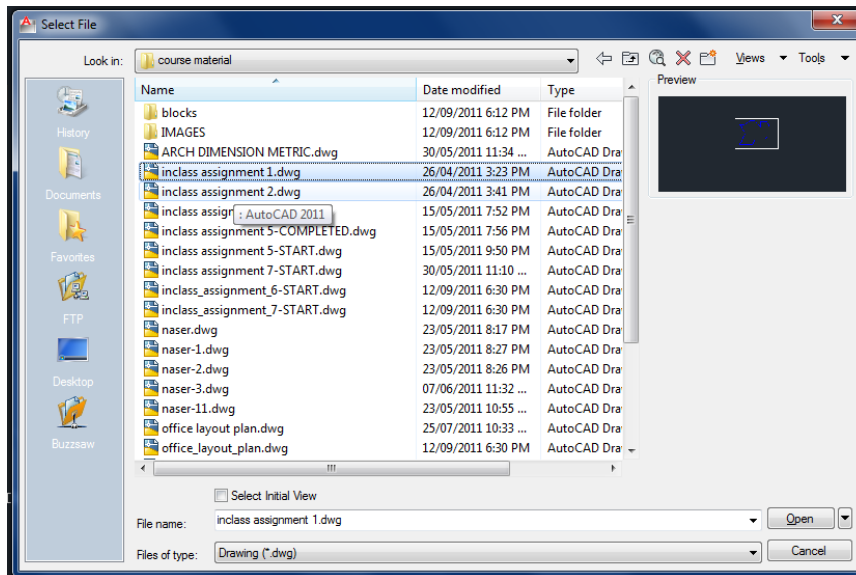
# AutoCAD Screen Layout





# Opening existing files

- OPEN – Application button> Open - File>Open, or CTRL+O or select the open file tool from the QAT.
- Select folder and file to open (week 1-openfile.dwg)
- Autocad files have the extension .dwg
- Can have many files open at one time
- Go to Window and select filename or use CTRL + TAB to cycle through open files.



# Navigating around a drawing using Zoom and Pan

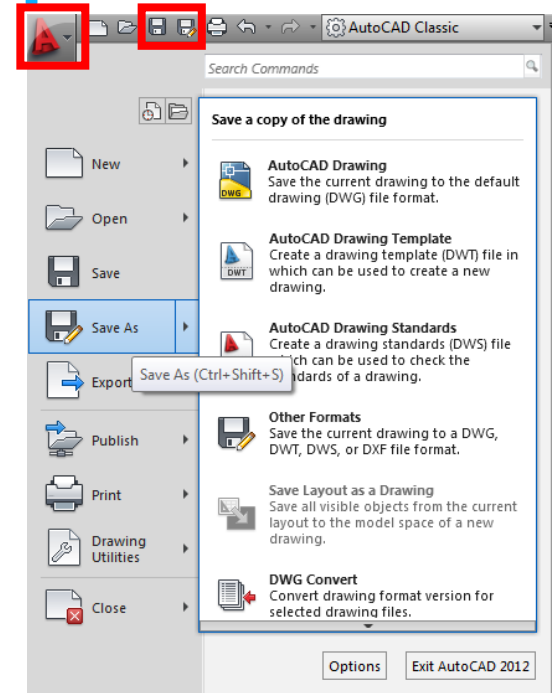
- **Using the mouse's Centre Wheel**
- Roll up or Down – to increase or decrease the ZOOM factor of the drawing. Zooming occurs relative to where the cursor is located.
- Hold Down – and move mouse allows you to perform a REAL-TIME PAN. This does not affect the Zoom factor of your drawing
- Double Click – to zoom extents (zoom to the largest extents of the drawing to fit on your screen).





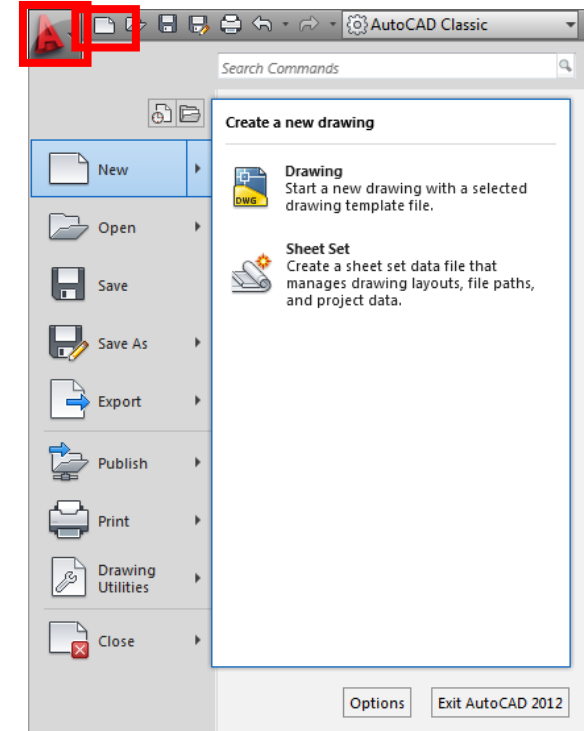
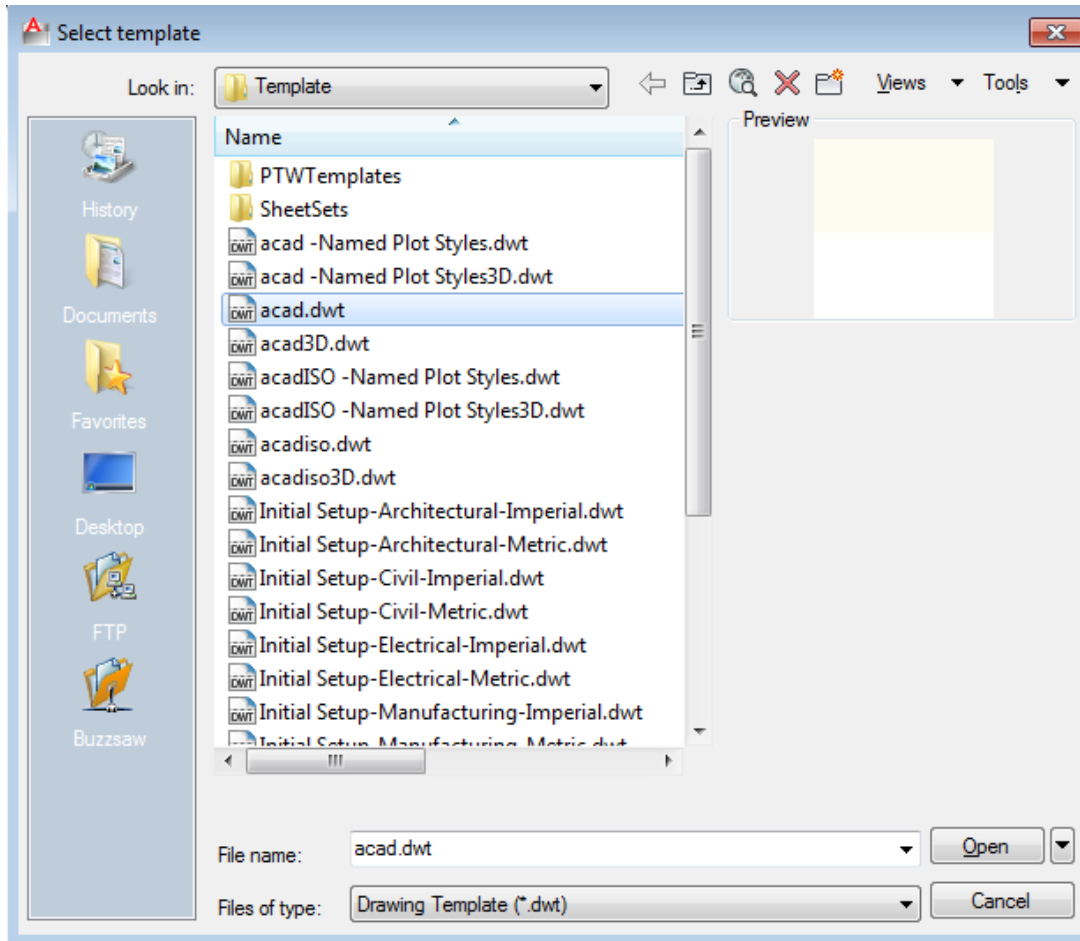
# Saving a dwg file, creating backup files

- SAVING – 2 Methods
- FILE | SAVE – is used to save a file after making changes. Can also use CTRL + S. This creates Backup files.
- FILE |SAVEAS – used to save the file but also prompts you to change the file name and the file type (version of AutoCAD used in the save)
- Autosave- AUTOSAVE is a feature in AutoCAD that automatically saves your drawing in specified timed intervals while you work. In the event of a system crash or power outage, you can retrieve your drawing from an AUTOSAVE file (.sv\$) in the state it was at the last time AUTOSAVE was invoked. Use the command “Savetime” to set your automatic save interval.



# Creating a New file by using templates

- NEW – File>New, or CTRL+N or select the new tool
- Use Acad.dwt unless otherwise told. This template is a blank one with no presets and can be used for metric as well as imperial drawings.



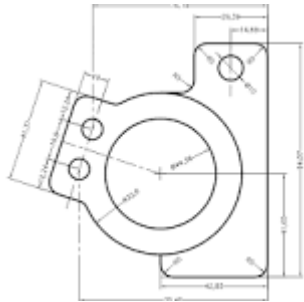
# Setting up your Units

- Units and Precision
- **DDUNITS OR UN or FORMAT | UNITS**
- Used to set the units of measure and precision as well as entry & display of angles
- Use Decimal (mm) for metric and Architectural for Imperial (inches)

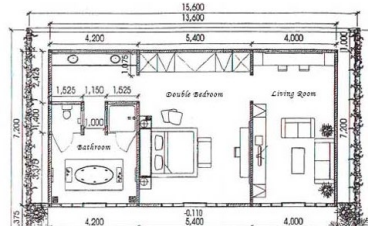


# Setting up your drawing limits

- The DRAWING LIMITS command allows you to configure the size of the drawing space in AutoCAD. Think of your drawing limits as your Paper size in full scale. It can be as big or as small as required.
- AS A GOOD RULE OF THUMB, DRAWING LIMITS SHOULD BE TWICE THE AREA REQUIRED.



**0mm  
30mm**



**31.2m  
x 40m**



**400m  
x  
300m**

To access the Drawing Limits command type "limits" at a Command prompt

--Prompt: Reset Model space limits

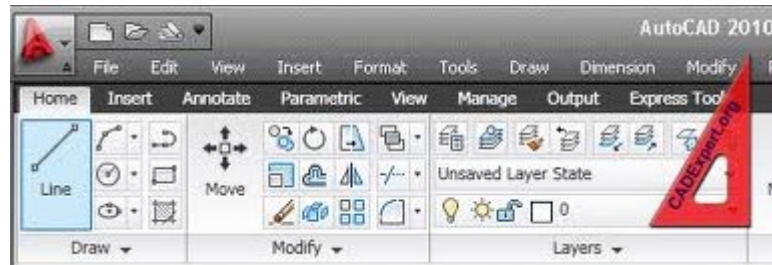
ON/ OFF/ <Lower left corner> <0,0 or current setting here>: Type in an absolute coordinate or press Enter to select default setting. NOTE: It is best to leave the Lower Left setting at the 0,0 .

--Prompt: Upper right corner <12,9 or current setting here>: Type in a new absolute coordinate value for this corner and press

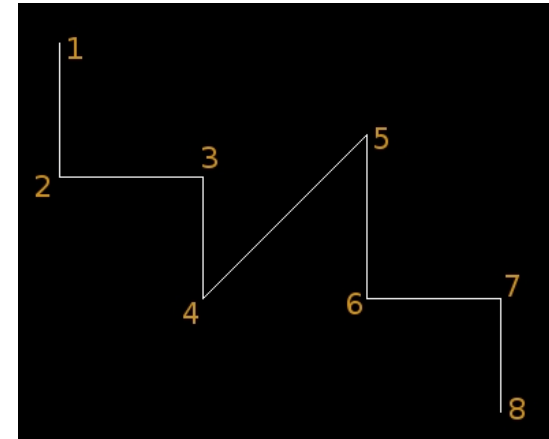
**REMEMBER TO DO A ZOOM ALL AFTER SETTING YOUR LIMITS**

# Drawing a Line

## PICK POINTS



- Type L for line at the command line and press enter.
- AutoCAD asks you (in the command line area) to specify a start point. Simply pick an area central to the drawing area (left click of the mouse).
- AutoCAD now asks for an end point. Select somewhere (left click) to the top right of the drawing area.
- Now one line is drawn. AutoCAD keeps the line command open so that another line can be drawn beginning exactly where the previous finished. We want to end the command so simply press enter or esc to exit the command.

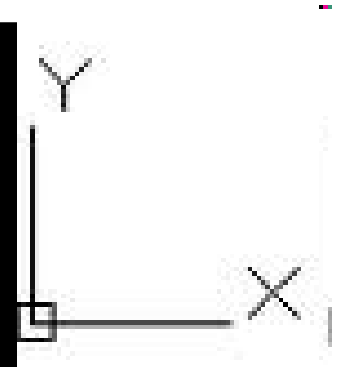
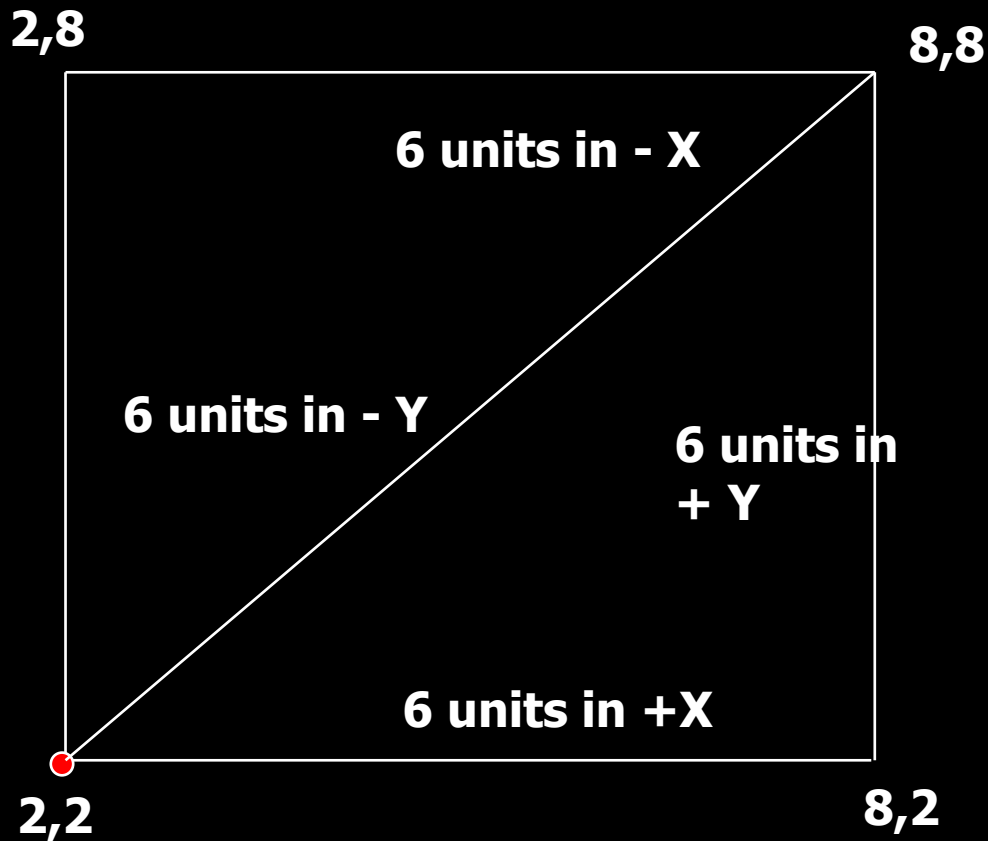


# Drawing a line accurately using coordinate system

## ABSOLUTE CO-ORDINATES - (x,y)

- Using this method, you enter the points as they relate to the origin. To enter a point just enter in the exact point as X,Y.

**Start the line command**



# Exercise 1.dwg

- Use absolute coordinate system to draw the following drawing.

