

BASIC MODIFY COMMANDS IN AUTOCAD DRAWINGS

1. COPY

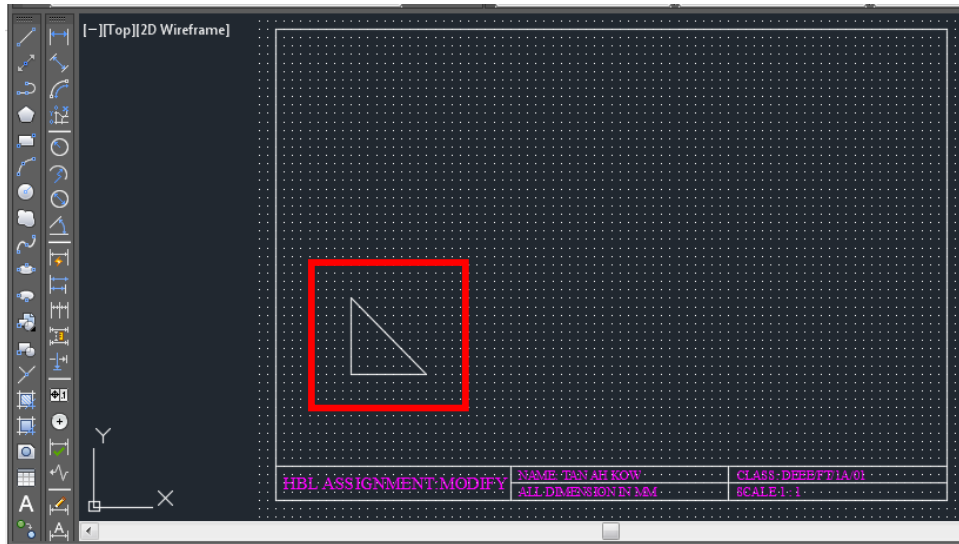


Fig 1.1- First, **Draw an object**, e.g. a triangle as shown

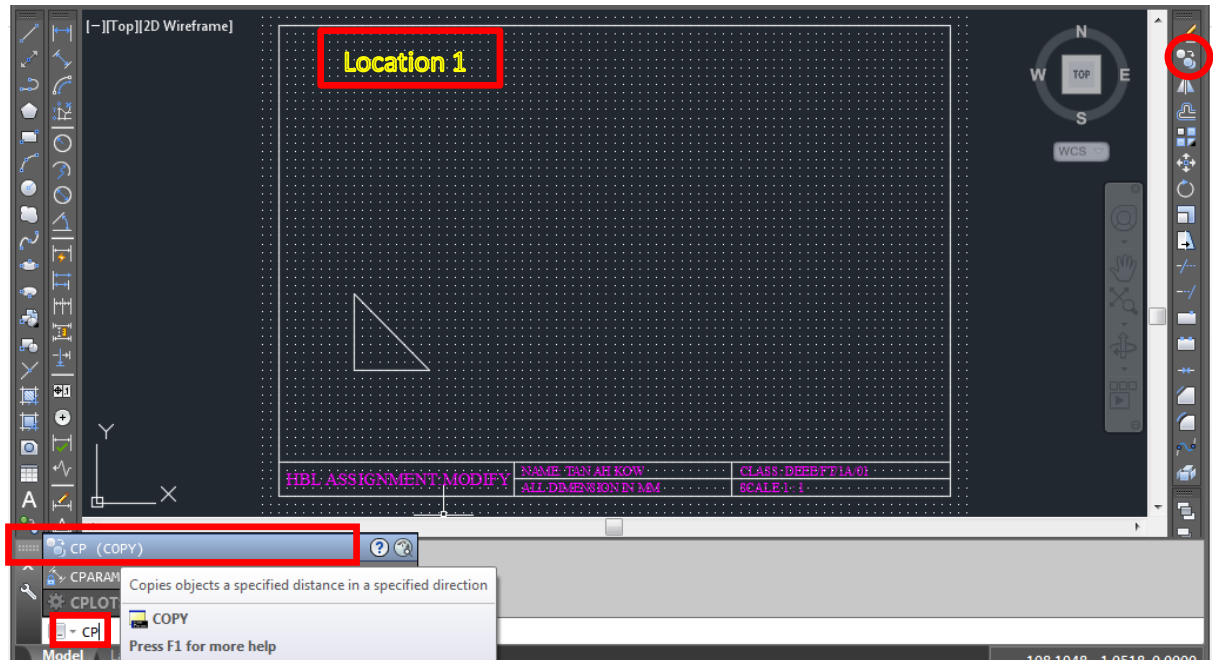


Fig 1.2- Type “cp” or “co” & enter, or click **Copy icon** as circled in red

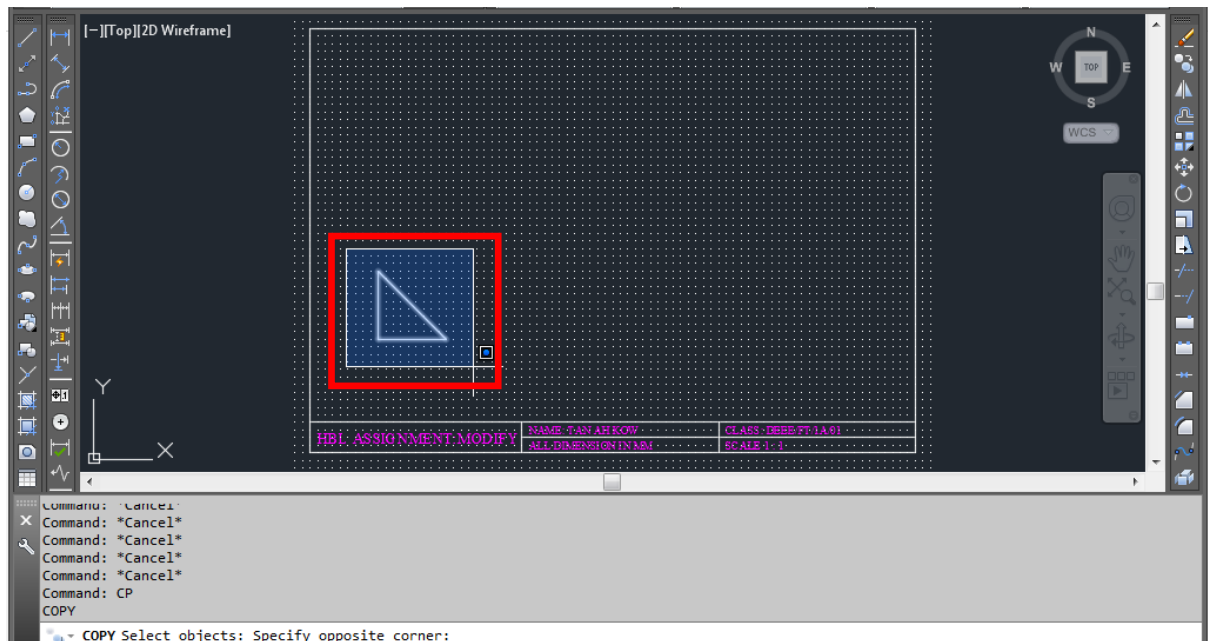


Fig 1.3- Use **Window** to select the whole object and **enter**.

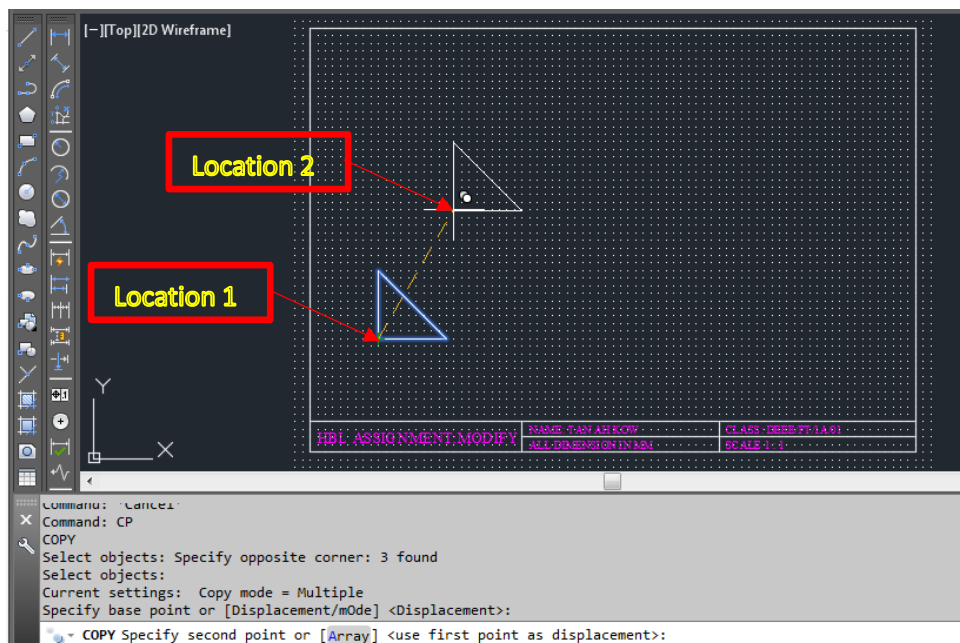


Fig 1.4- Specify base point: click at **location 1**. Specify second point: Move your cursor and place in another location (**Location 2**) to produce a **copy of the object**. Further duplication can be done by clicking elsewhere to place another copy of the object and so forth.

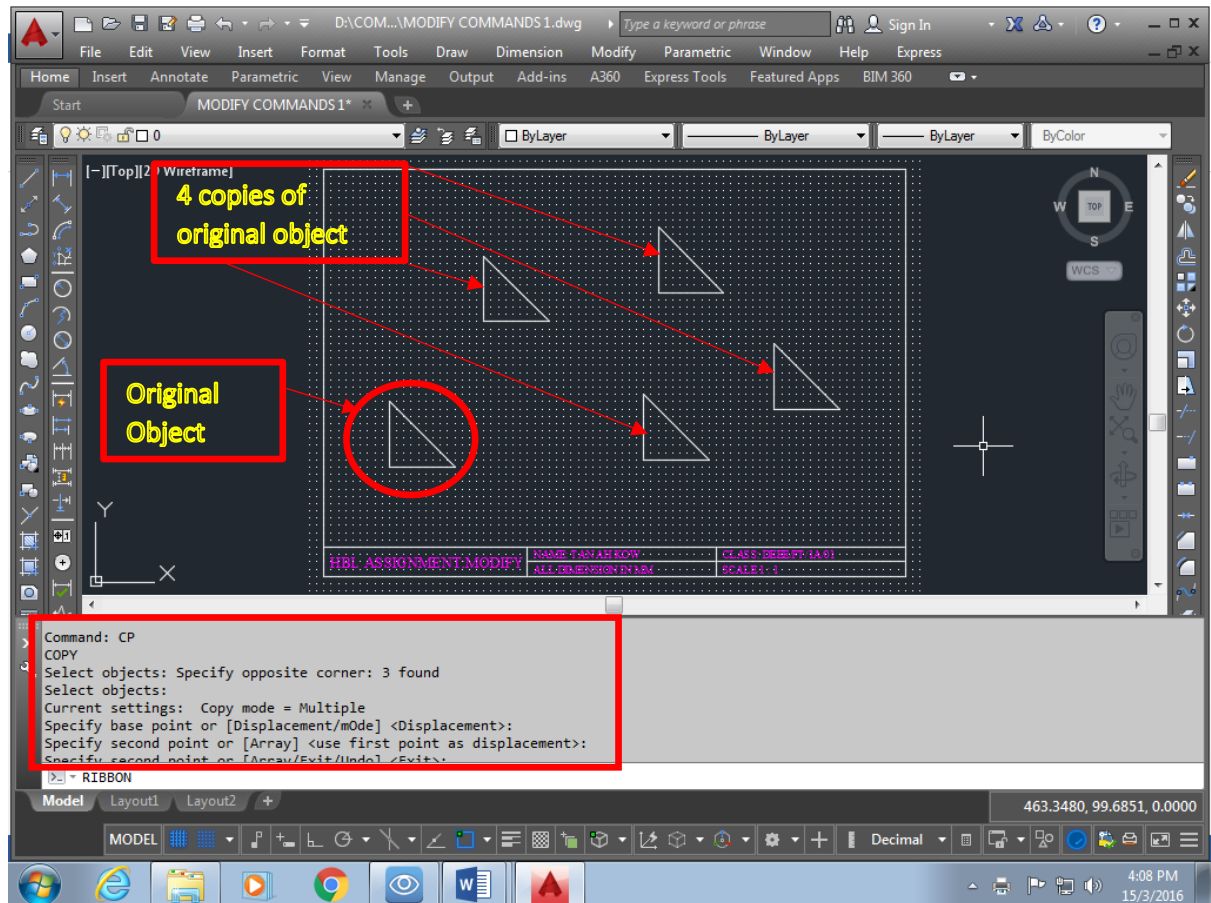


Fig 1.5- 4 copies of original object is displayed.

2. MOVE

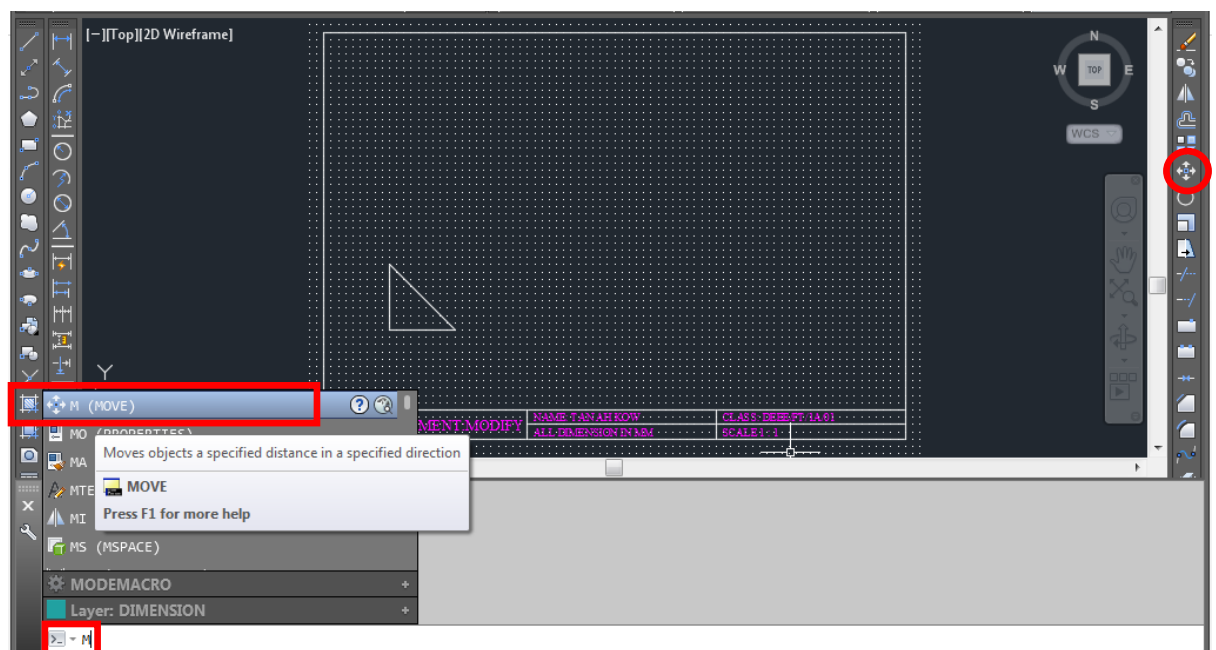


FIG 2.1- For same object as shown, type “m” & **enter** or Click **Move** icon.

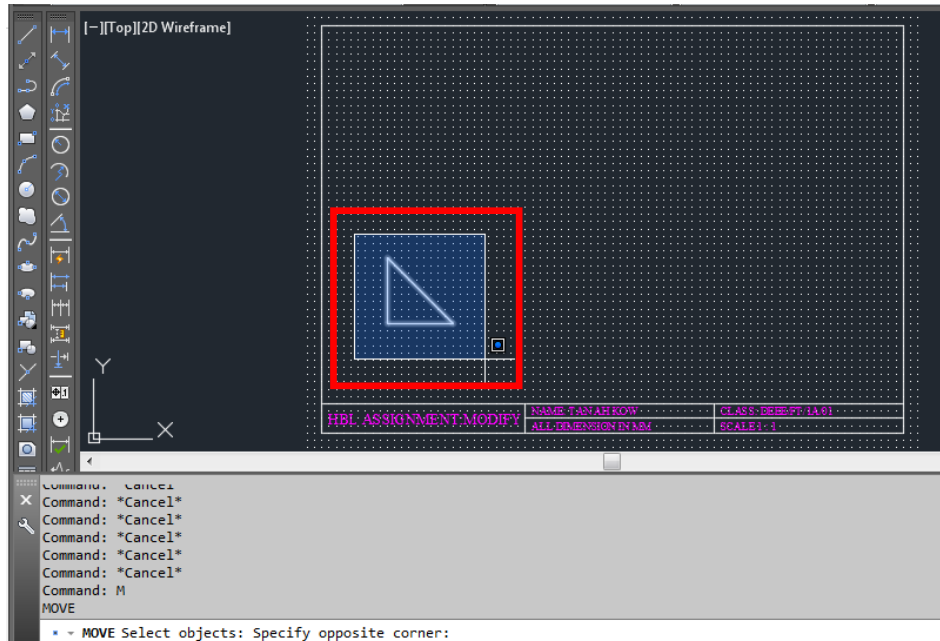


Fig 2.2- Window the whole object and **enter**

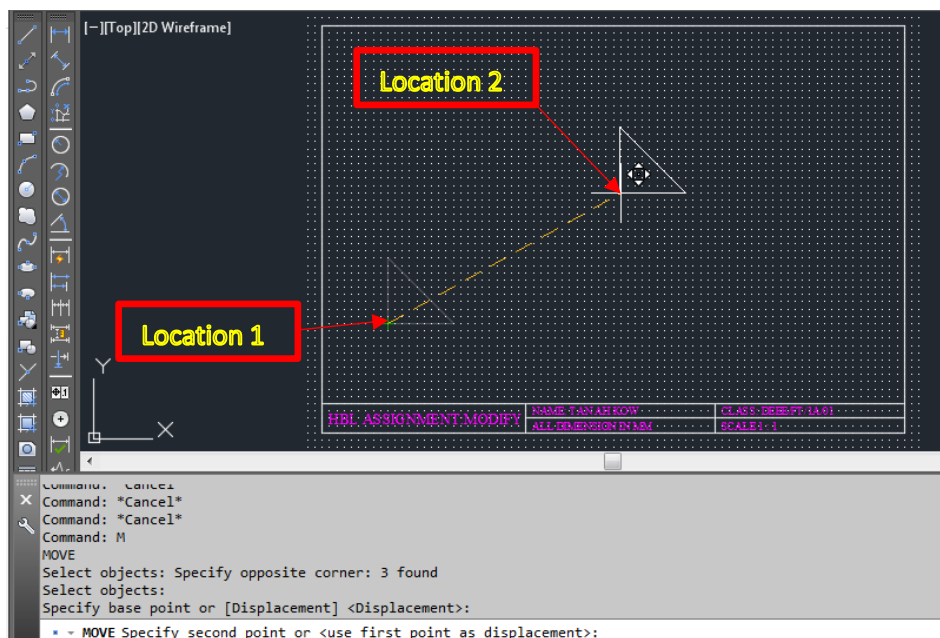


Fig 2.3- Specify base point: click **location 1**. Specify second point: click **location 2**.

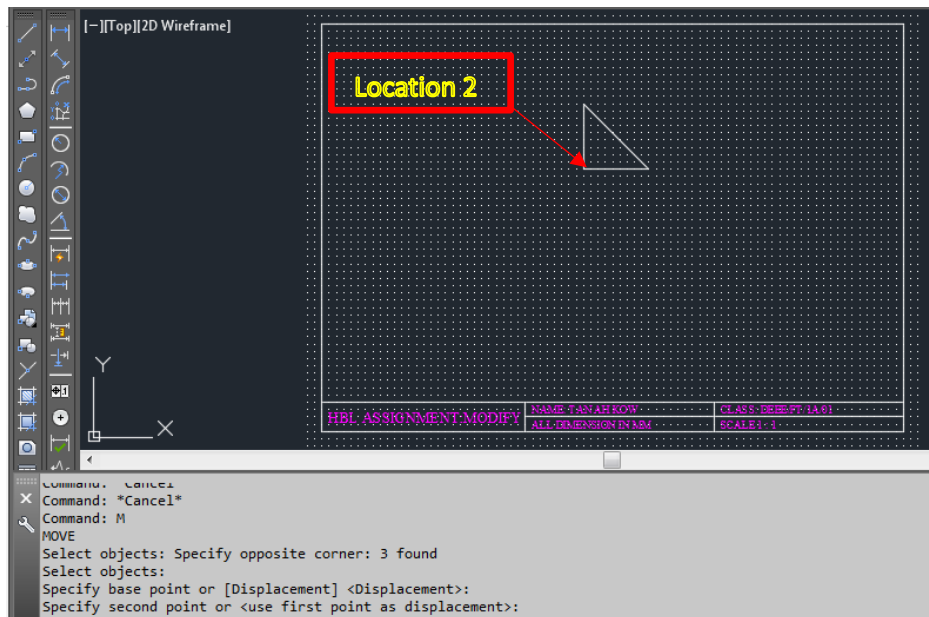


Fig 2.4- Original object is now move to location 2.

3. MIRROR

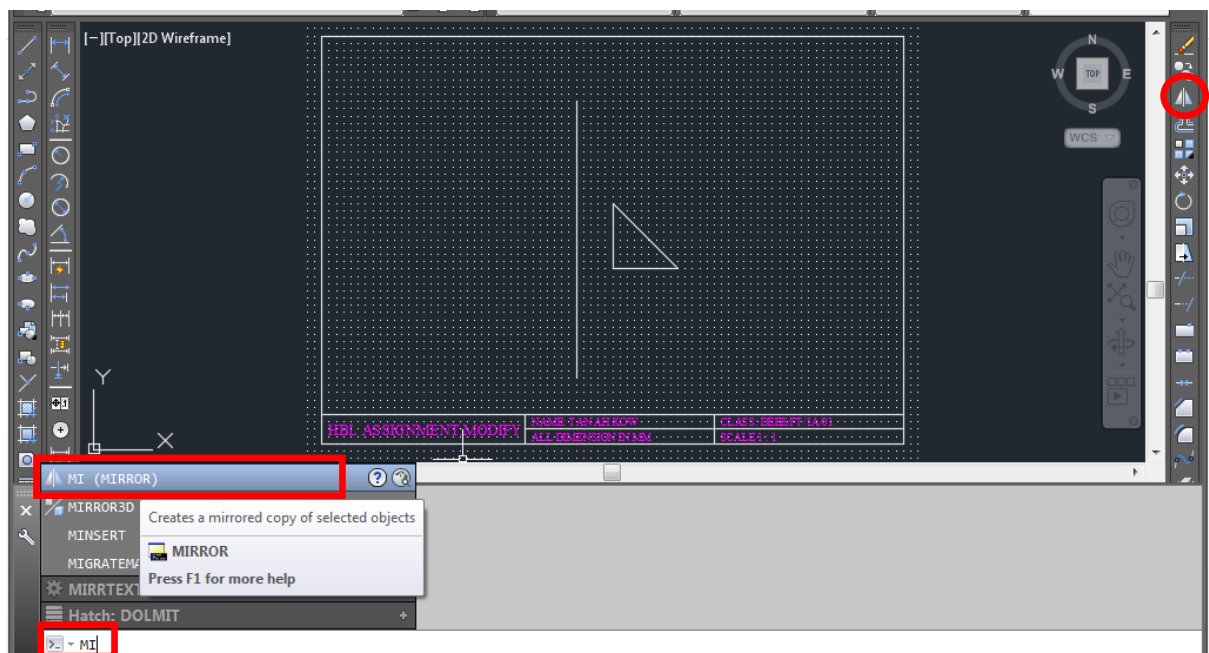


Fig 3.1- Type “mi” and enter or click mirror icon as circled in red.

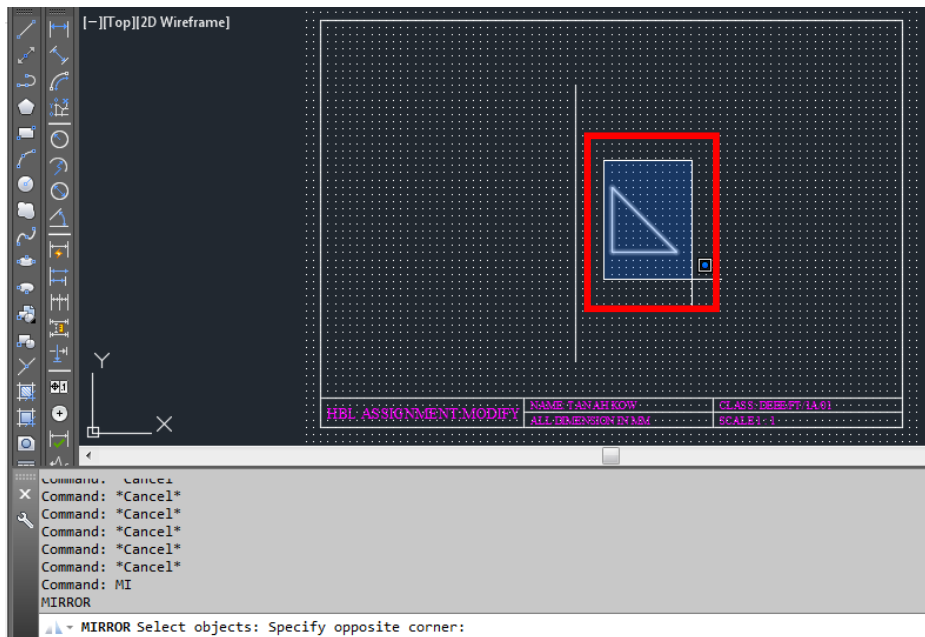


Fig 3.2- Window the whole object & enter

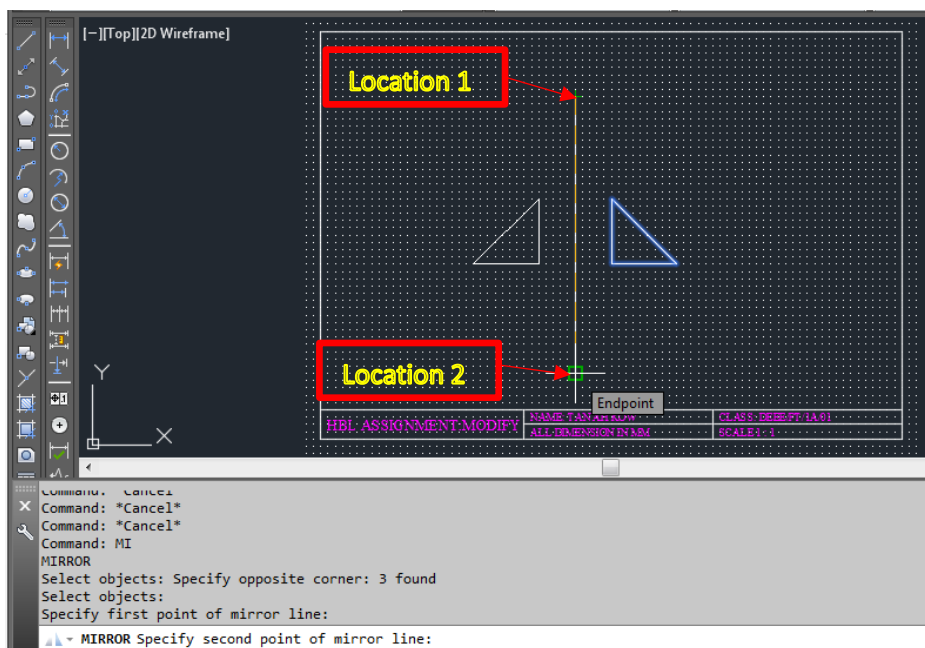


Fig 3.3- Specify First point of mirror line: Location 1.

Specify second point of mirror line: Location 2.

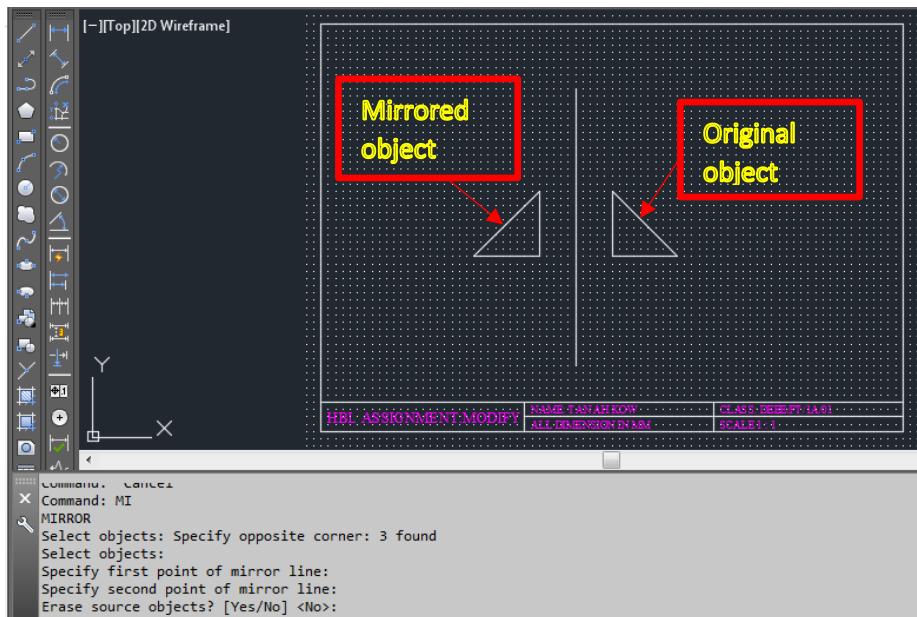


Fig 3.4- Erase source object: no.

Both the **original & mirrored object** is displayed.

4. UNDO

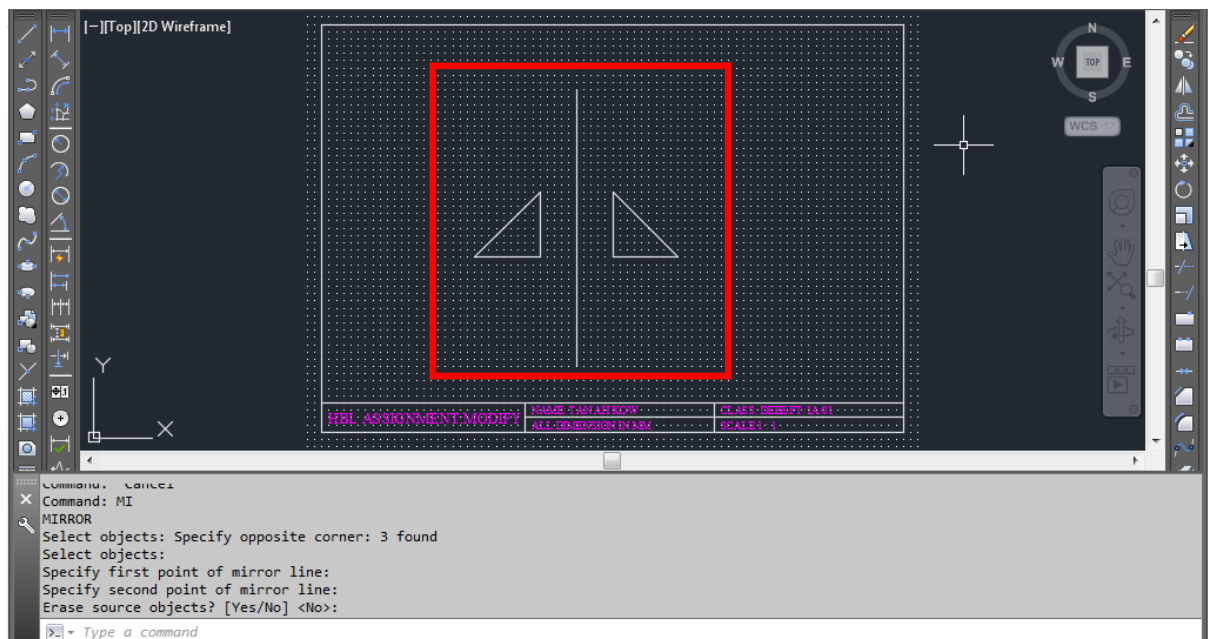


Fig 4.1- Start with the mirror drawing in Fig 3.4 to **demonstrate undo command.**

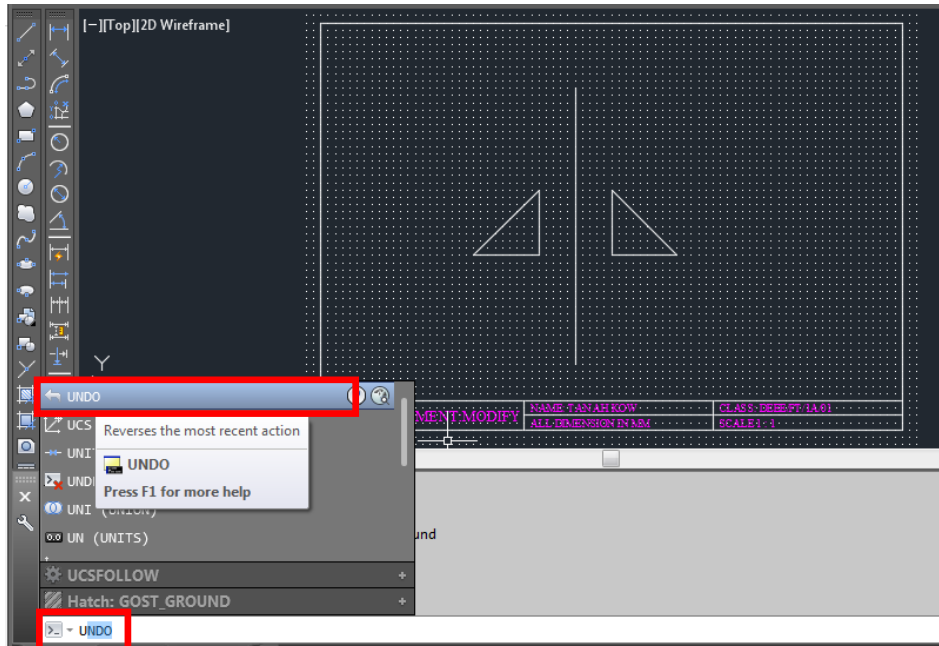


Fig 4.2- Type “u” and enter.

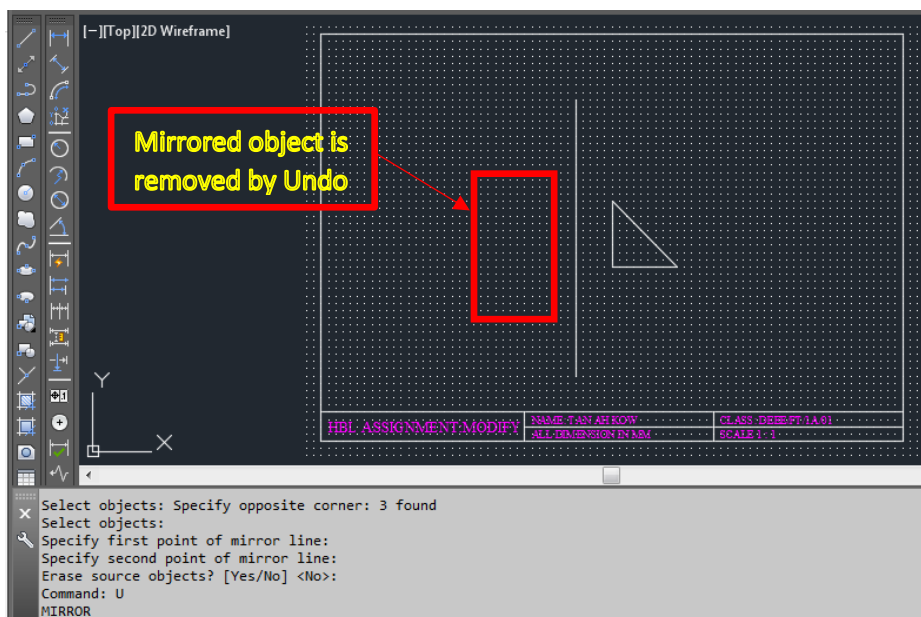


Fig 4.3- The mirrored object is removed.

“Enter” again continuously will undo many times until the original is removed.

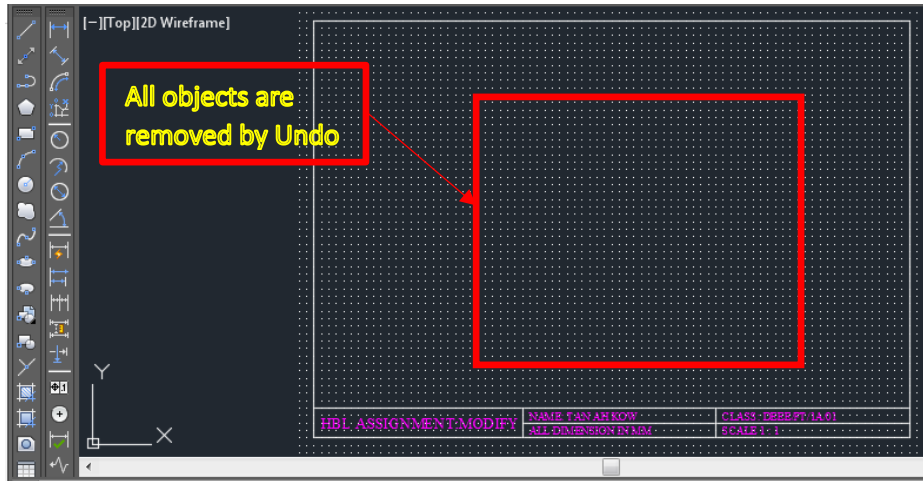


Fig 4.4- All the object inside the border are removed using undo repeatedly.

5. ERASE

A. To erase single entity

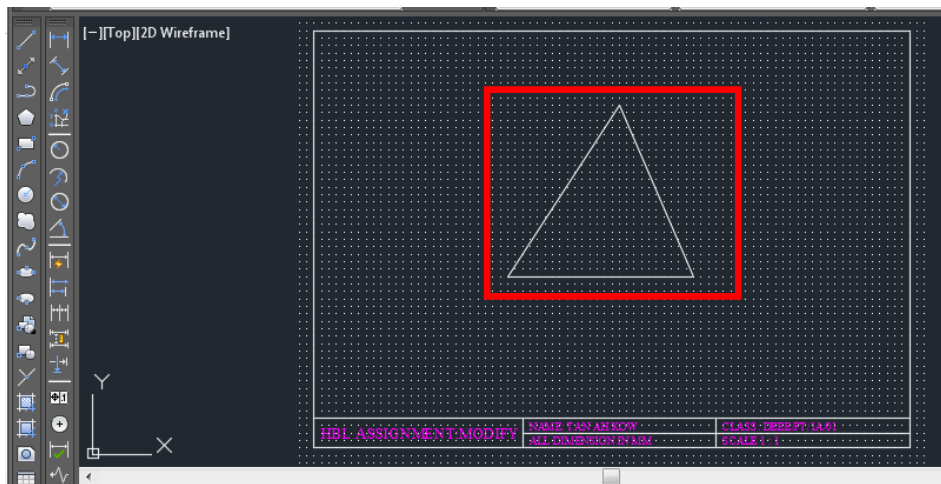


Fig 5.1- Draw an object to demonstrate erase

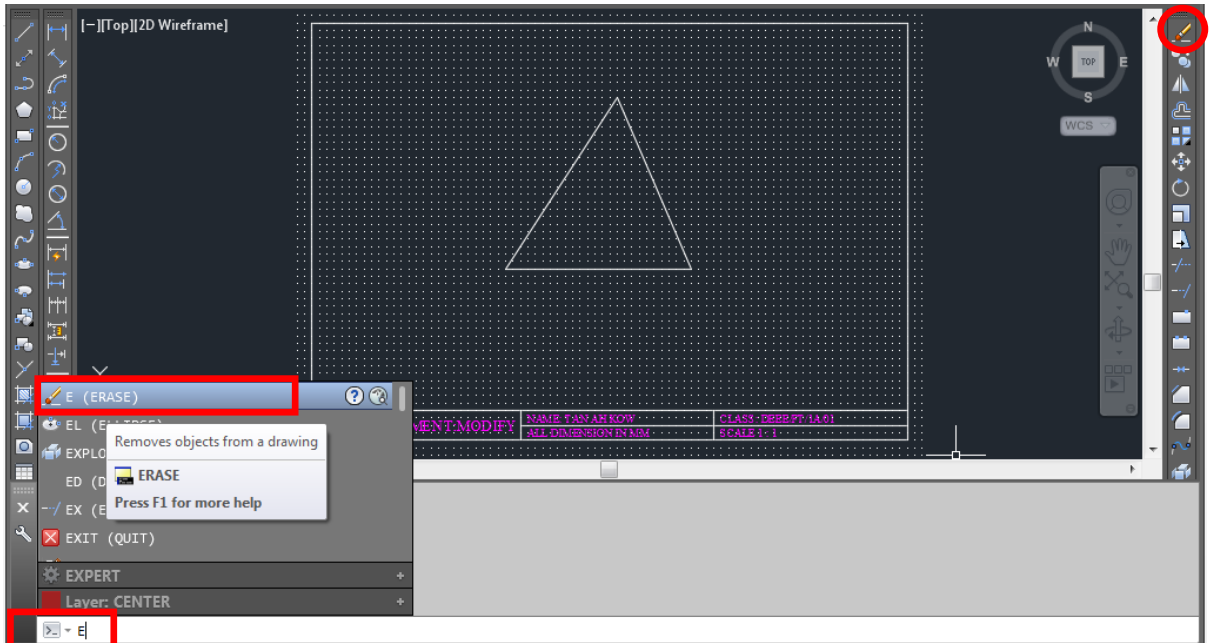


Fig 5.2- Type “e” & enter or click **Erase icon** as circled in red

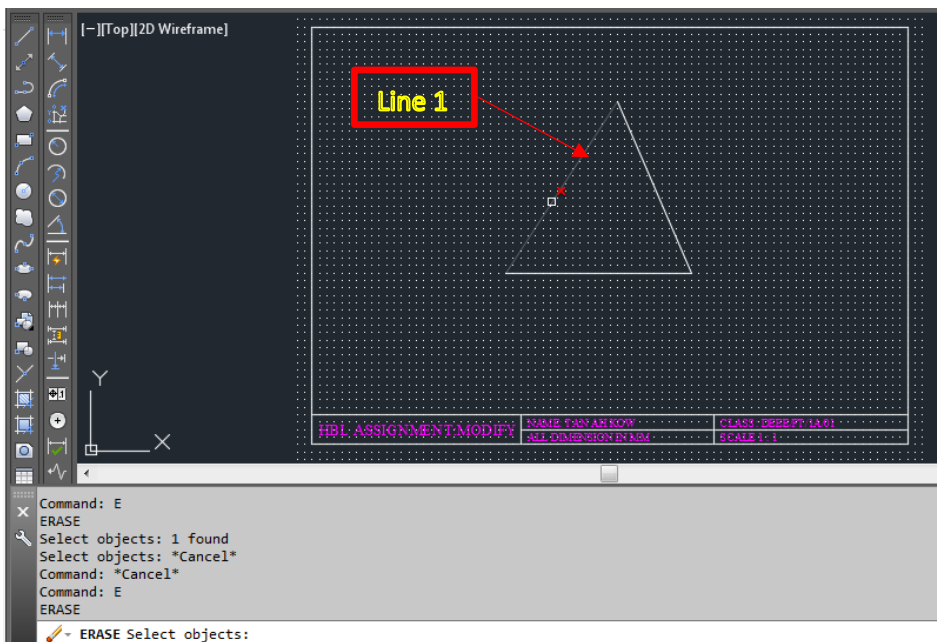


Fig 5.3- click on **line 1** and enter

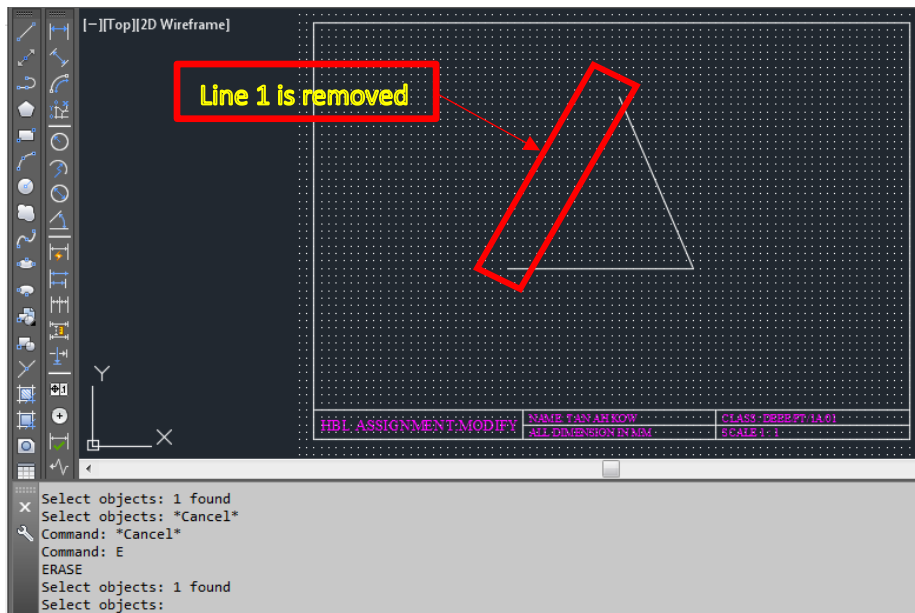


Fig 5.4- Line 1 is removed

B. To Erase 2 entities or more

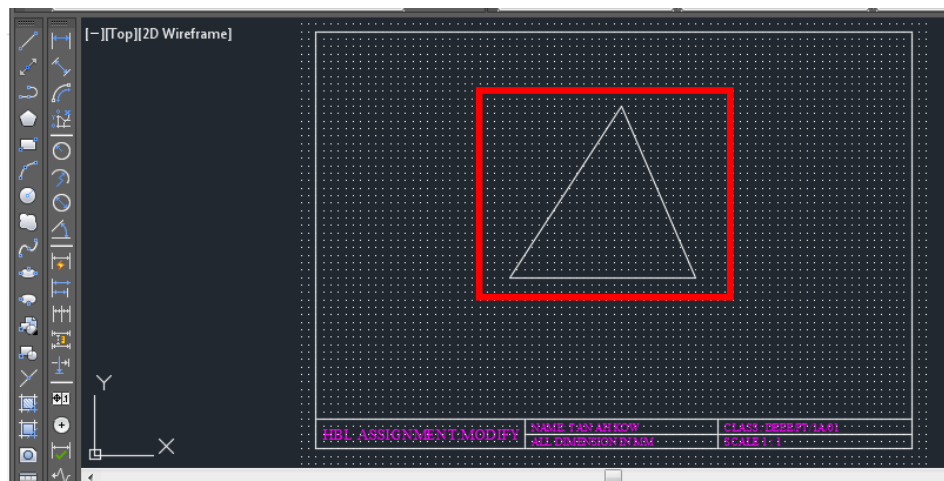


Fig 5.5- Use the same object as shown in Fig 5.1

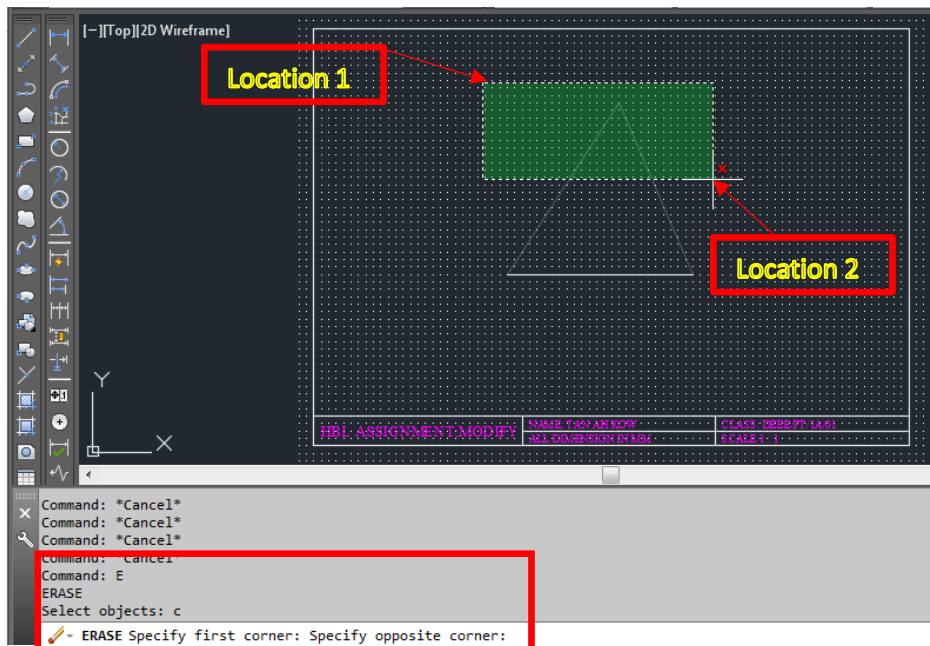


Fig 5.6- Type “e” and **enter**. Select object: **c** (crossing).
Click first corner: **location 1**, Opposite corner: **location 2**.

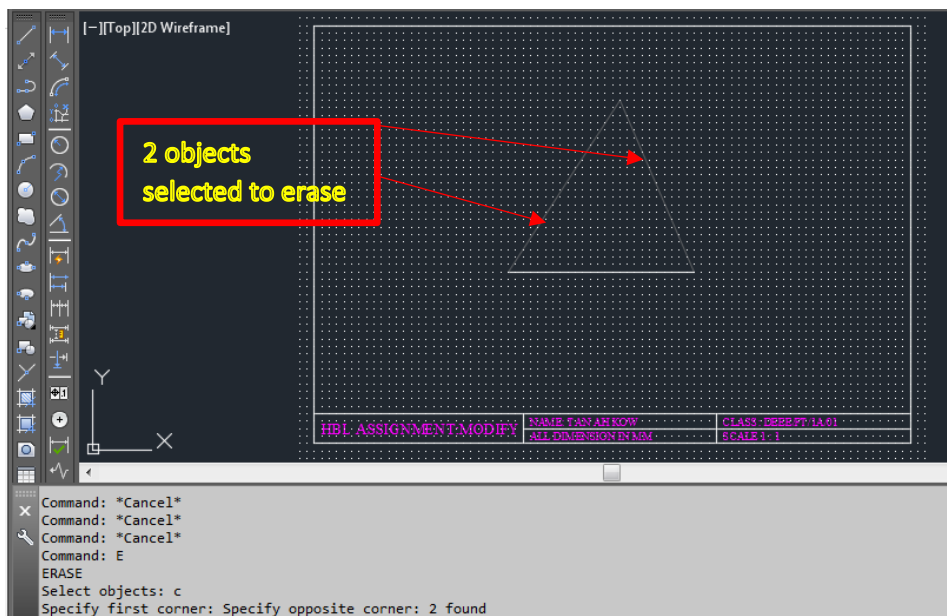


Fig 5.7- 2 object selected to be **erased** and **enter**.

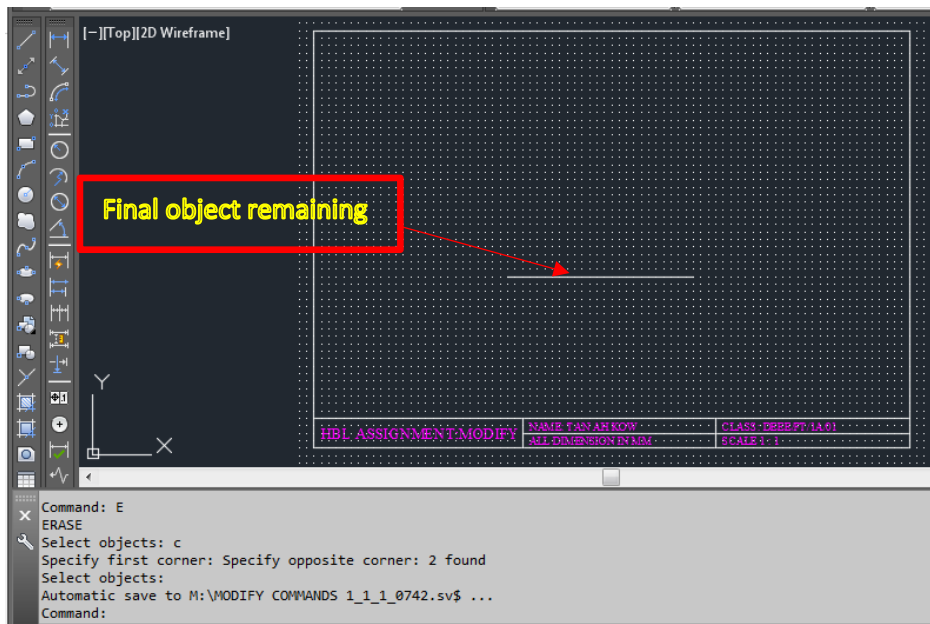


Fig 5.8- The 2 lines are erased as shown with only one remaining line.

C. To erase all the objects including the A3 template

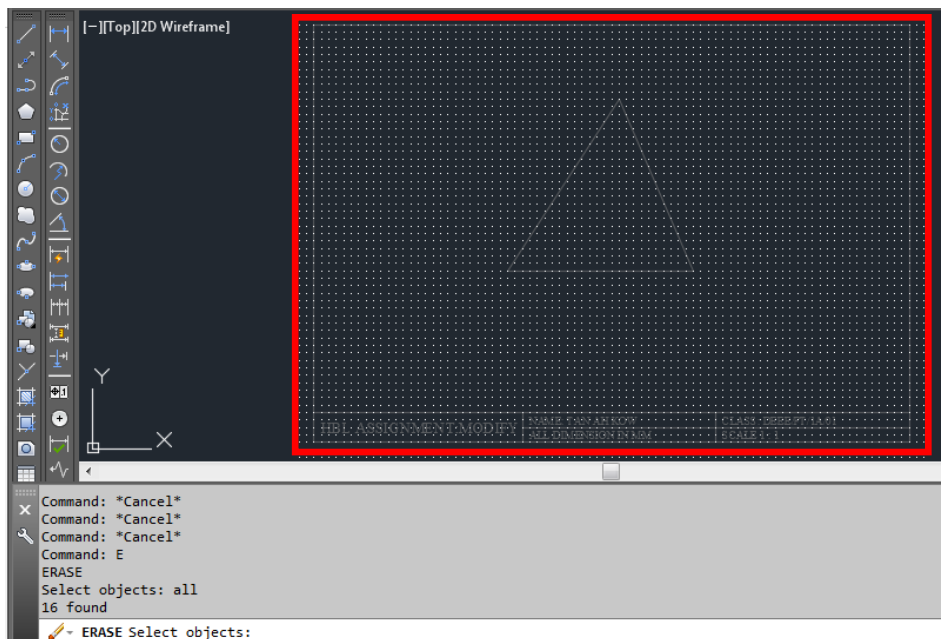


Fig 5.9- Using the same object as in Fig 5.1, type “e” and **enter**. Select Object: **all** & **enter**. All objects are selected to be erase as shown in red square.



Fig 5.10- All object are removed in the A3 drawing space.

6. EXPLODE

If an object is drawn using a polyline, then the whole object is visualised as 1 entity. In order to breakup into separate entities, command **Explode** is used.

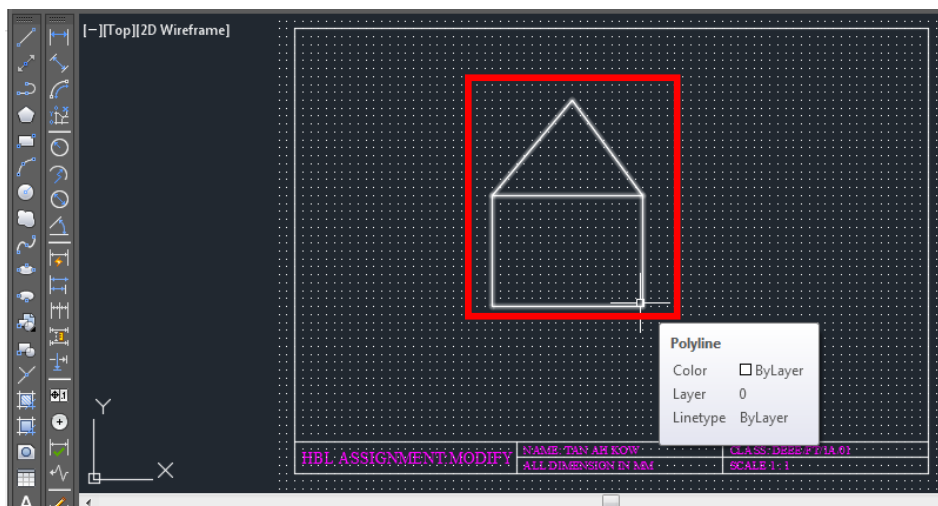


Fig 6.1- An object drawn using polyline as shown

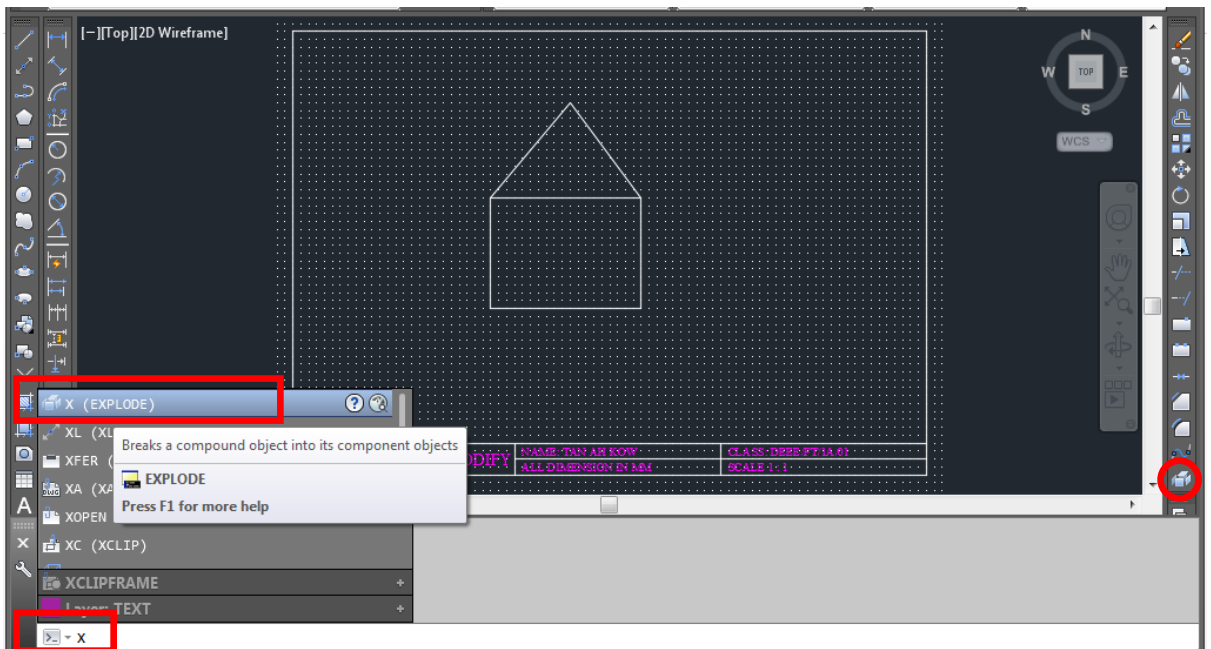


Fig 6.2- Type “x” and **enter** or click **Explode** icon circled in red.

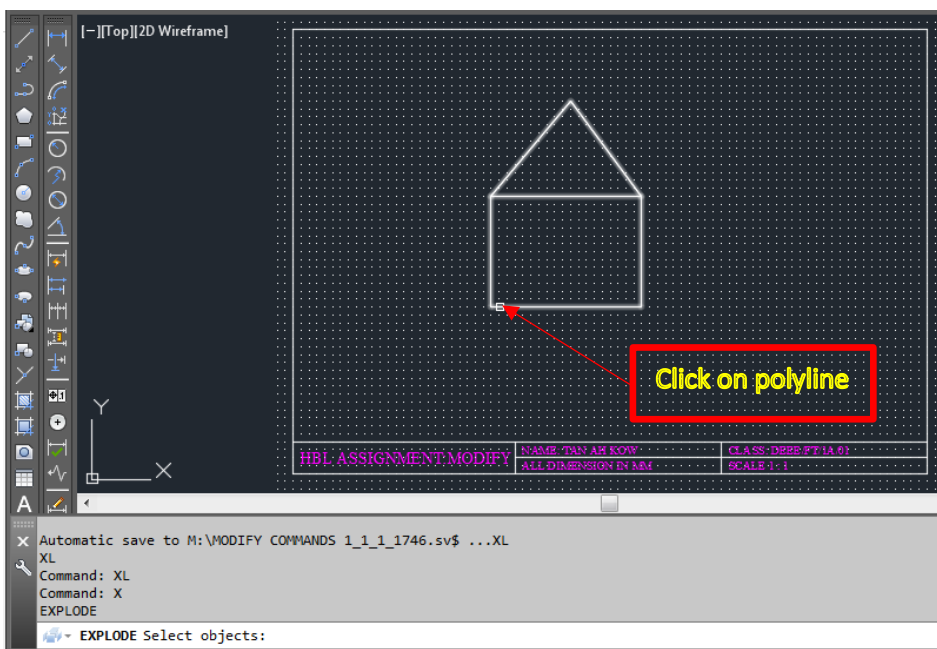


Fig 6.3- Select object: **Click on the polyline** and **enter**.

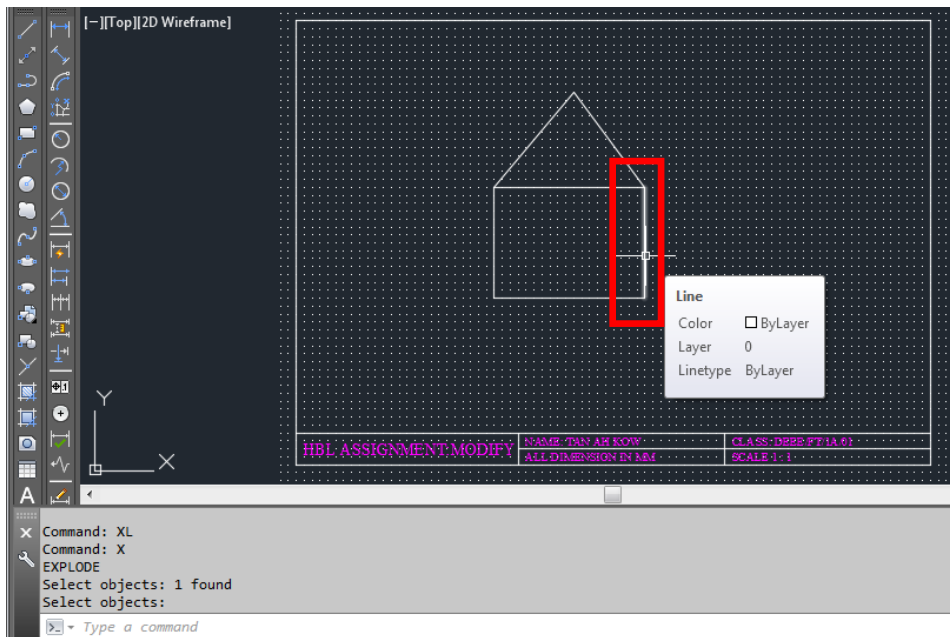


Fig 6.4- The object is broken up into individual lines

7. POLYLINE EDIT

Many lines can be jointed to form a polyline of single entity by using command polyline edit (**pe**).

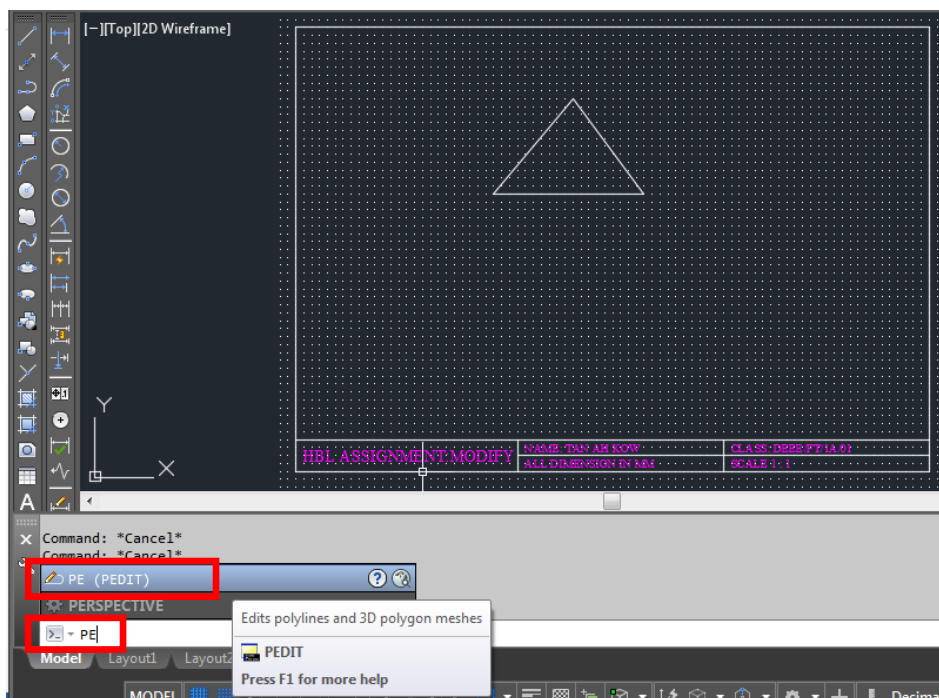


Fig 7.1- Type “pe” and enter.

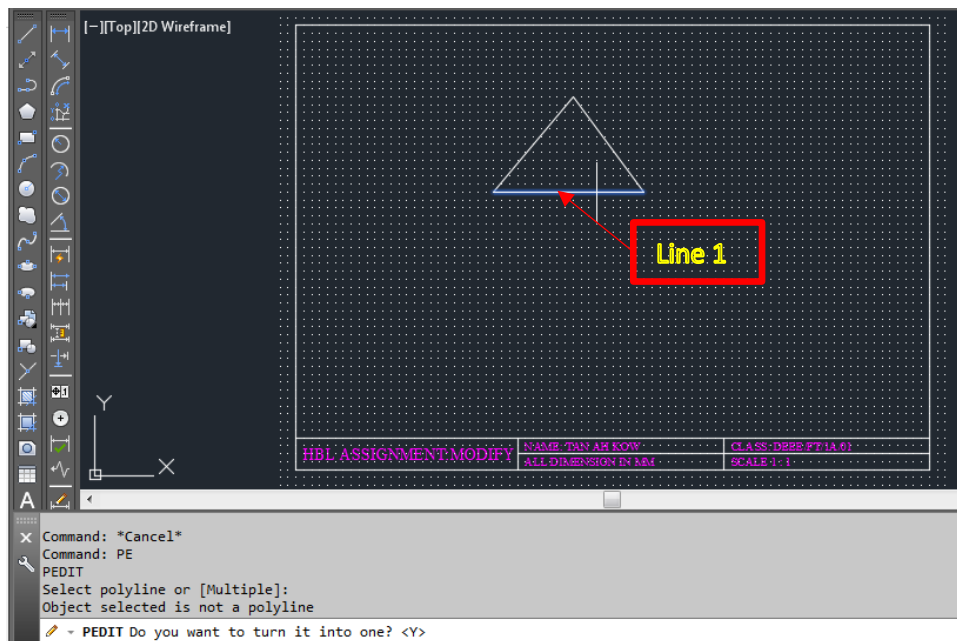


Fig 7.2- Click on the **bottom line 1**. As this drawn using line previously, the response from AutoCAD is “ Object selected is not a Polyline” and prompt whether you want to change into polyline with a default <Y> for yes. **Enter** to indicate yes.

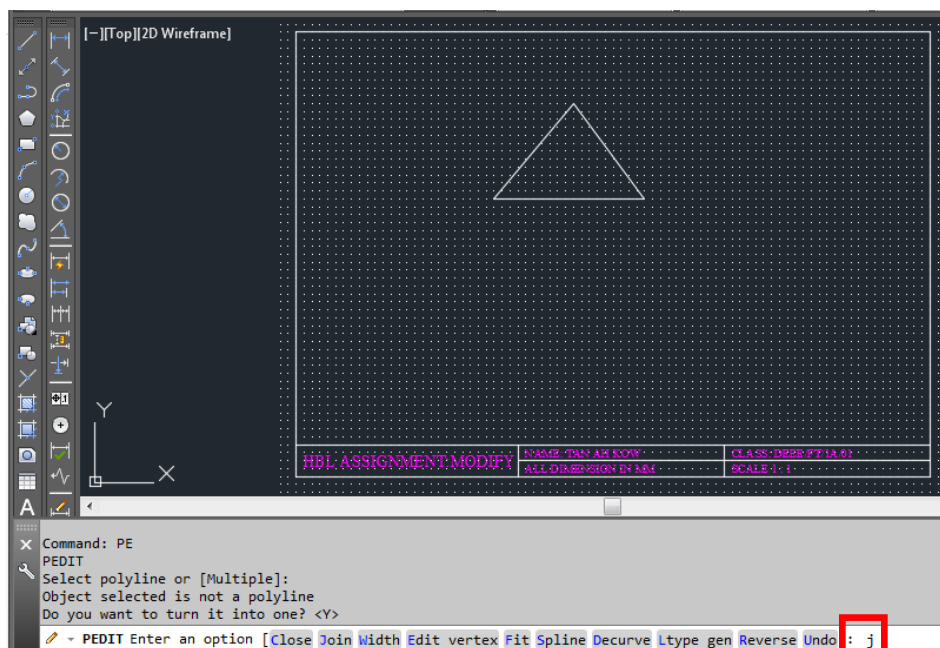


Fig 7.3- Next, type “j” to join other lines to turn them into polylines.

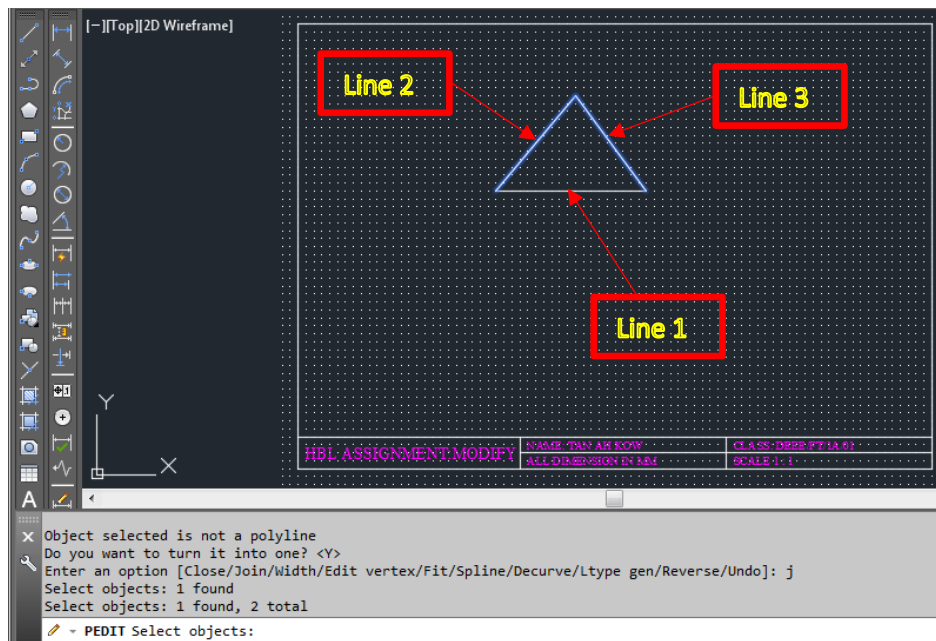


Fig 7.4- select line 2 & line 3 to join the **polyline 1**.

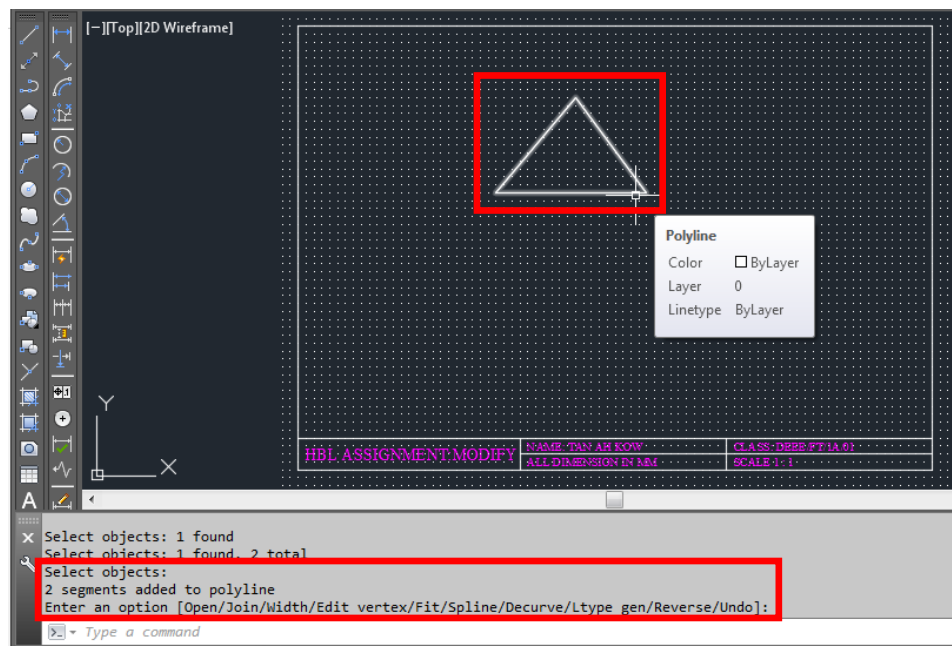


Fig 7.5- Enter **twice** to complete the polyline edit command. End result is that the triangle is now a **polyline single entity**.

8. TRIM

To remove a portion of object, e.g. the line inside the circle

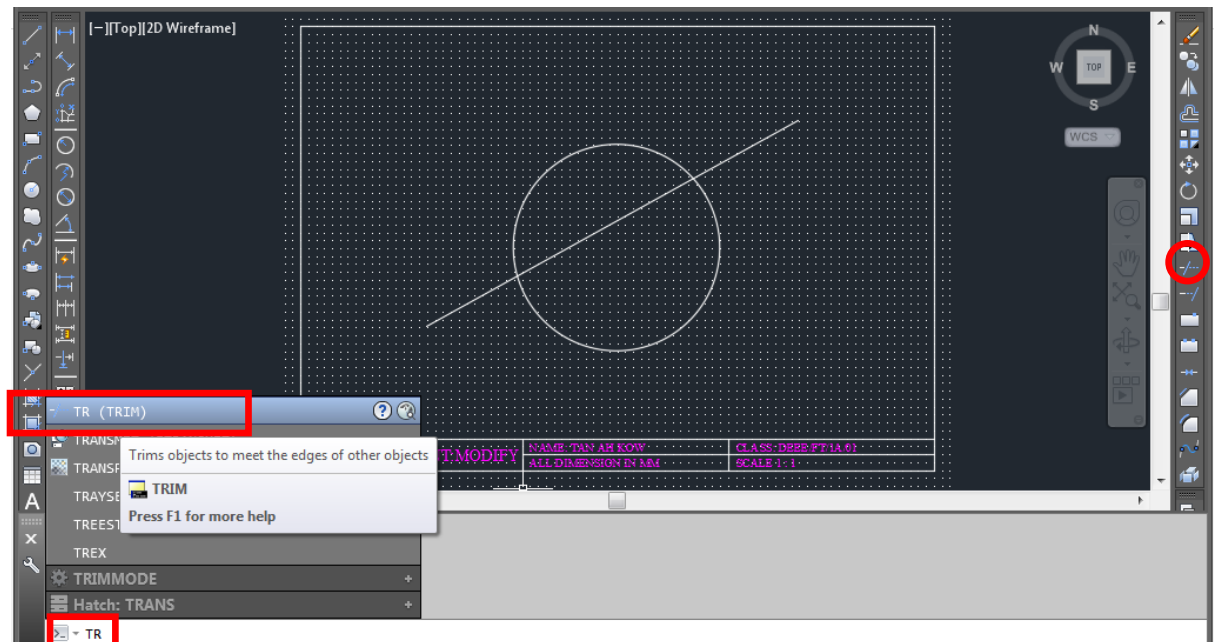


Fig 8.1- Type “tr” and **enter** or click **Trim** icon as circled in red.

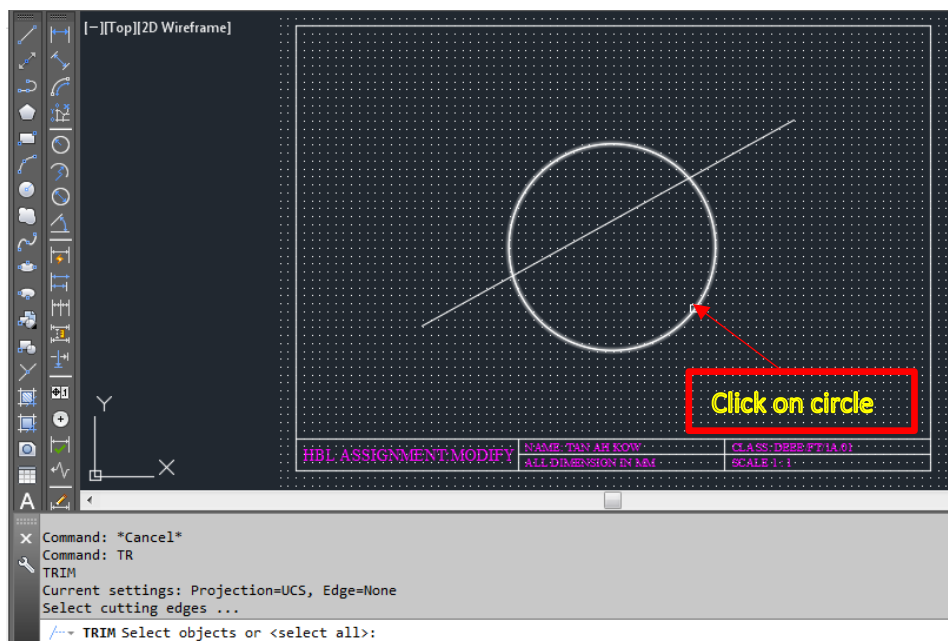


Fig 8.2- Click on the **circle** which is the cutting edge and **enter**

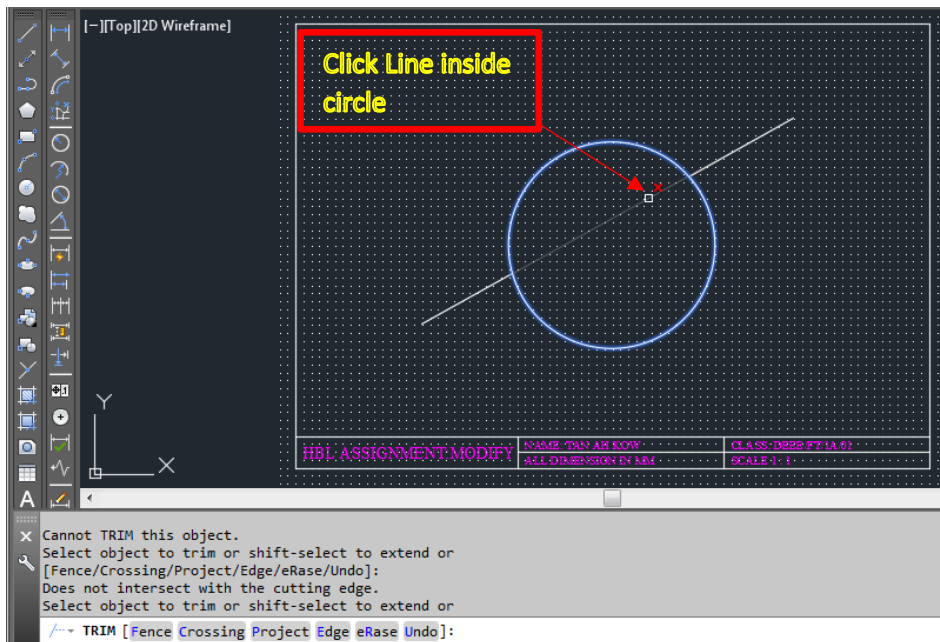


Fig 8.3- select object to trim or remove: click on the **line** inside circle and **enter**

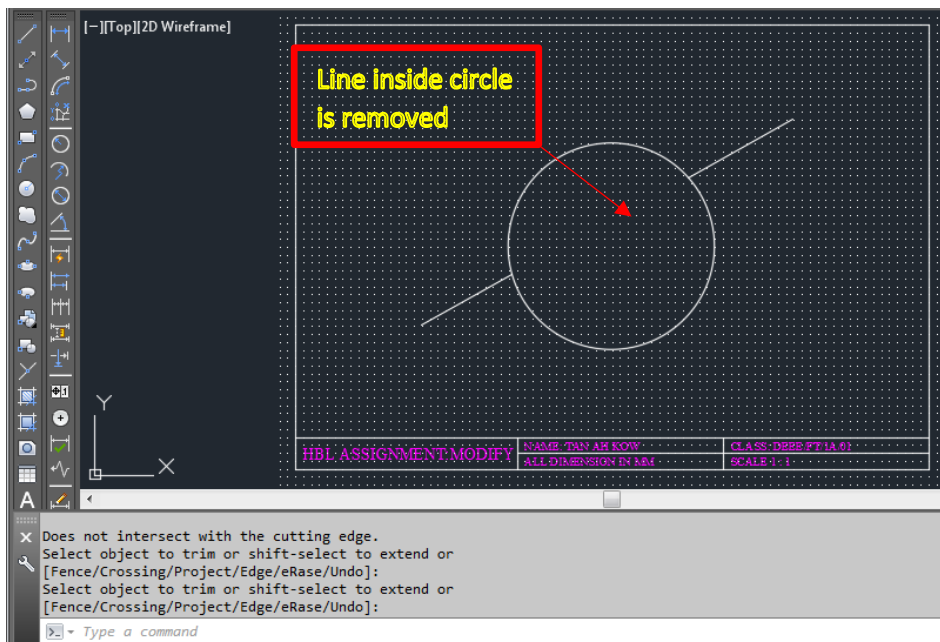


Fig 8.4- The line inside circle is removed.

9. BREAK

Another method to remove a portion of an object. E.g. to remove the line inside rectangle using command **Break**.

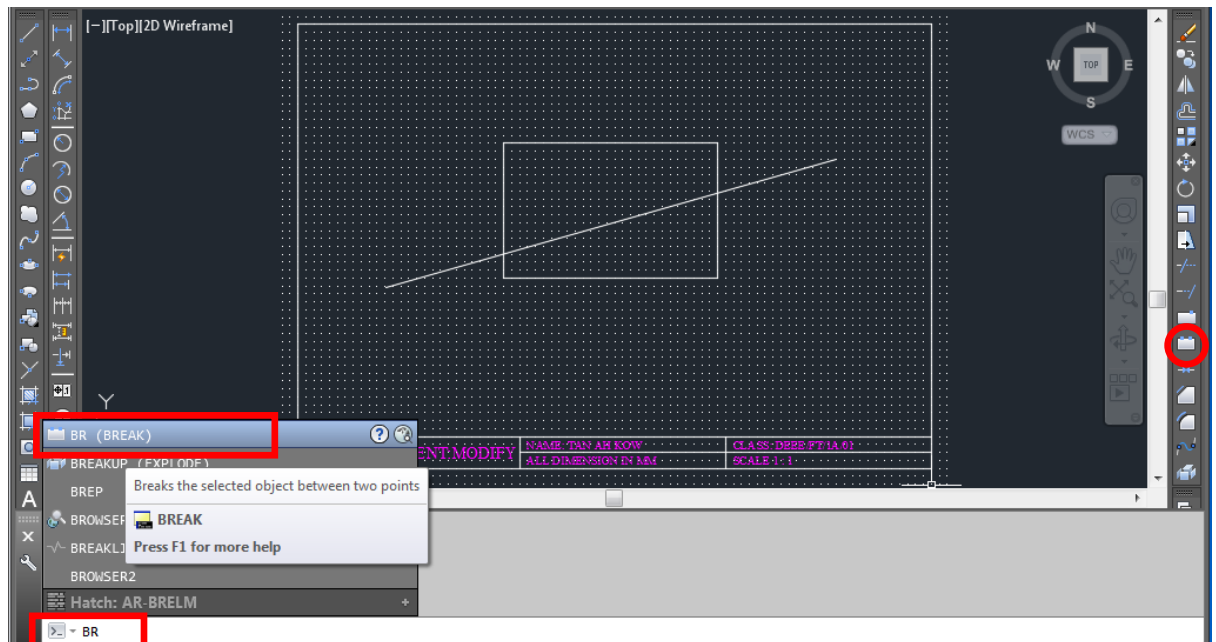


Fig 9.1- Type “br” and **enter** or Click **Break** icon circled in red.

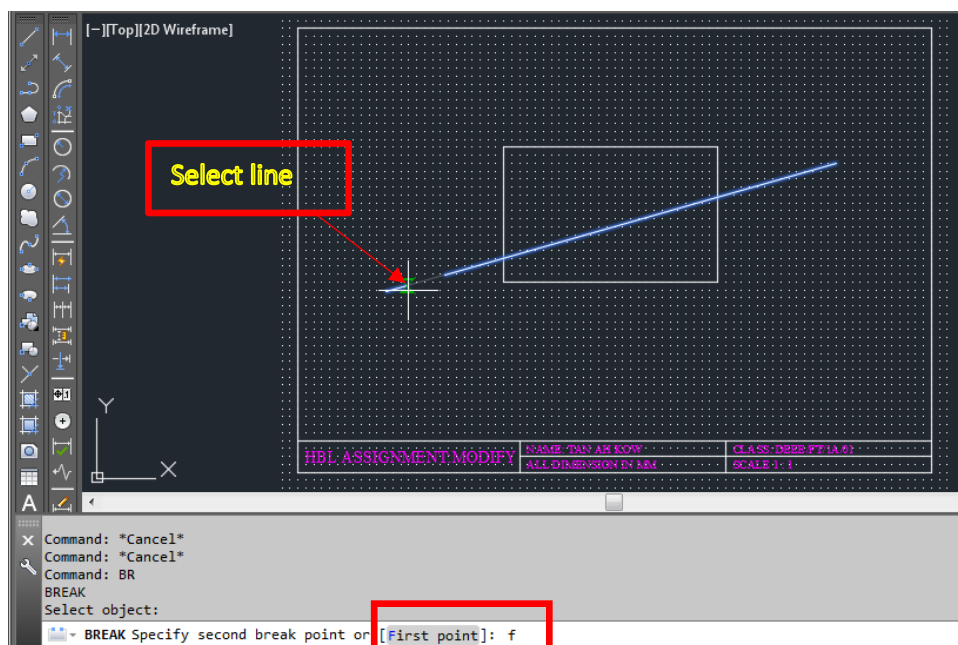


Fig 9.2- Select the line and **enter**. Type “f” and **enter** to indicate first break point.

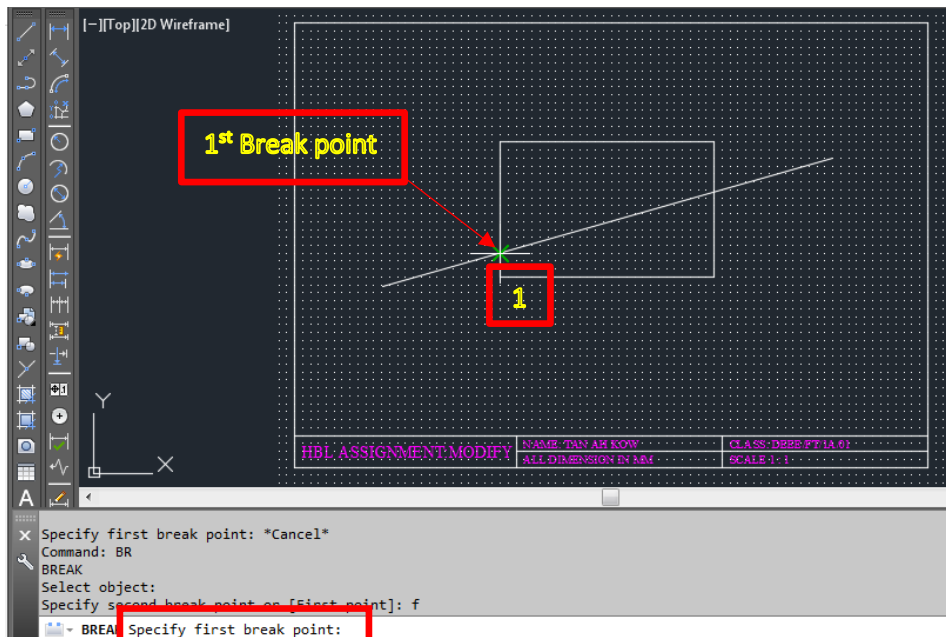


Fig 9.3- Click at **point 1** (First Break point), the intersection between rectangle and line.

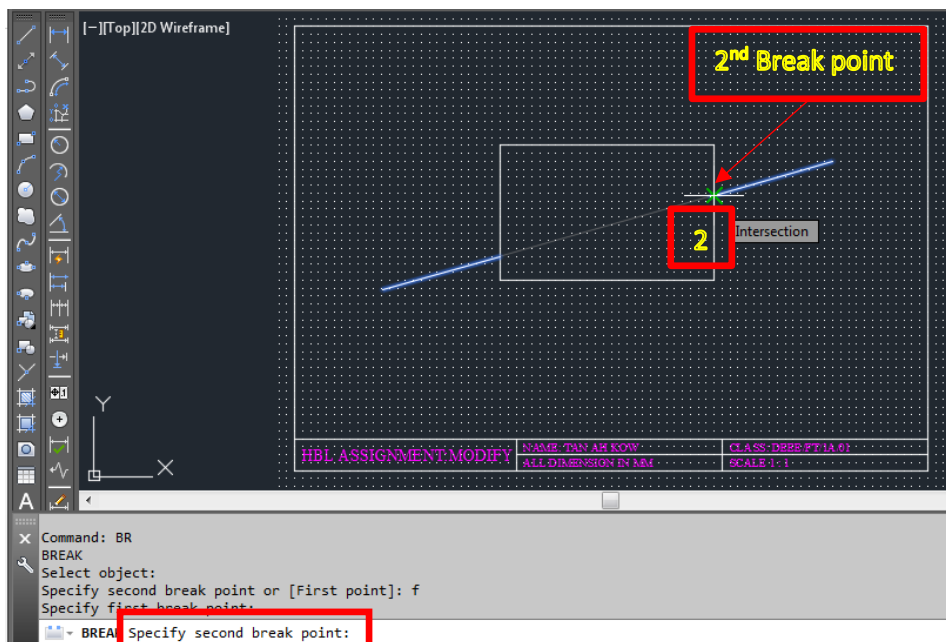


Fig 9.4- Click at **point 2** (Second Break point), the intersection between rectangle and line.

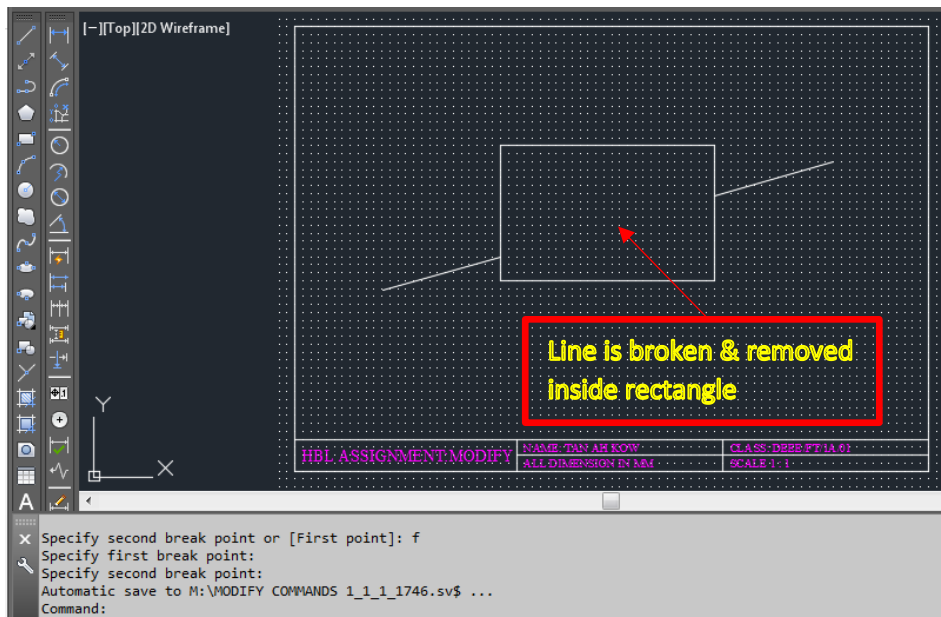


Fig 9.5- Line has been broken & removed inside the rectangle.

10. FILLET

Fillet is basically rounding an edge with a specified radius of curvature.

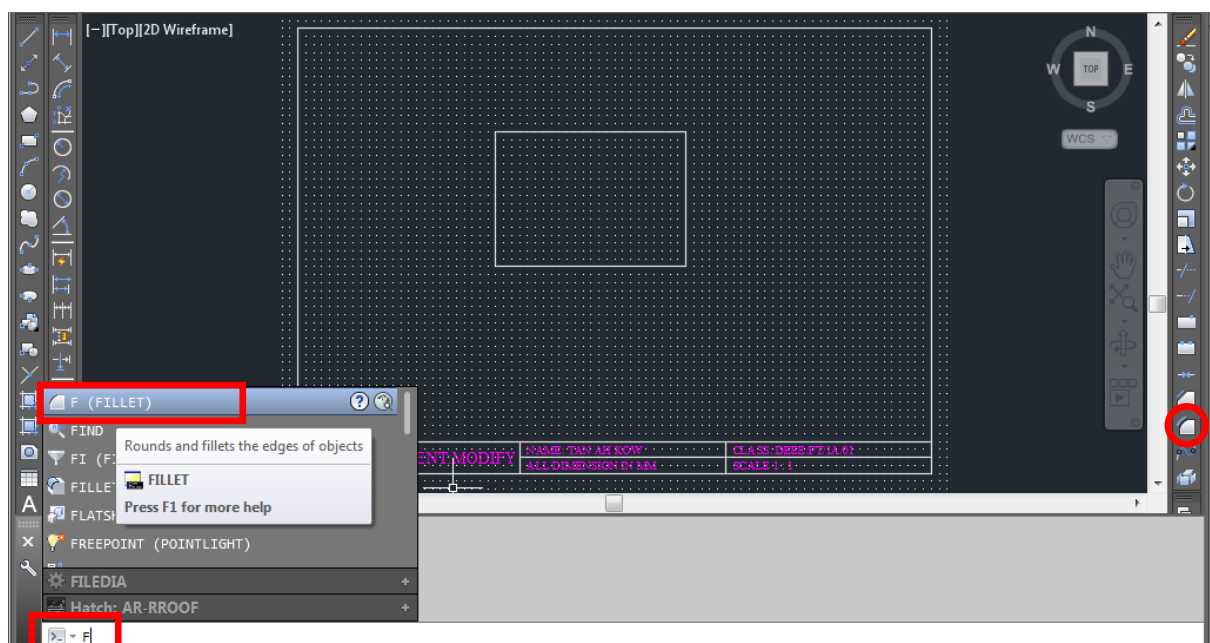


Fig 10.1- Type “f” and enter or click Fillet icon as circled in red.

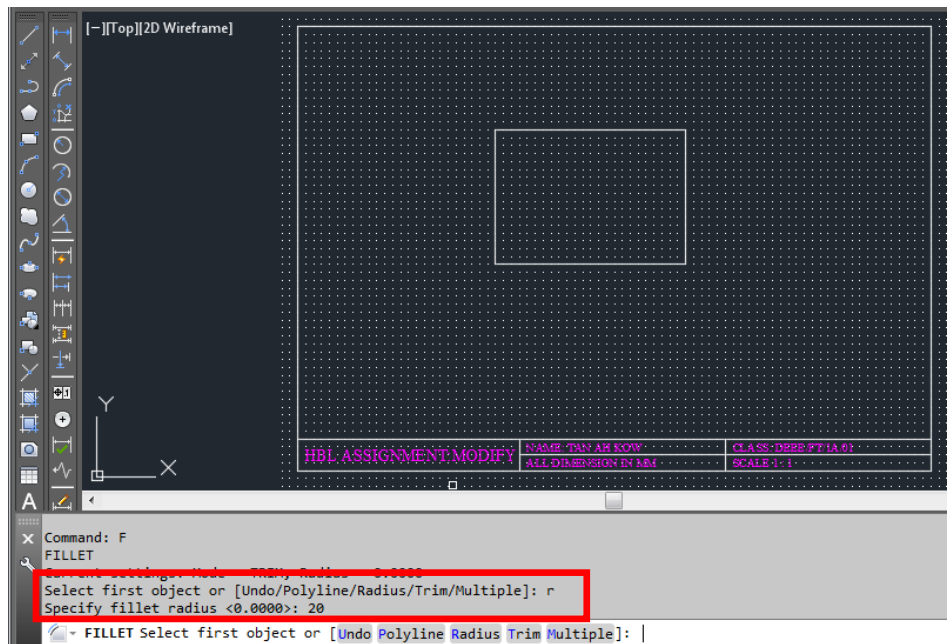


Fig 10.2- next, type “r” for radius and **enter**. Fillet radius: 20

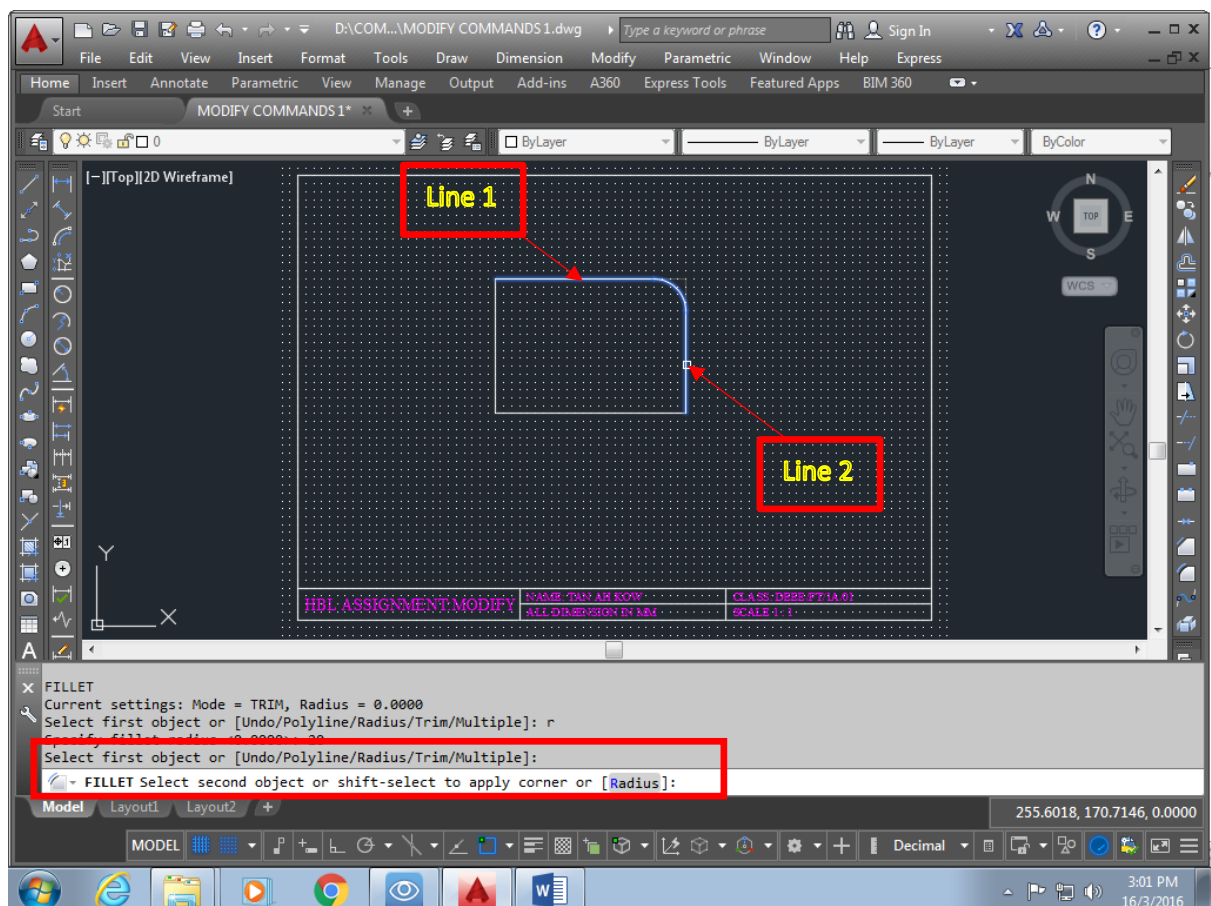


Fig 10.3- Select first object: click **line 1**. Select second object: click **Line 2** and **enter**.

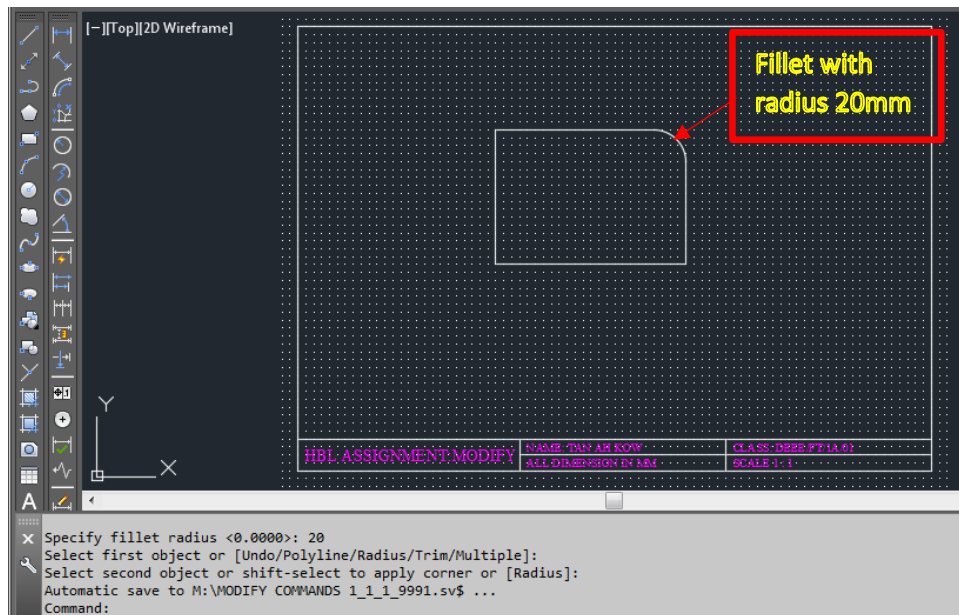


Fig 10.4- Display a fillet with radius of curvature 20mm.

11. CHAMFER

Chamfer is basically bevels the edges of an object.

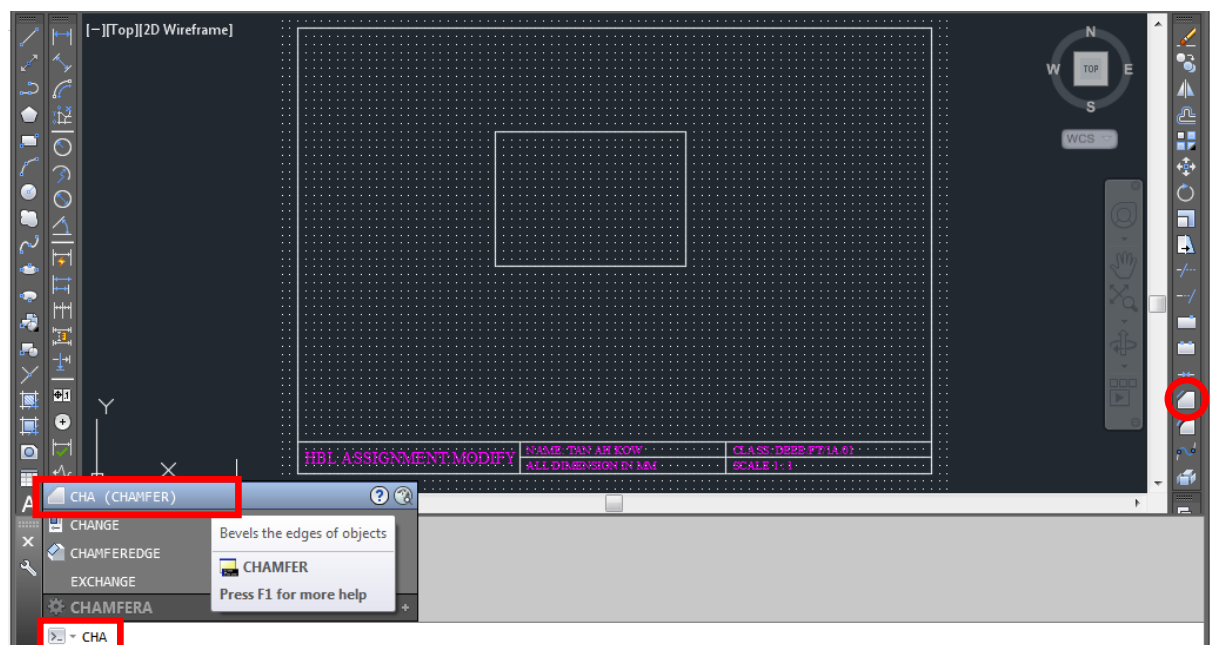


Fig 11.1- Type “cha” and **enter** or click **Chamfer** icon as circled in red.

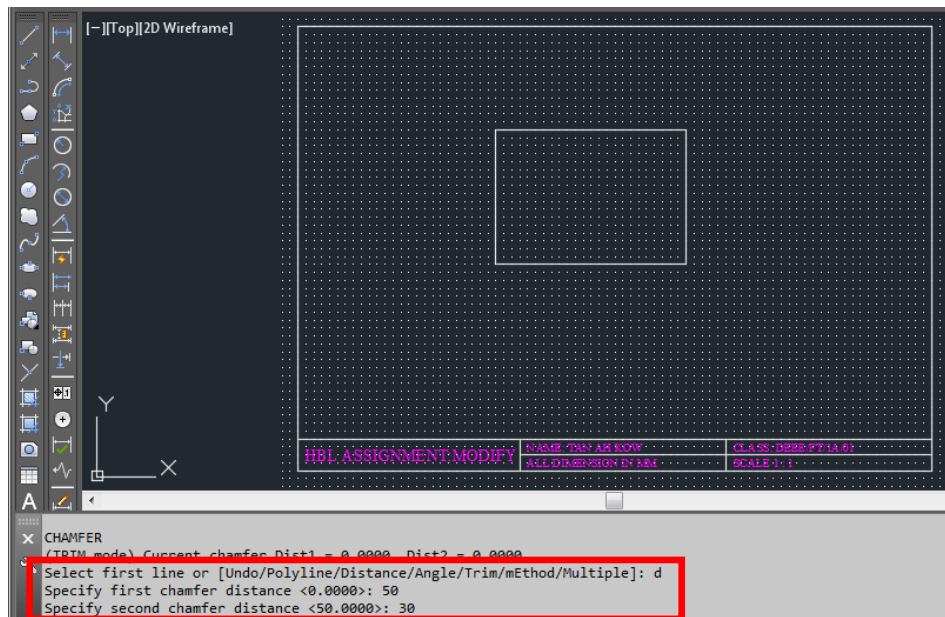


Fig 11.2- Next, type “d” for distance from edge to be chamfered.

First chamfer distance: **50**. Second chamfer distance: **30**

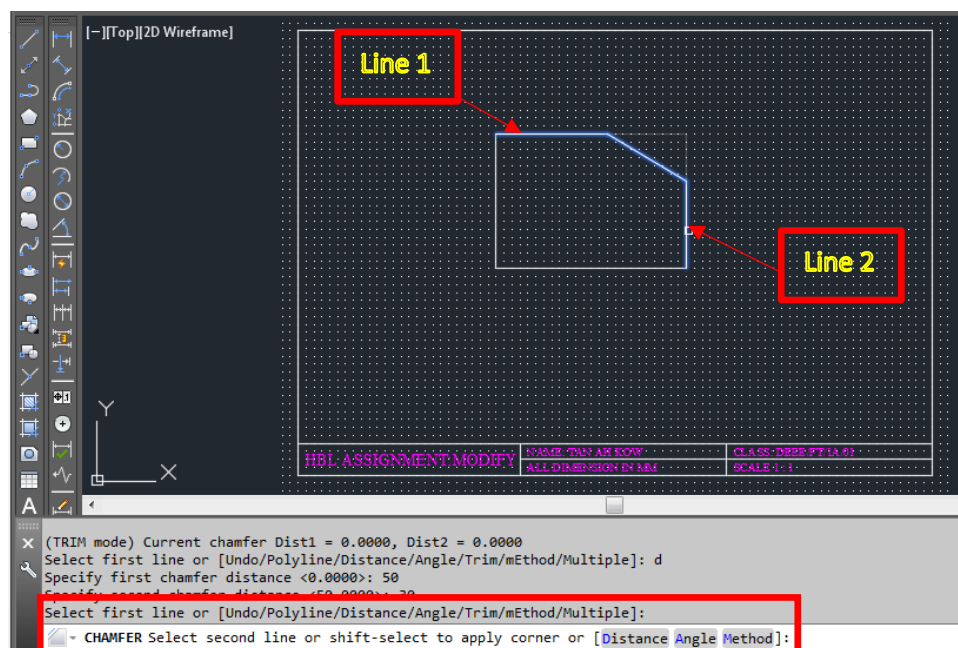


Fig 11.3- Select first line: click **line 1**.

Select second line: click **line 2**.

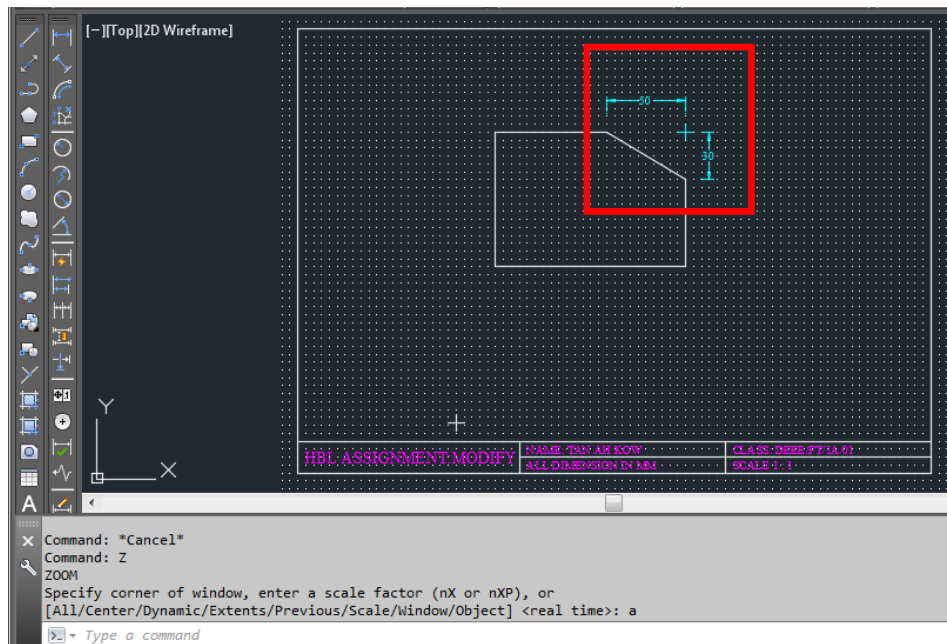


Fig 11.4- A chamfered edge is form.

(50 mm from line 1 & 30mm from line 2 at top right edge of rectangle).

12. OFFSET

To duplicate any object of same distance apart.

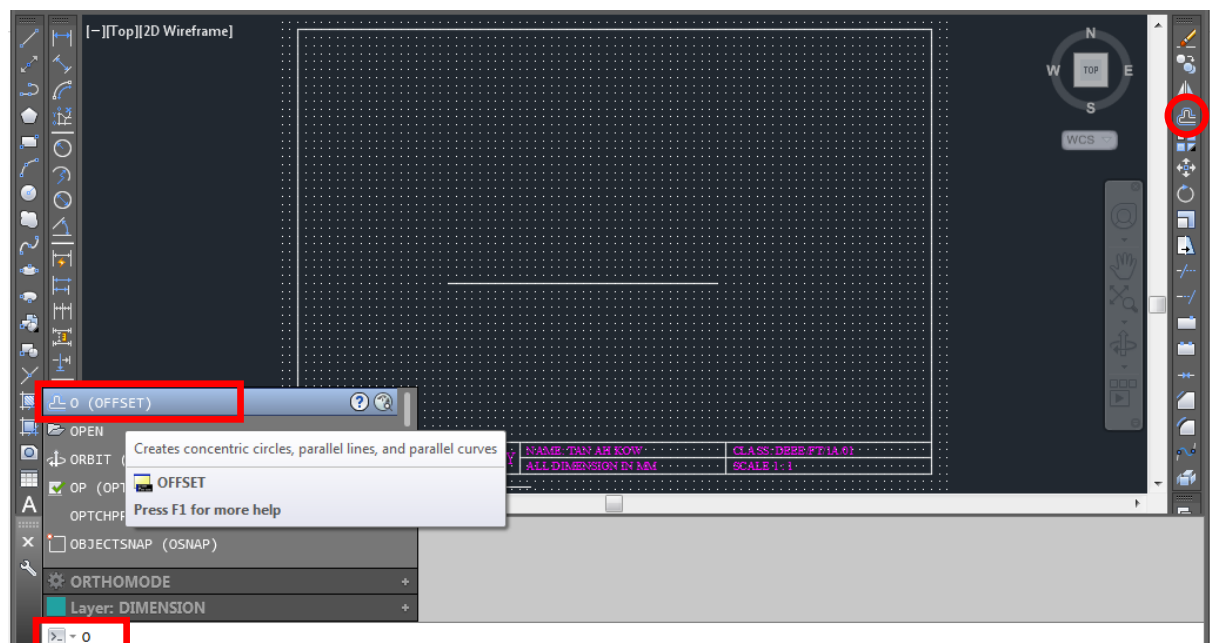


Fig 12.1- Type “o” and enter or click **Offset icon** as circled in red.

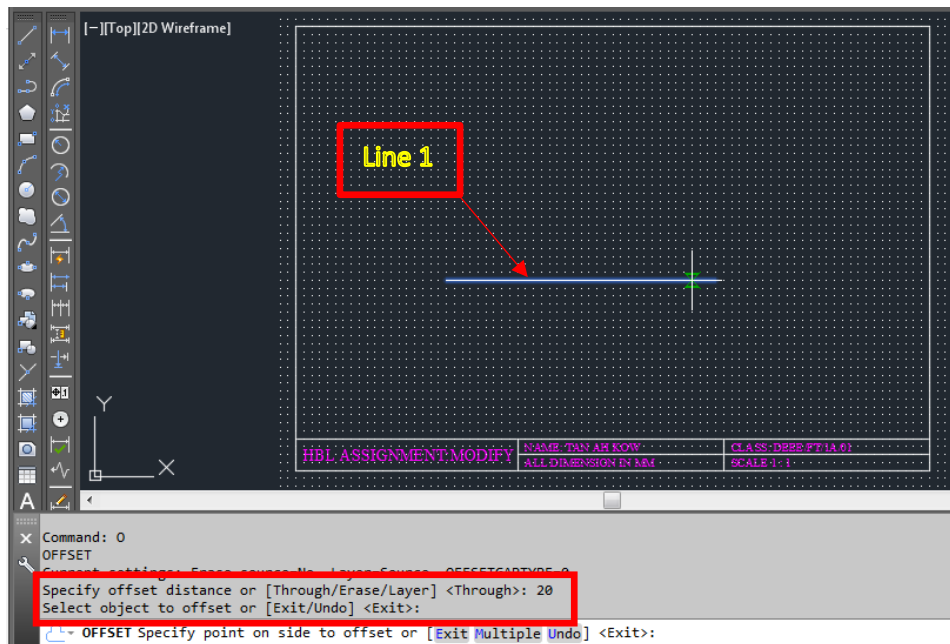


Fig 12.2- Specify offset distance: **20**

Select object to offset: click **line 1**

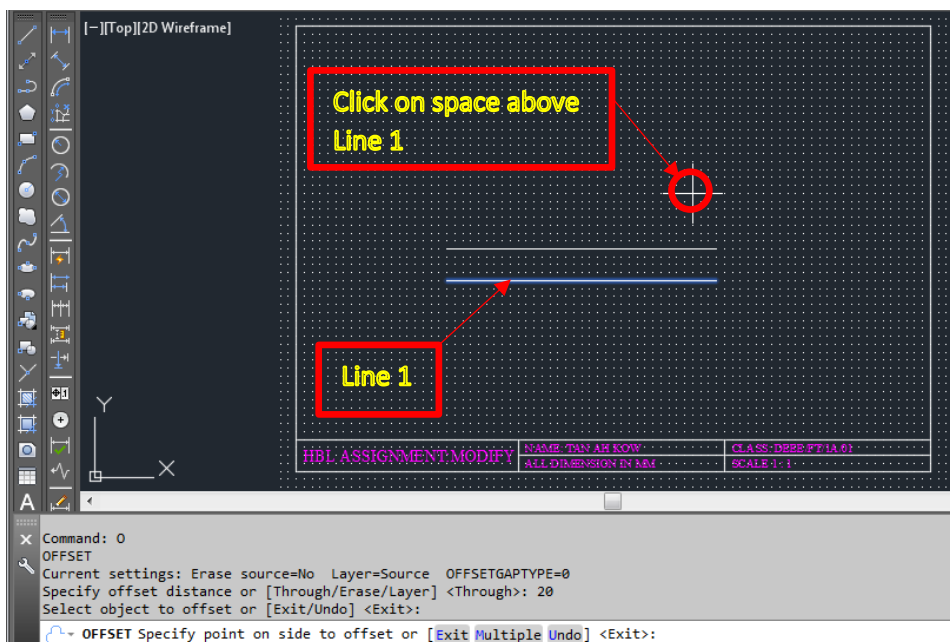


Fig 12.3- Specify point on side to offset: **click above line 1.**

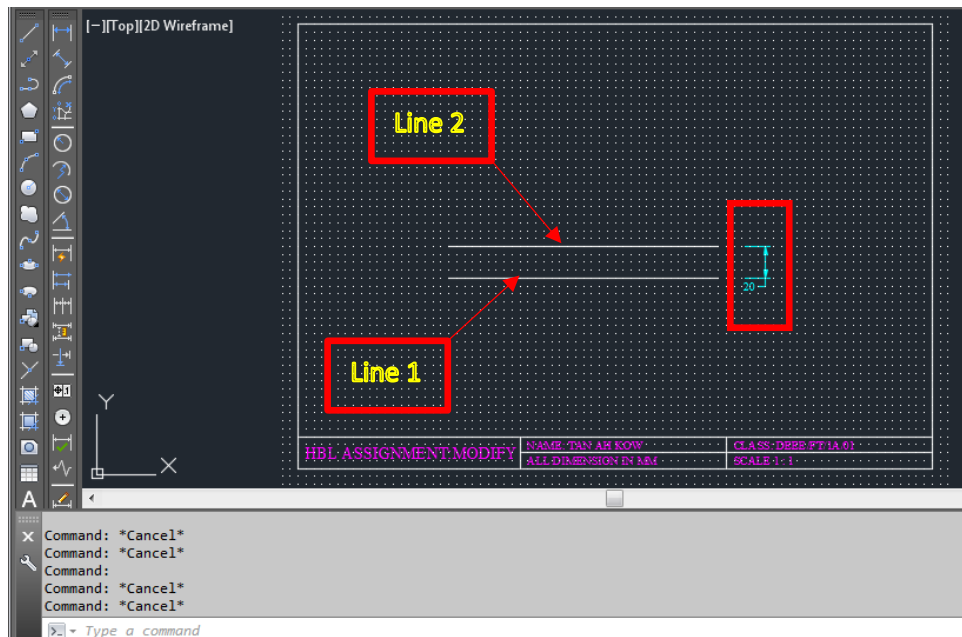


Fig 12.4- A new Line 2 is now created **above** original line 1 with a distance of 20mm.

13. STRETCH

Command stretch demonstration

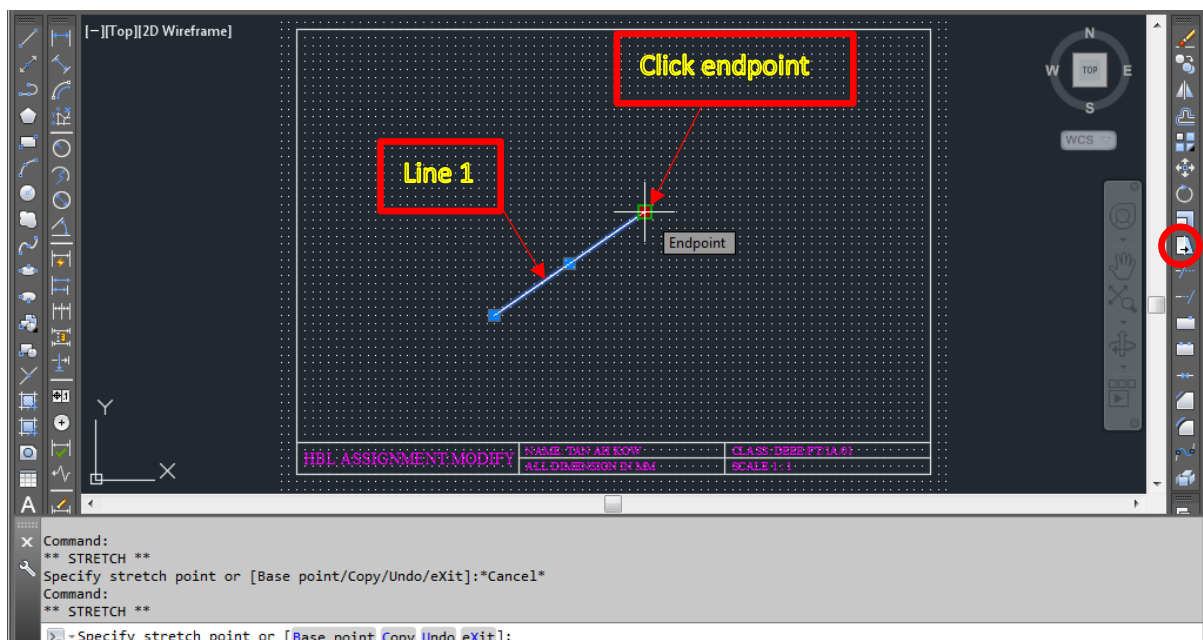


Fig 13.1- Click on line 1. 3 blue squares appears. Next, click on **top endpoint (Blue square will appear red)**. Or Click **Stretch icon** circled in red.

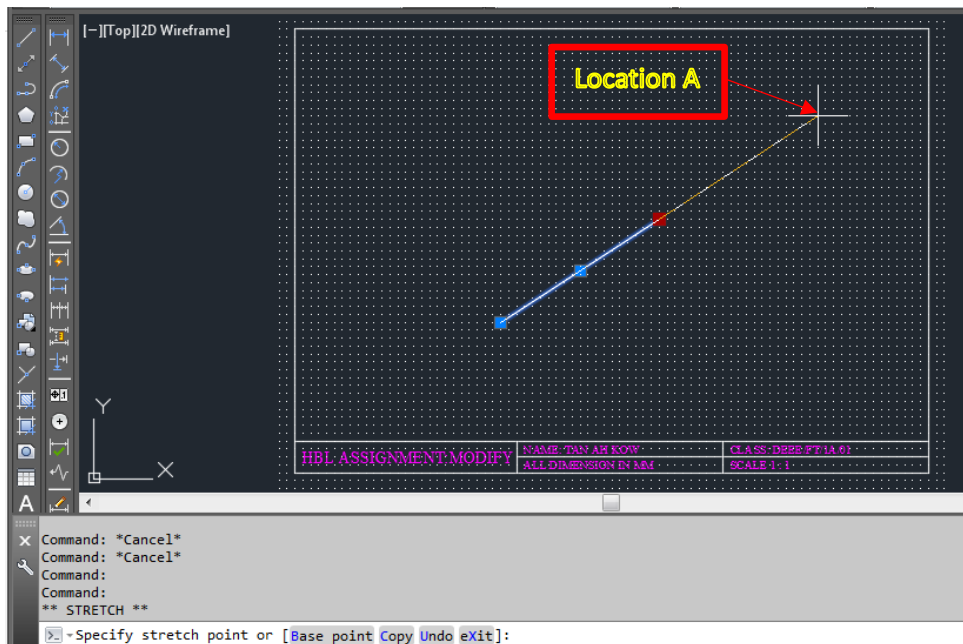


Fig 13.2- Drag cursor further to **location A** and **click on it** and **enter**.

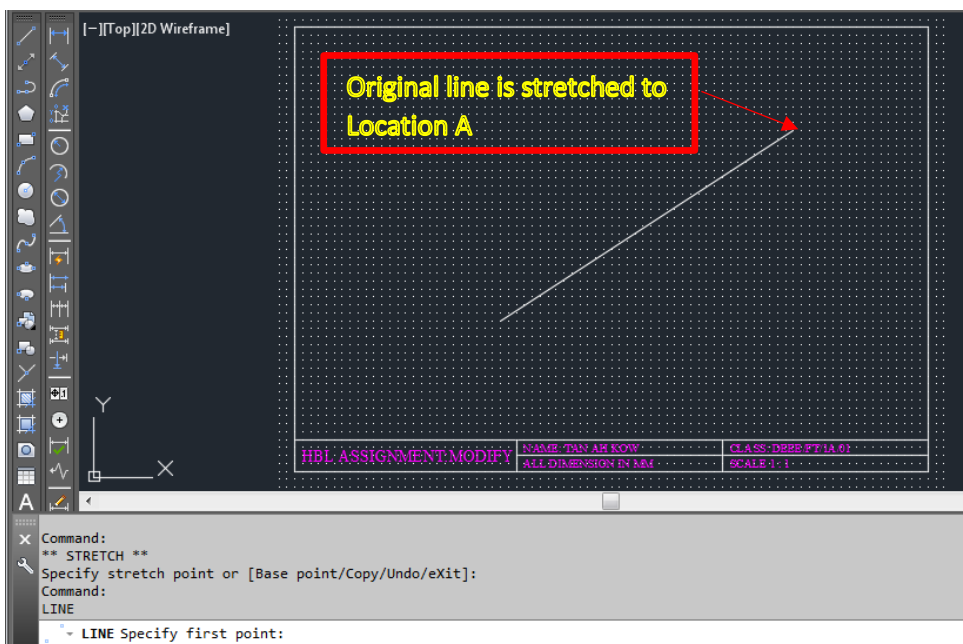


Fig 13.3- Original line 1 is stretched & lengthened to **location A**.

Similarly with the same method, **original line can also be compressed to shorten it**.

14. CHANGE

To change a properties of existing object.

E.g.1- Change the radius of existing circle.

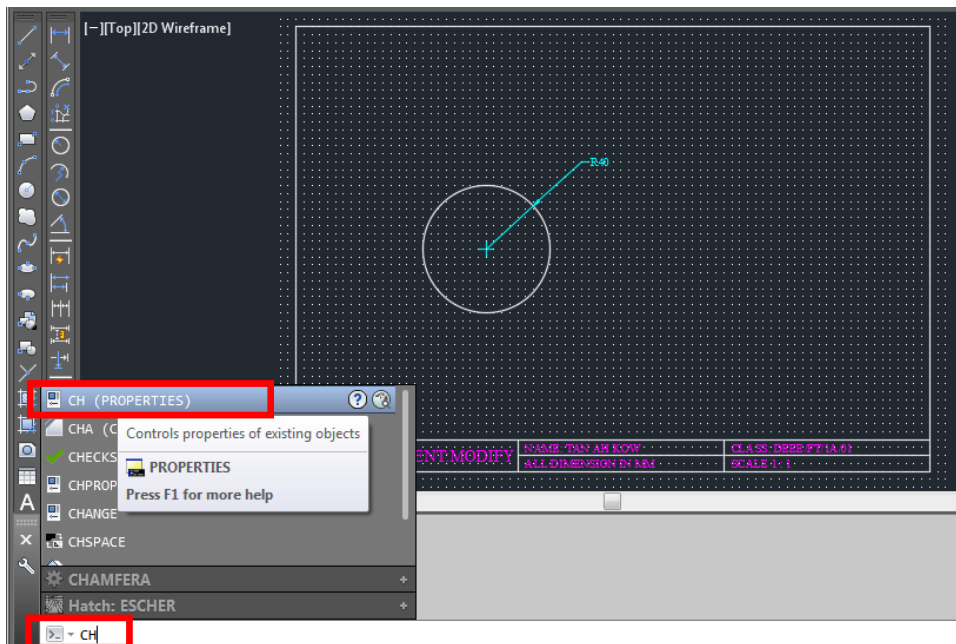


Fig 14.1- Type “ch” and enter.

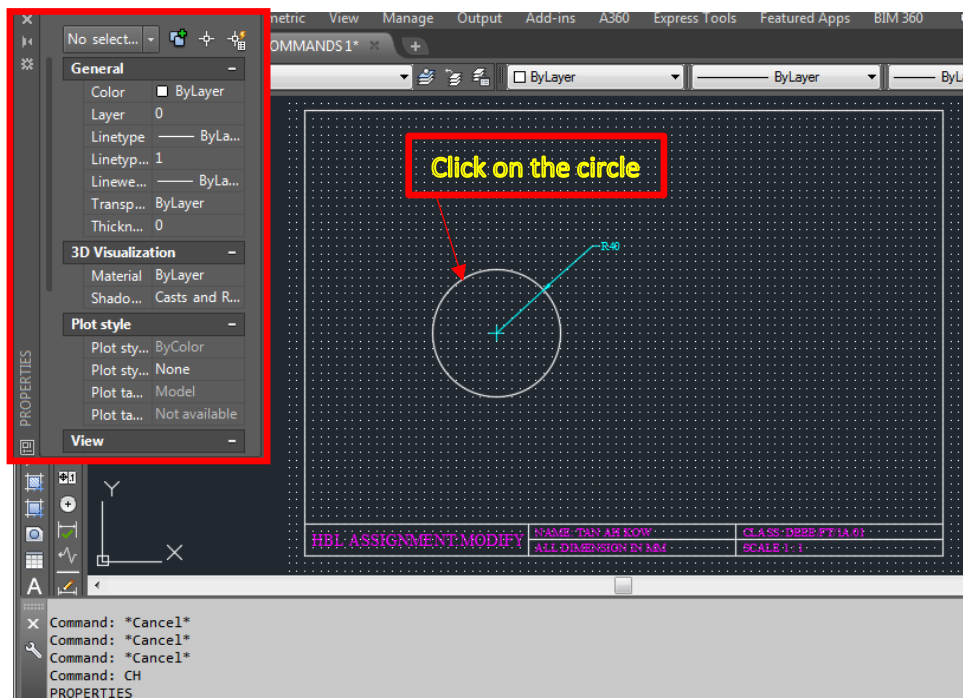


Fig 14.2- A properties dialog box appears and click on the circle.

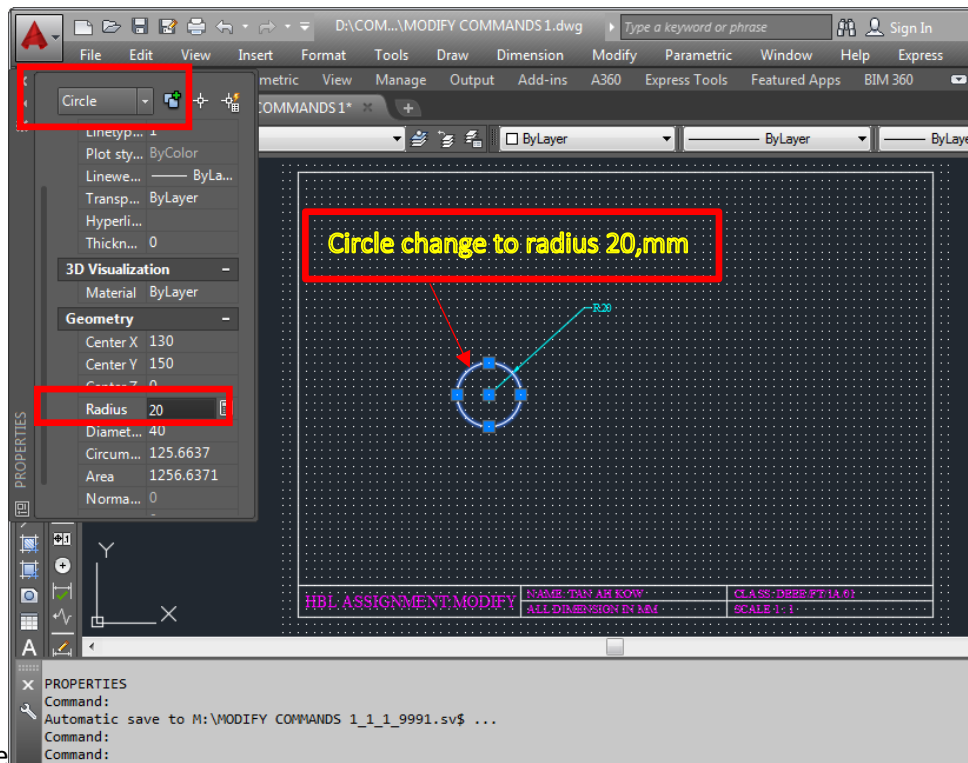


Fig 14.3- Properties dialog box on circle is now activated. Scroll down and click Radius and change from radius 40mm to 20mm enter. Circle of radius 20mm now appears.

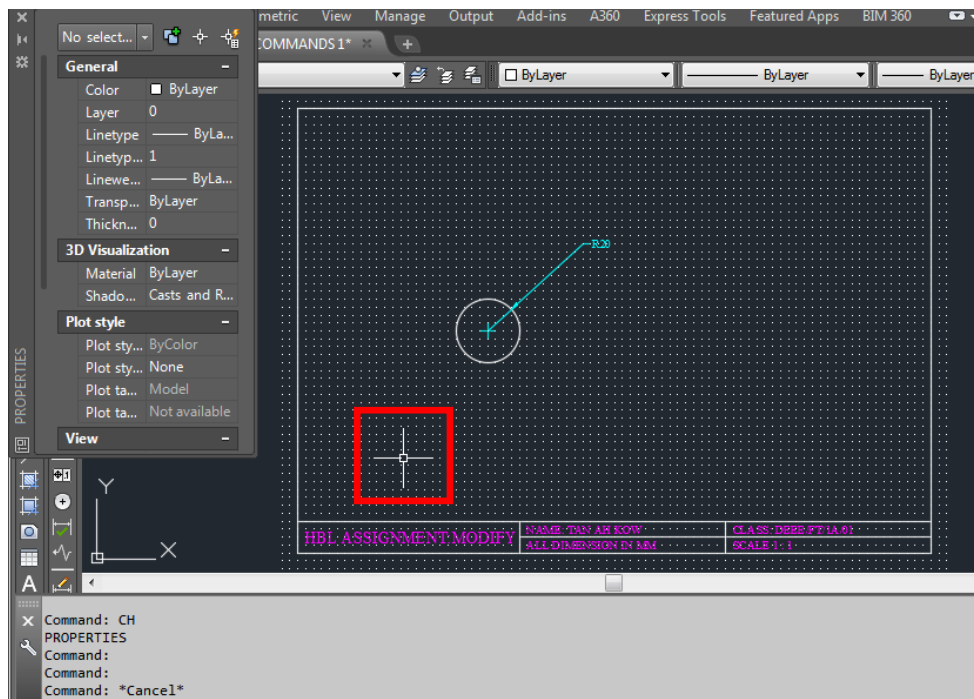


Fig 14.4- Move cursor to drawing space (red square box) and click Esc in keyboard to complete Change command to circle.

E.g.2- To change the height of Text

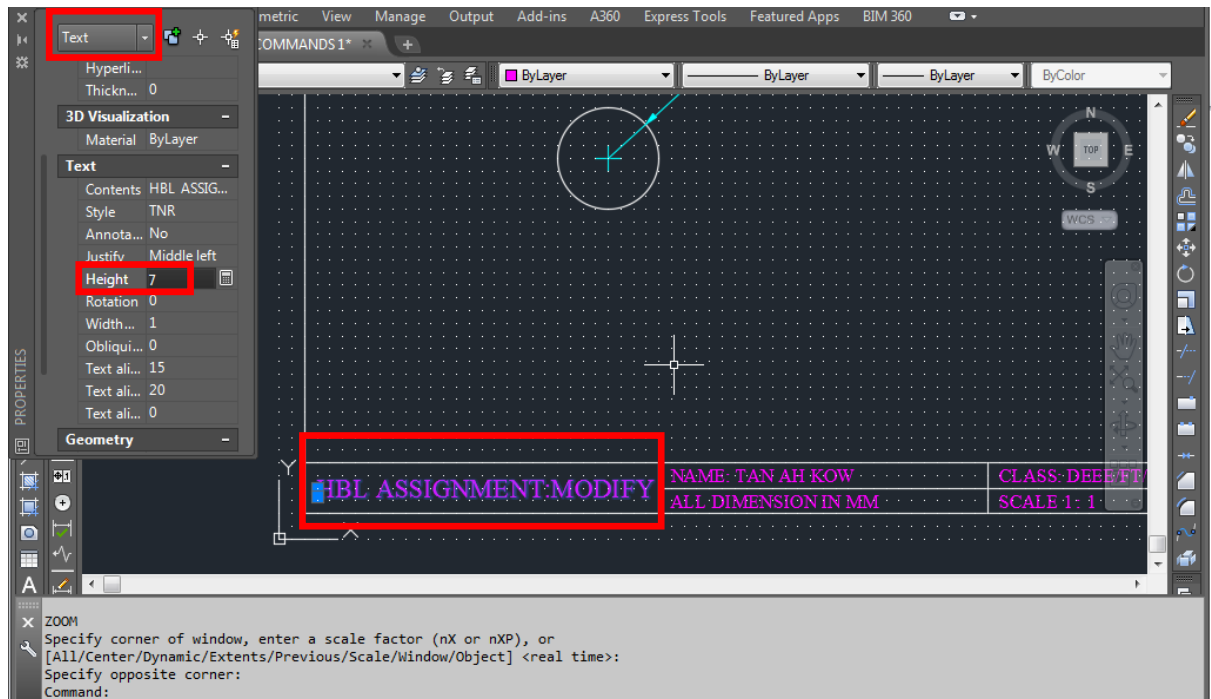


Fig 14.5- Existing height of text “HBL ASSIGNMENT:MODIFY” is 7mm. Click on to this **text**. Change properties on Text is now activated. Scroll down and click **Height** which shows 7mm.

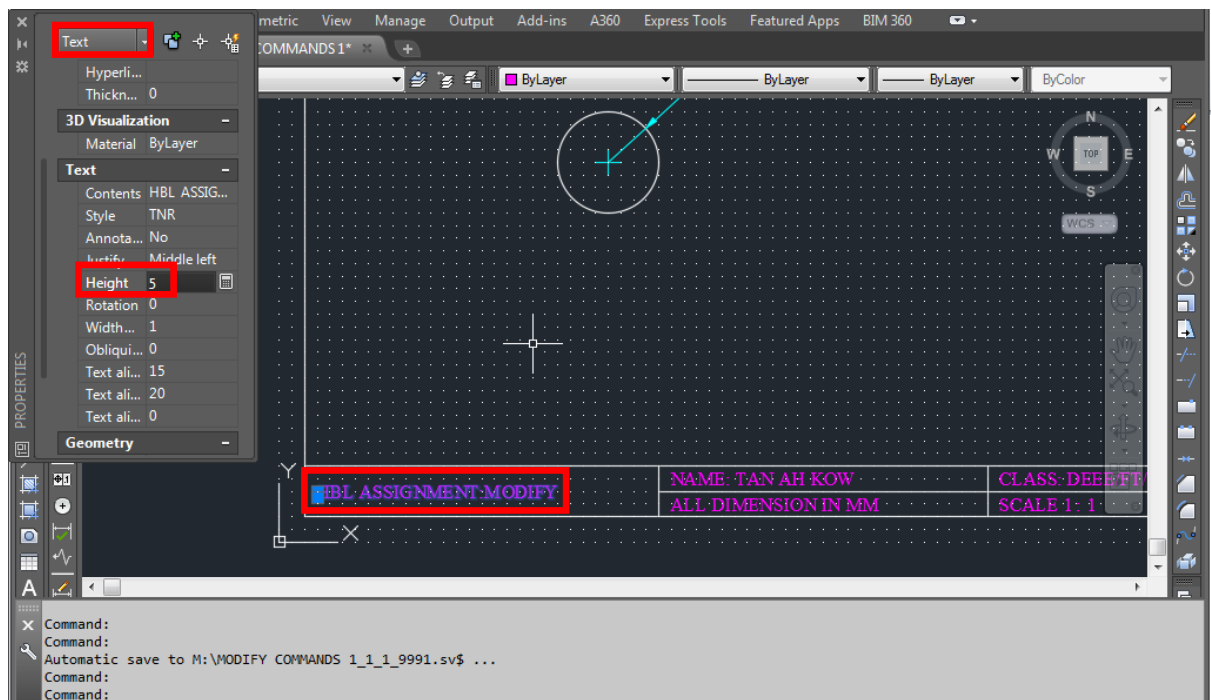


Fig 14.6- Change height to 5mm and enter. The text height “HBL ASSIGNMENT:MODIFY” is now change to 5mm.

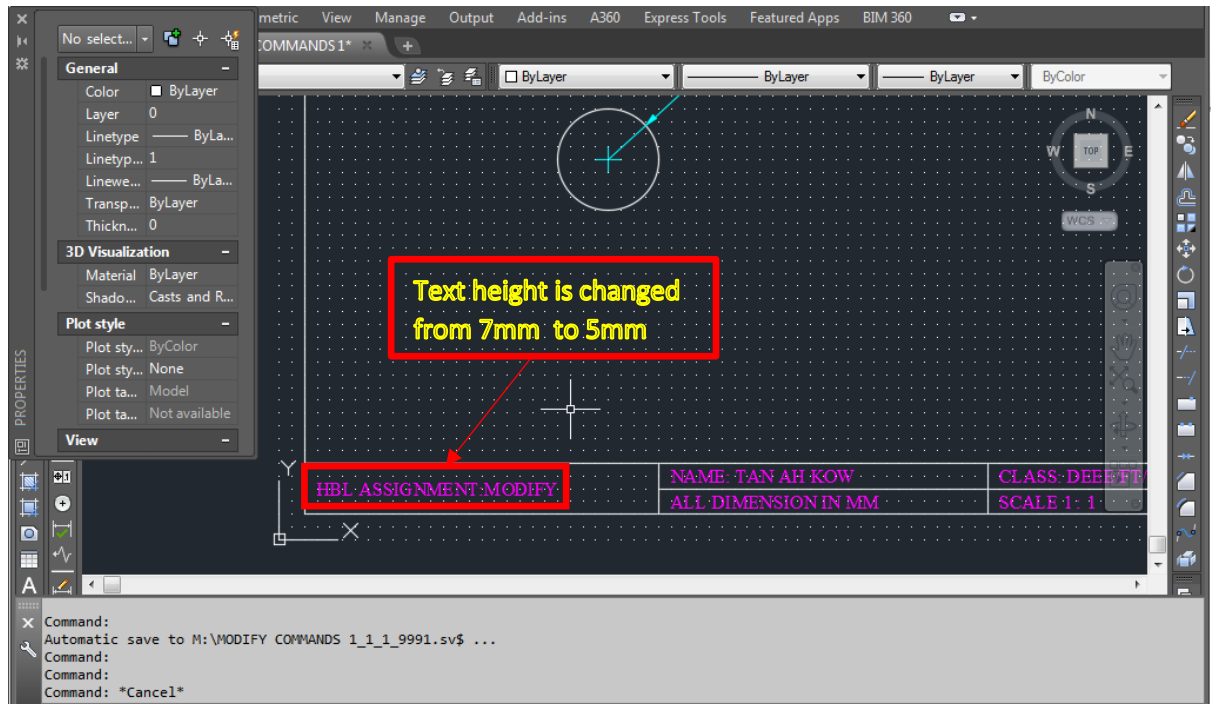


Fig 14.7- Move cursor to drawing space (red square box) and click **Esc** on keyboard to complete the Change command on text.

15. ROTATE

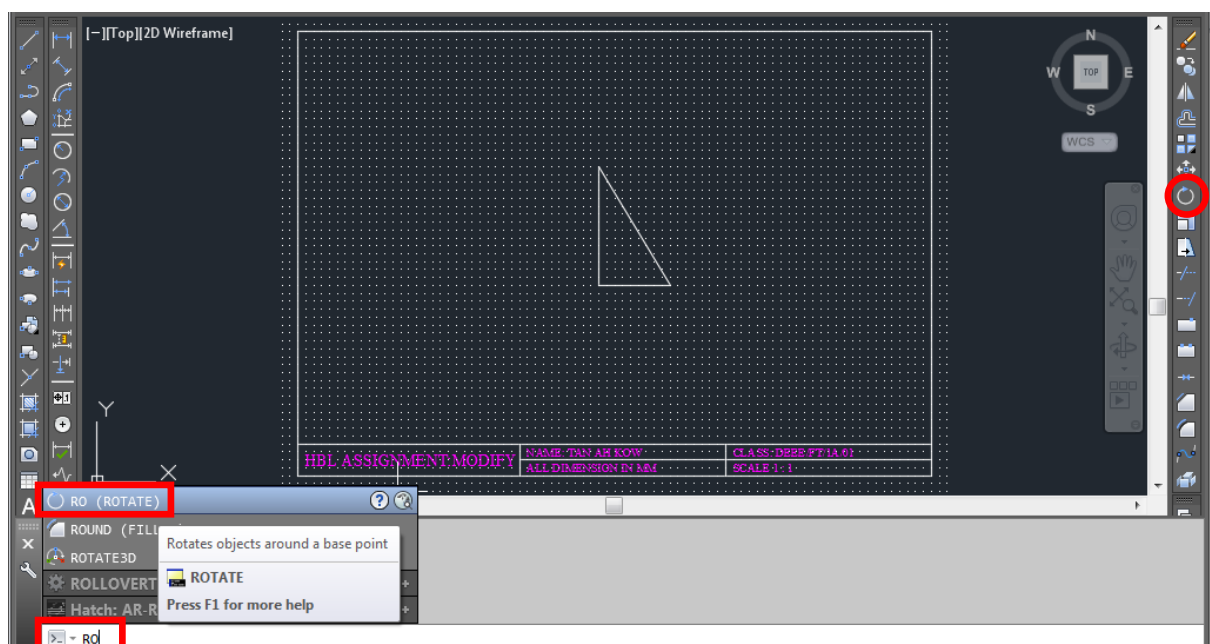


Fig 15.1- Type “ro” or click **Rotate** icon as circled in red.

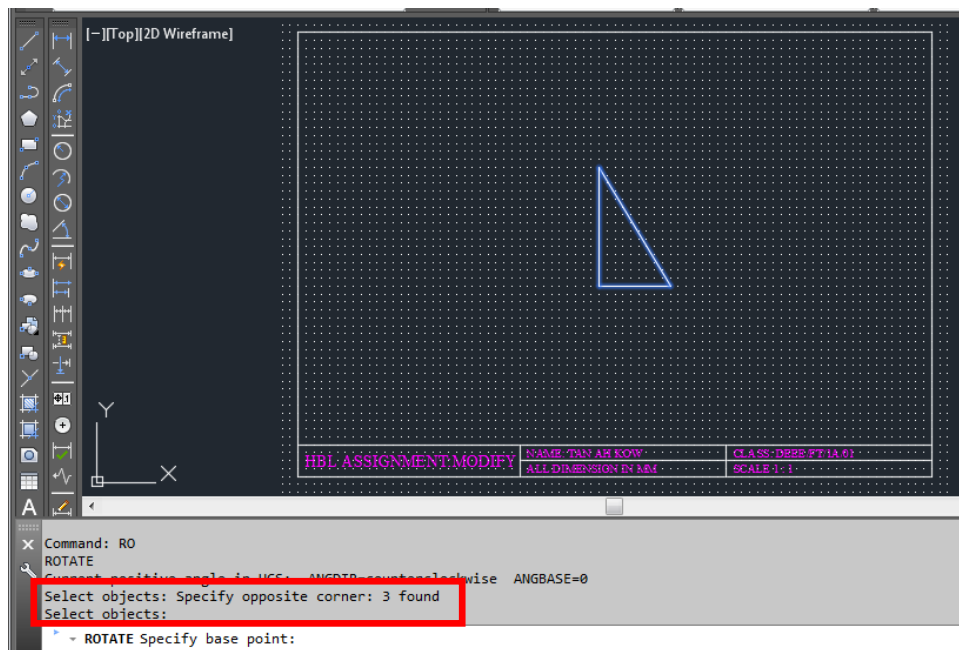


Fig15.2- Select Object: window the whole object and enter.

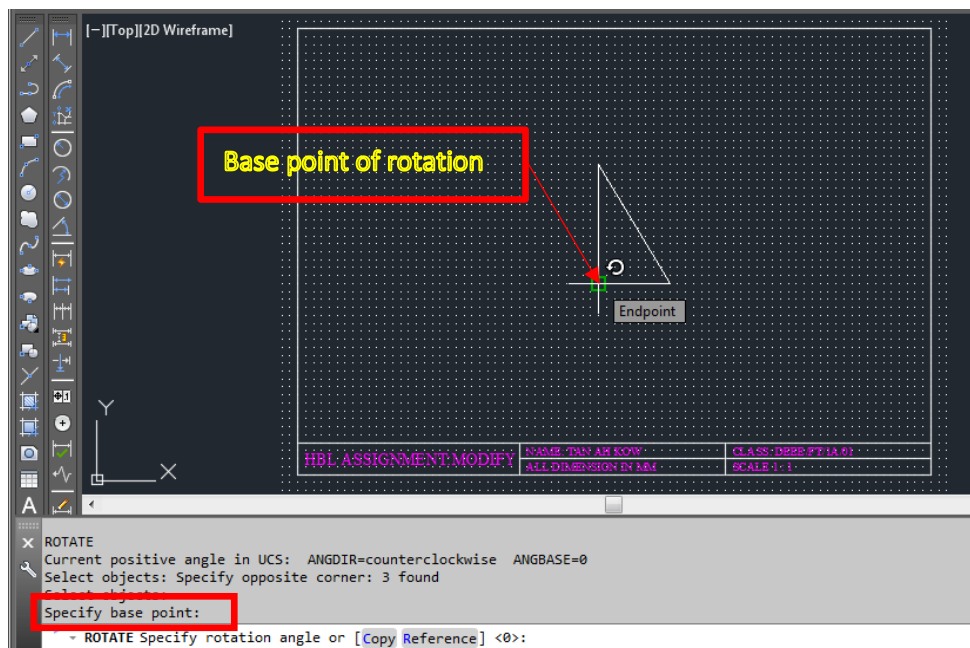


Fig 15.3- specify base point: click at endpoint shown

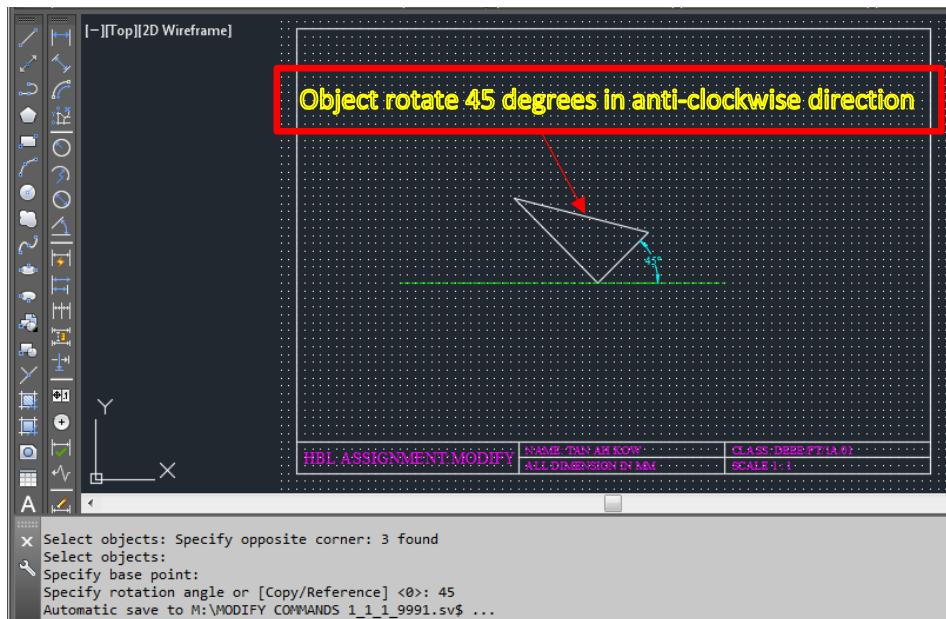


Fig 15.4- specify rotation angle: **45** to represent positive rotation of 45 degrees (anti-clockwise direction). If type **-45**, object will rotate about the base point in clockwise direction.

16. SCALE

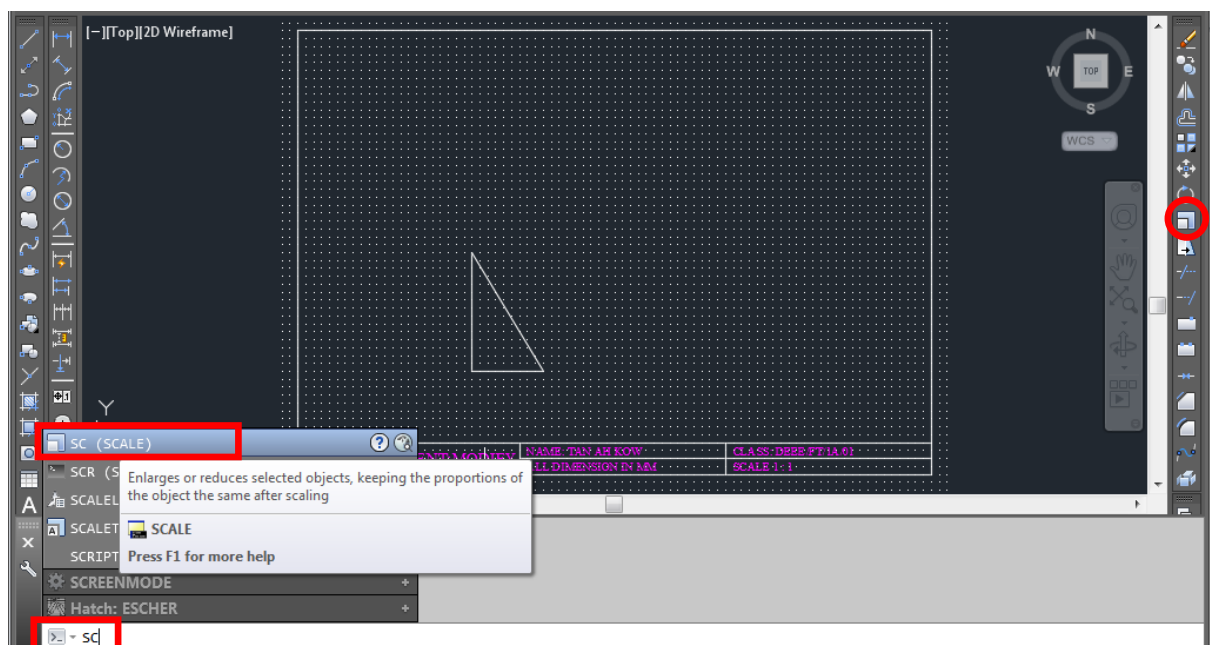


Fig 16.1- Type “sc” or click **Scale** icon as circled in red.

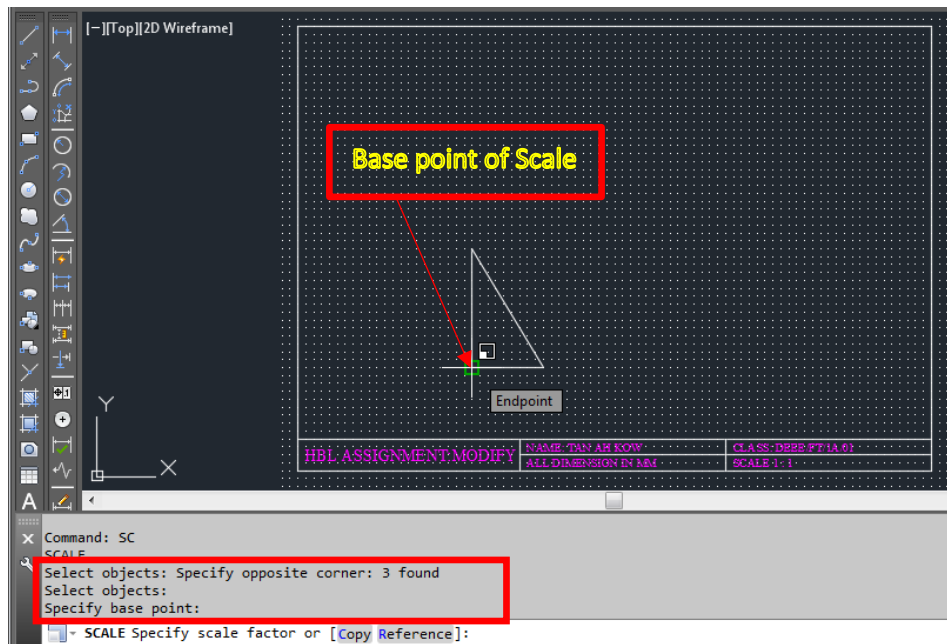


Fig 16.2- Select object: **Window the whole object** and **enter**.

Select base point: Click **endpoint** as shown.

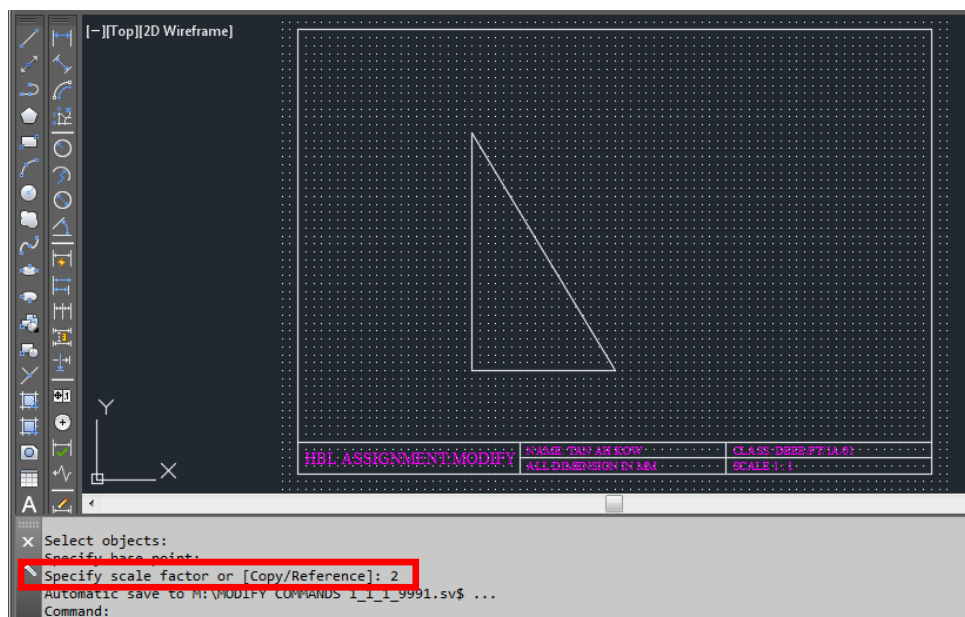


Fig 16.3- Specify scale factor: **2**

The object now **two times** the size of original object.

17. ZOOM

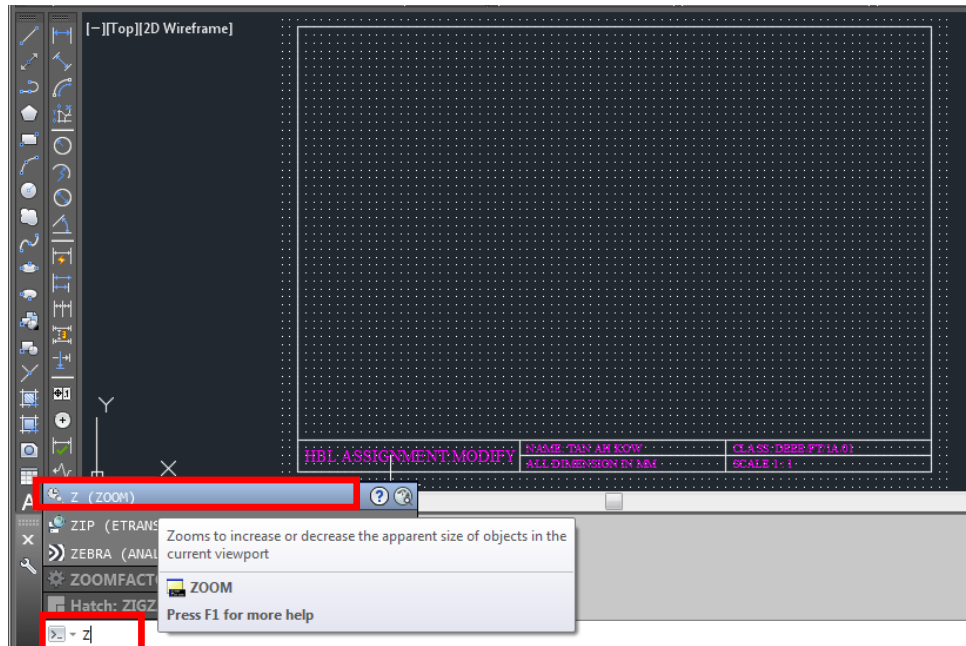


Fig 17.1- Type “z” for zoom.

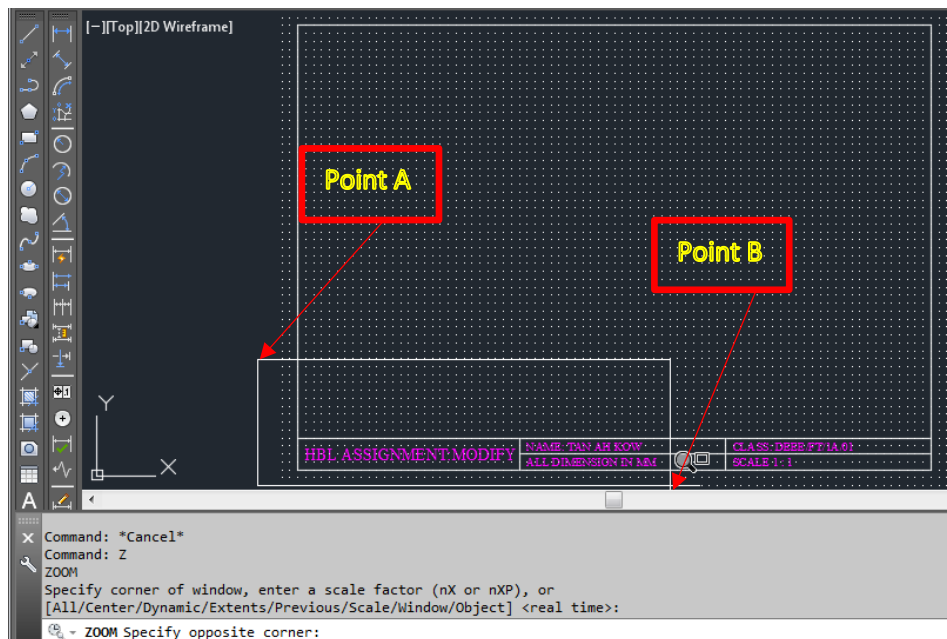


Fig 17.2- Zoom Window by clicking at **point A** and drag mouse to diagonally & click at **point B**.

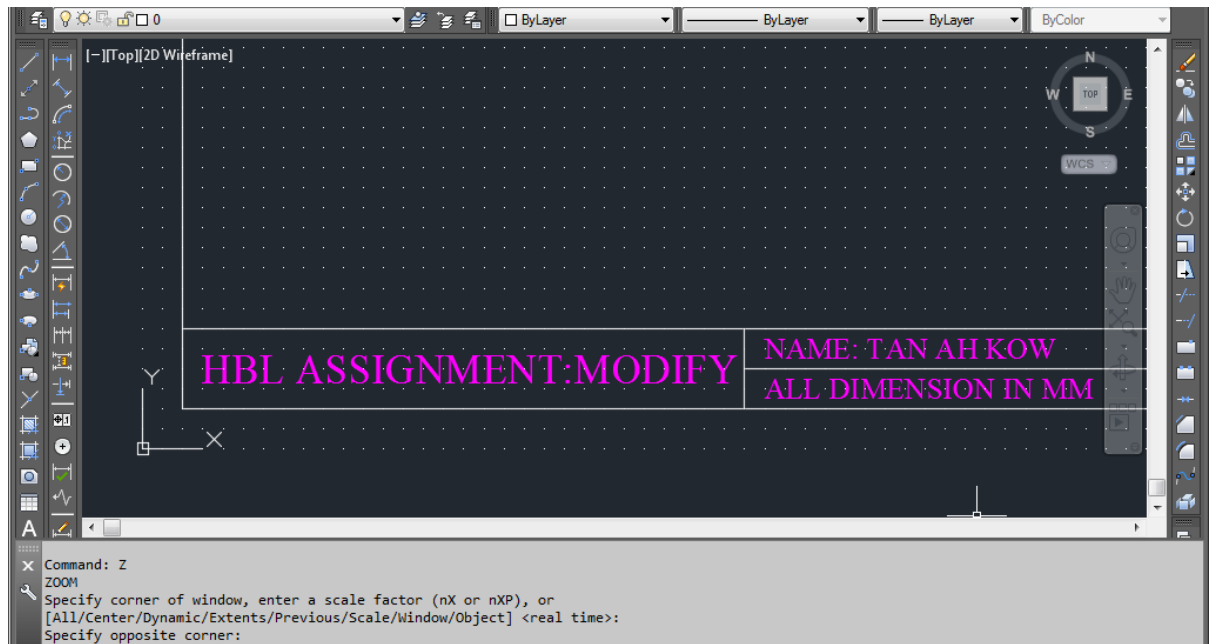


Fig 17.3- The zoom area appears as specified by the window.

Now in order to back to original drawing display, do the steps below:

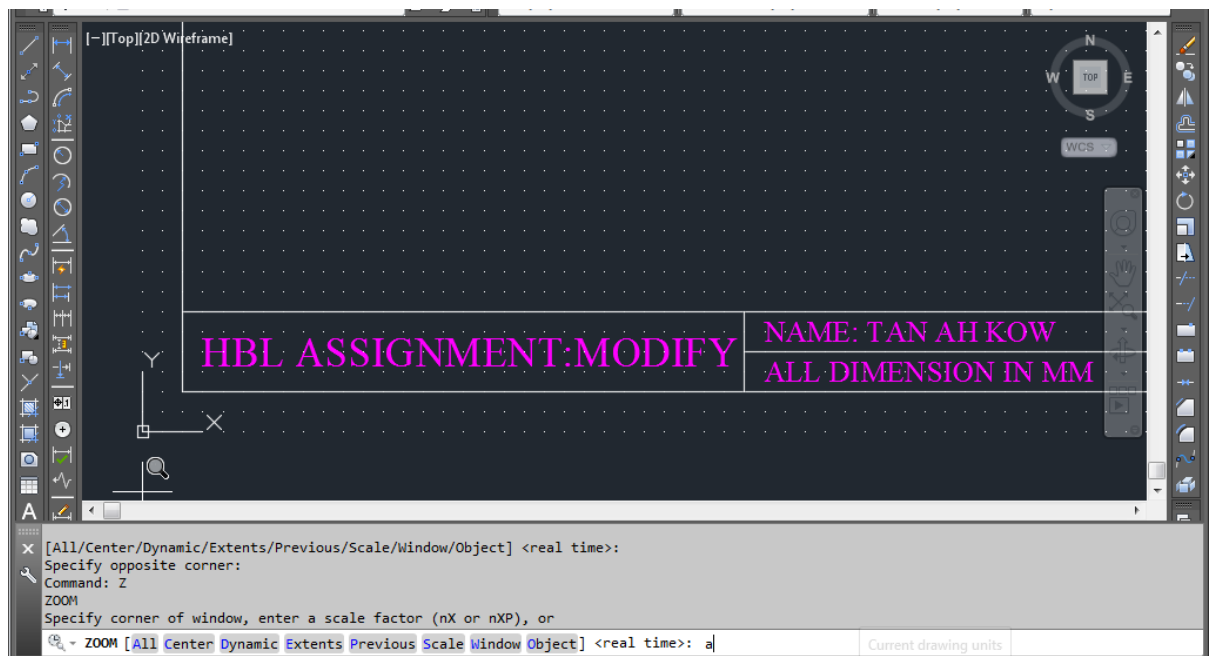


Fig 17.4- Type “z” for zoom and next type “a” for all.

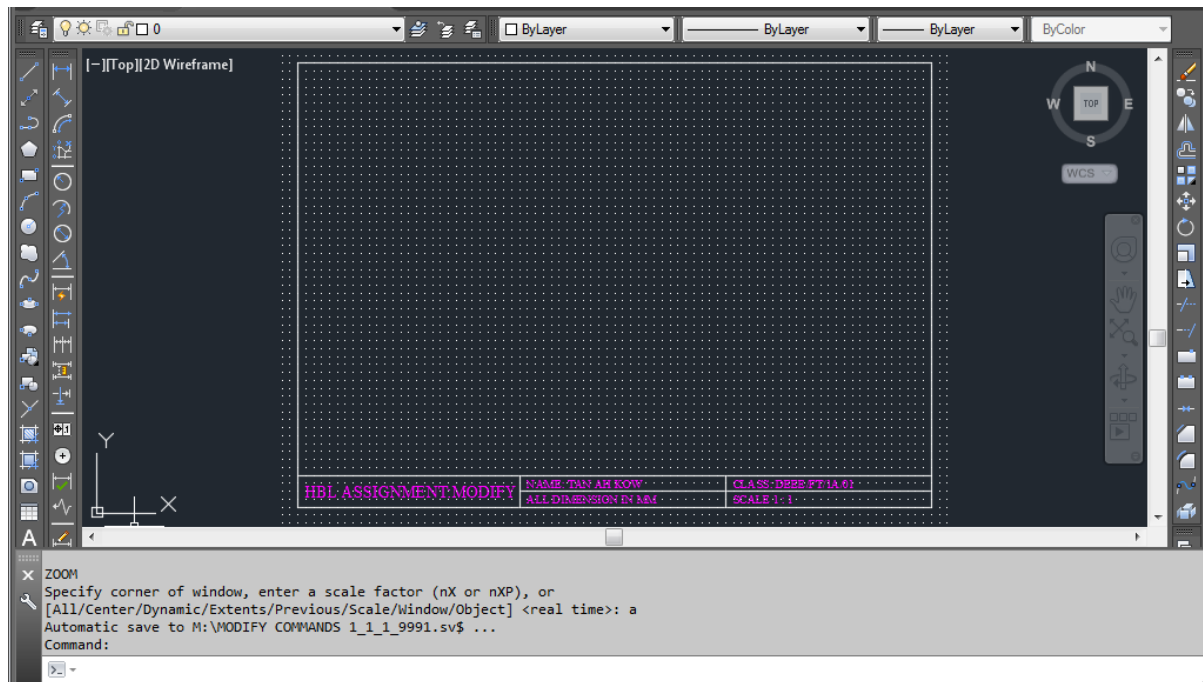


Fig 17.5- The **Zoom All** now returns to the **original A3 drawing** space.

