Line and cartesian coordinate
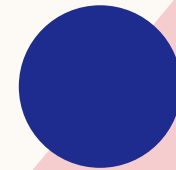
LECTURE TOW

Asst. lecturer

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Draw lines using the lines command

- Coordinate system
- 1-Absolute cartesian coordinate system

ERASE:لمسح جميع الرسومات الموجودة على منطقة رسم واجهة الاوتوكاد باتباع الخطوات التالية

- Command: ERASE <mark>enter</mark>

- Select objects: ALL <mark>enter</mark>
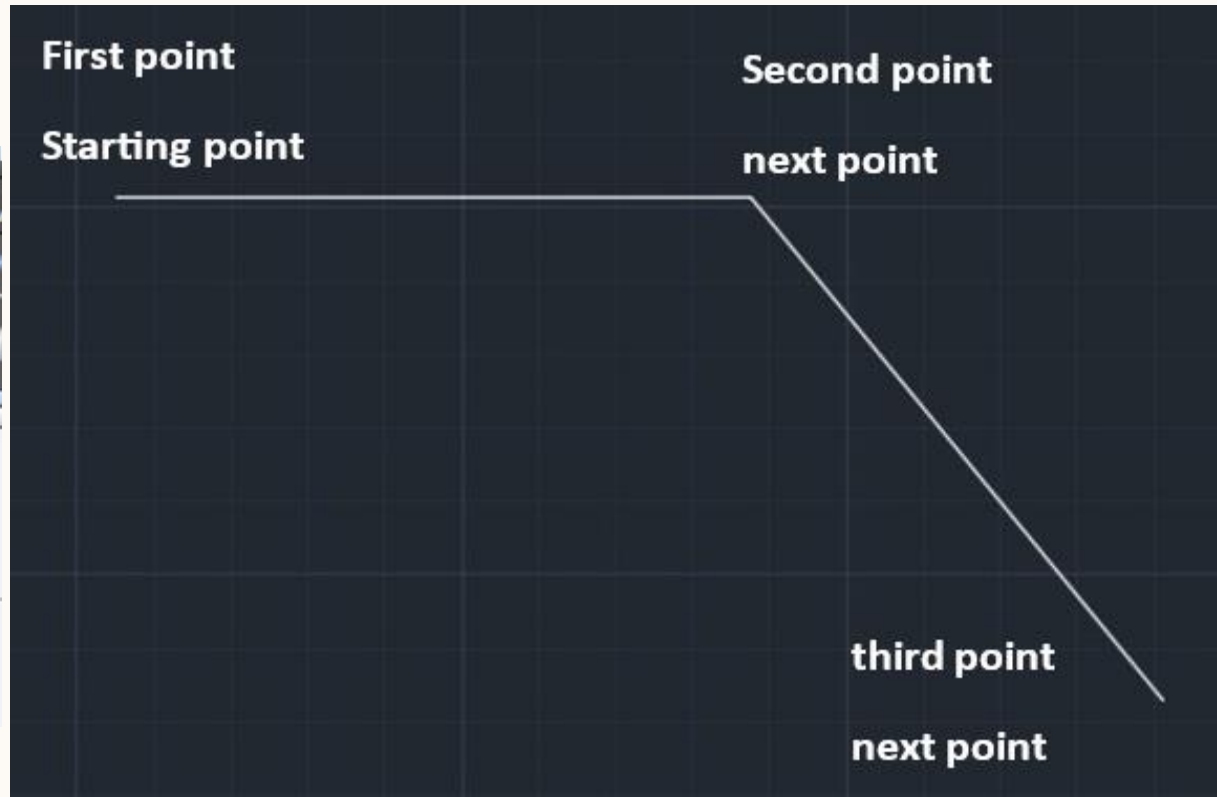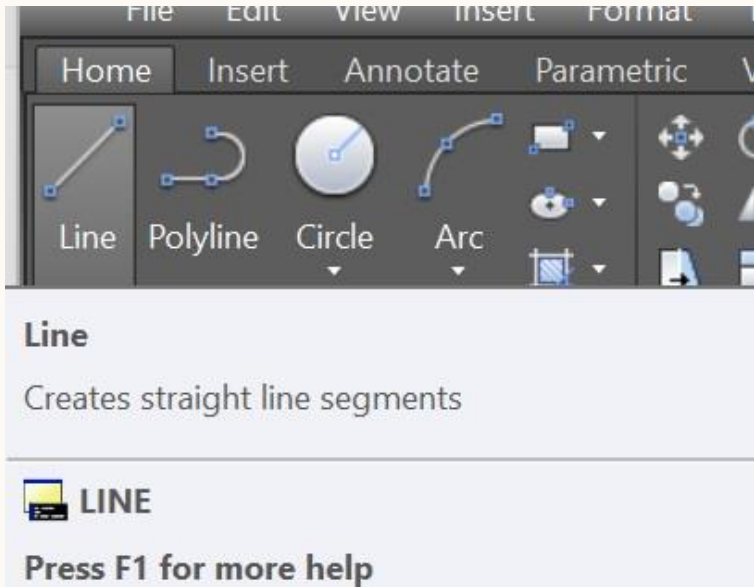
- Select objects: <mark>enter</mark>

Draw tools

1. Line
   - Aline can be draw between any two point and the line tool can be arrived from:

يمكن رسم الخط بين أي نقطتين يتم الذهاب اليه من

- Home> draw> line

- From the command window by write <mark>L</mark> after that click <mark>enter</mark>

Figure(2.1): how draw line command from draw tool

Command: _line

Specify first point: click by the left click on the mouse

Specify next point or [Undo]: click by the left click on the mouse to specify second point

Specify next point or [Undo]: click by the left click on the mouse to specify third point

Specify next point or [Close/Undo]: enter (click enter to exit from the command line)

- The options found in the line command
- Continue   close   undo
- Continue option

- To draw line, consist 3 points like the figures 2.2 by using continue option following the steps below

Command: LINE
Specify first point: click by the left click on the mouse to specify first point
Specify next point or [Undo]: click by the left click on the mouse to specify second point
Specify next point or [Undo]: enter
Command:
LINE (choose from writing L in the commend window or / click enter)
Specify first point: enter or from the write click on the first line ستحدد النقطة الثانية كنقطة استمرار الرسم للخط الثاني
Specify next point or [Undo]: click by the left click on the mouse to specify third point
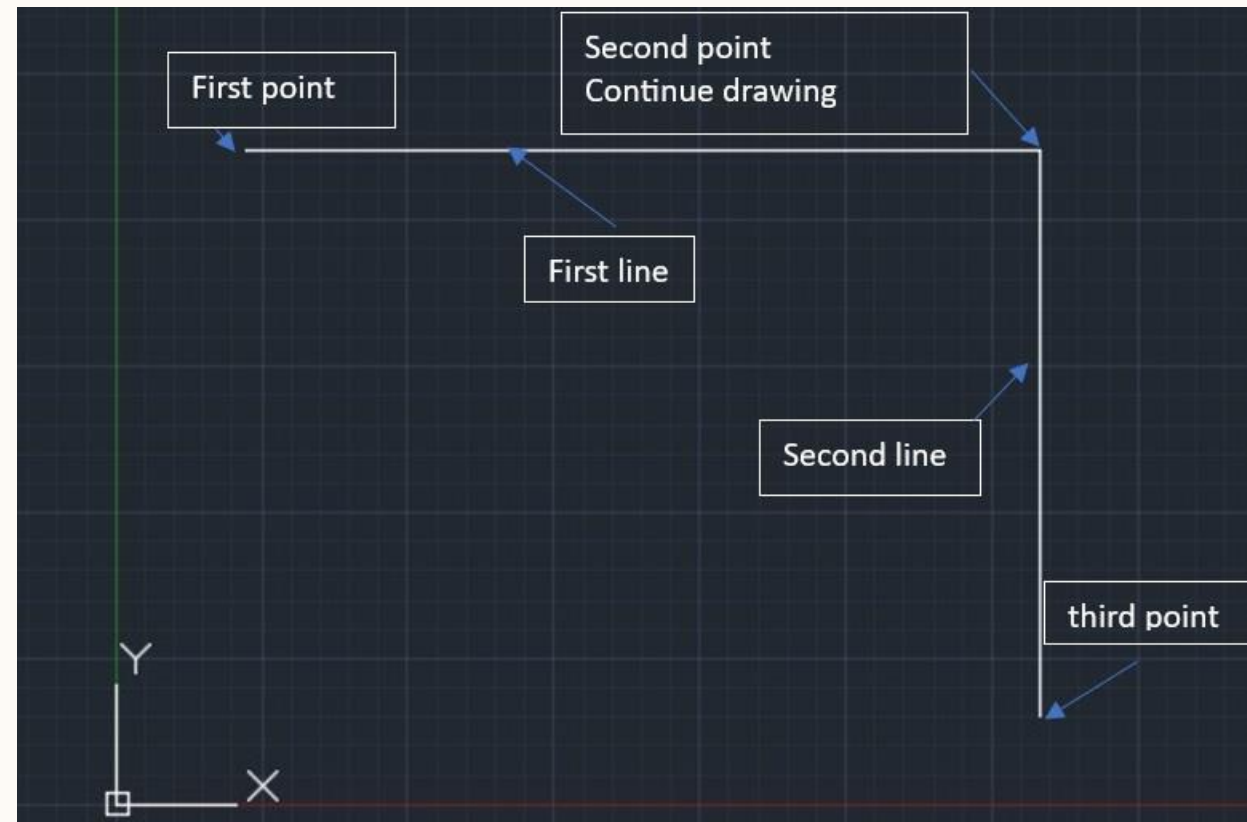Specify next point or [Undo]: enter

Figure (2.2): using continue option with the line command

==Close option==

- This option used when the figures have closed shape to first point .

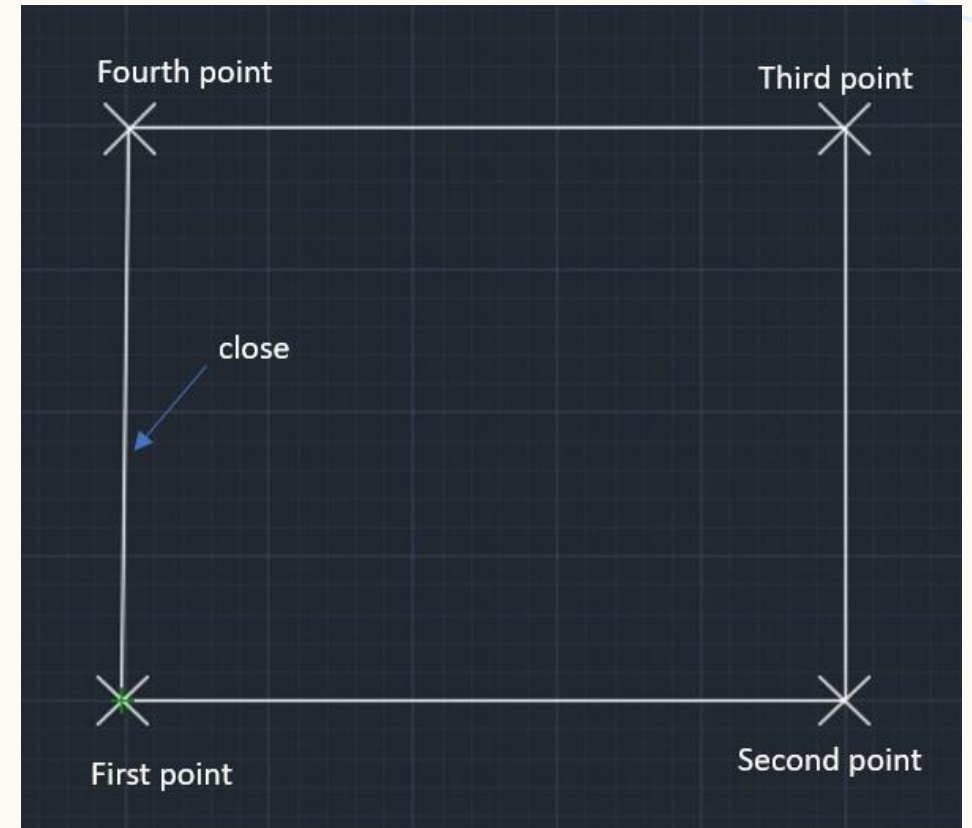هو الحرف الأول للخيار الإضافي المحصور بين قوسين و الذي يعني إغلاق الشـكل.c:

Command: _line
Specify first point: ==click to specify first point==
Specify next point or [Undo]: ==click to specify second point==
Specify next point or [Undo]: ==click to specify third point==
Specify next point or [Close/Undo]: ==click to specify fourth point==
==Specify next point or [Close/Undo]: c enter==

Undo option

- This option used when you have error in the line drawing so you can by this option remove this line and remove multiple lines until you arrived that you want as shown in figure (2.3).

يمكننا هذا الخيار من إزالة خط (التراجع خطوة من اخر امر خط تم رسمة) ويمكن استخدامه عدة مرات الى ان يتم الوصول الى ما تريده

Command: _line
Specify first point: click to specify first point
Specify next point or [Undo]: click to specify second point
Specify next point or [Undo]: click to specify third point
Specify next point or [Close/Undo]: click to specify fourth point
Specify next point or [Close/Undo]: u enter (remove last line from point4 to point 3)
Specify next point or [Close/Undo]: u enter (remove last line from point3 to point 2)
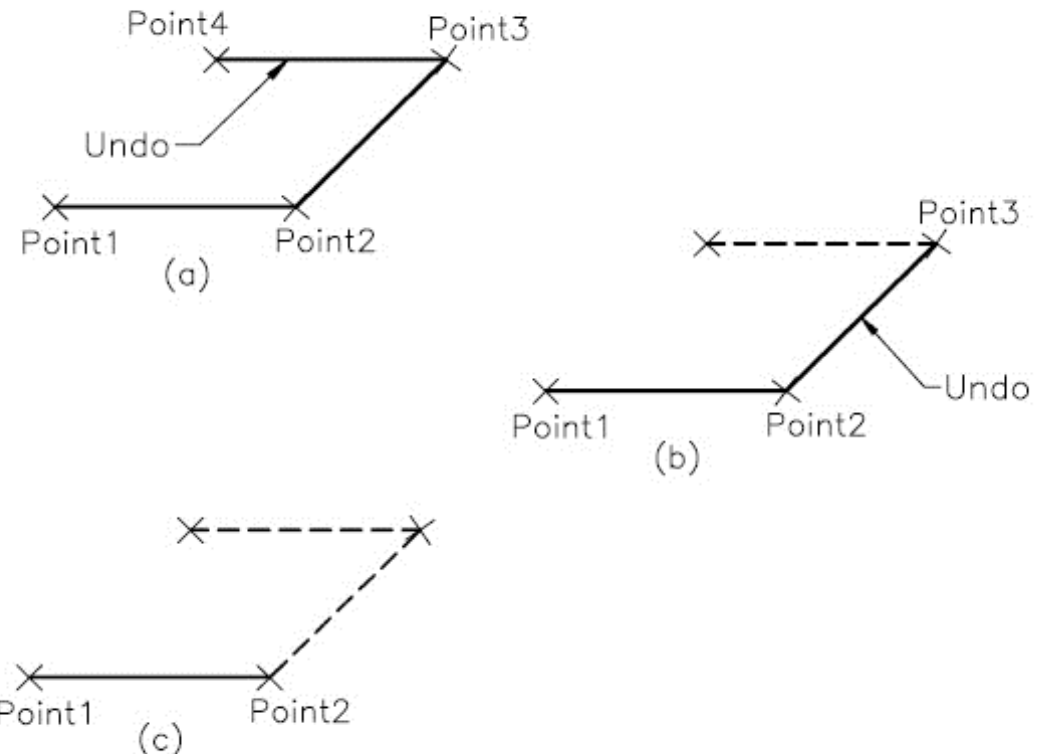Specify next point or [Undo]:   enter

Figure (2.2): using continue option with the line command

- Coordinate system
- In AutoCAD the point represented in an XY plane by the following:
- 1-Absolute cartesian coordinate system
- 2-Relative cartesian coordinate system
  - A - Relative coordinate system
  - B - Relative polar coordinate system

- Absolute cartesian coordinate system   طريقة الاحداثيات الديكارتية المطلقة
- In AutoCAD, the absolute coordinates are specified at the Command prompt by entering X and Y coordinates for points, separated by a comma. points distance(x,y) is measured from the origin point (0,0).

احداثيات النقاط تقاس من نقطة الاصل أي (0,0)

Example : draw the points shown below in AutoCAD by using absolute coordinates system?

points	Coordinates
1	10,10
2	50,10
3	50,50
4	10,50

Solution

Command: _line enter
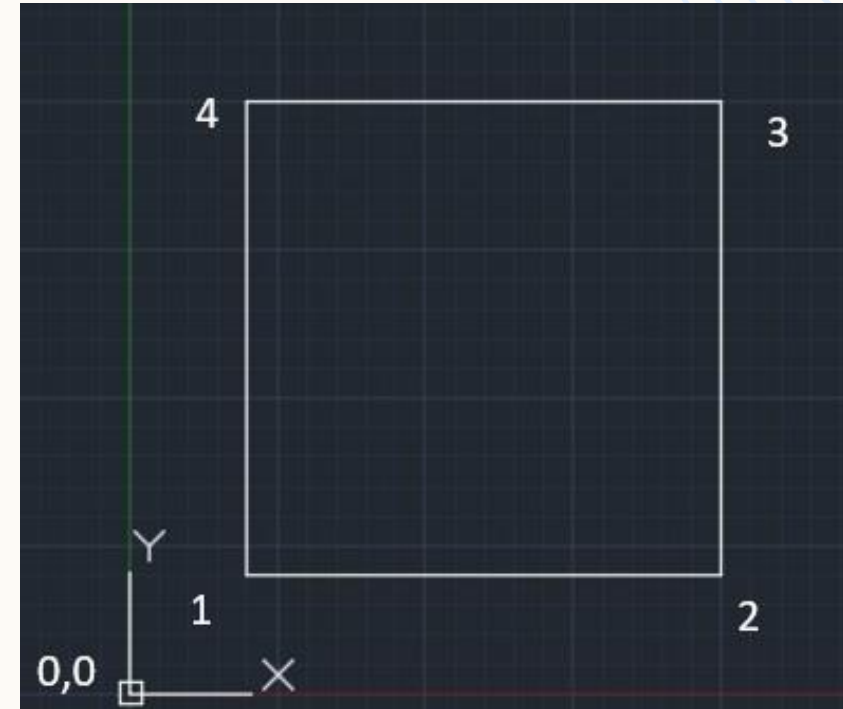Specify first point: 10,10 enter
Specify next point or [Undo]: 50 ,10 enter
Specify next point or [Undo]: 50,50 enter
Specify next point or [Close/Undo]: 10,50 enter
Specify next point or [Close/Undo]: c   enter or 10,10
coordinates of first point ----enter

Example : draw the figure below in AutoCAD?

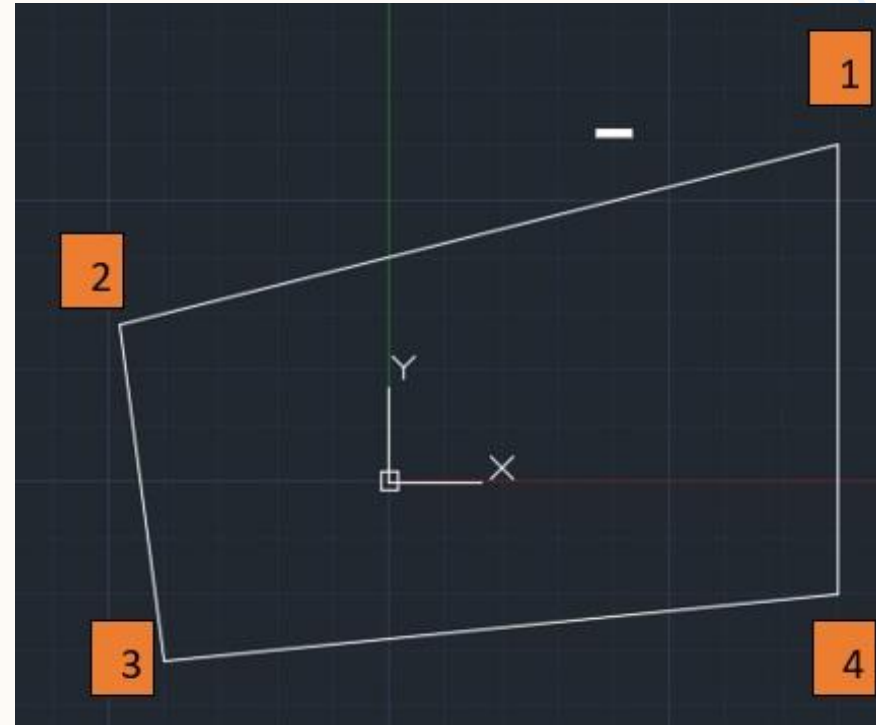| points	Coordinates
1	20,15
2	-12,7
3	-10,-8
4	20,-5

solution

Command: L

LINE

Specify first point: 20,15 enter

Specify next point or [Undo]: -12,7 enter

Specify next point or [Undo]: -10,-8   enter

Specify next point or [Close/Undo]: 20,-5 enter

Specify next point or [Close/Undo]: c enter

H.W1:. Draw the following figure, note the figure is start from the point (0, 0).

Using absolute coordinate?

THANK YOU