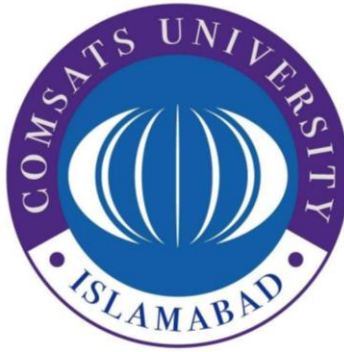# CPE 214 – Computer-Aided Engineering Design

Lab # 5: To describe the modify commands I and practice the drawings using AutoCAD

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OBJECTIVE(S): This lab has been designed to familiarize students with Copy, Offset, Mirror, Array and Rotate commands using AutoCAD.

INTRODUCTION:

MIRROR: "mi" or "MIRROR" is the command to activate mirror command. In this command first and second points are selected for mirror object.
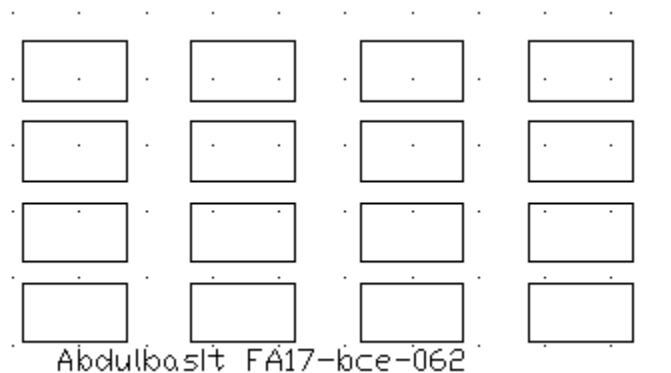
COPY: "co" or "COPY" is the command to copy object. First, we select the object and the give the displacement point.

OFFSET:"o" or "OFFSET" is the command to activate the offset command .
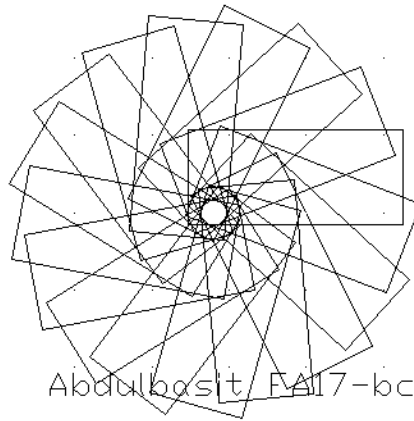
LAB TASKS:

Task 1:

  i.   TO CREATE A RECTANGULAR ARRAY:
 ii.   I wrote "ar" in the command line to activate array command and a dialogue box was appeared on the screen.
iii.   Chose rectangular array and selected the object to be arrayed.
 iv.   In rows and columns boxes, I entered the number of rows and columns required.
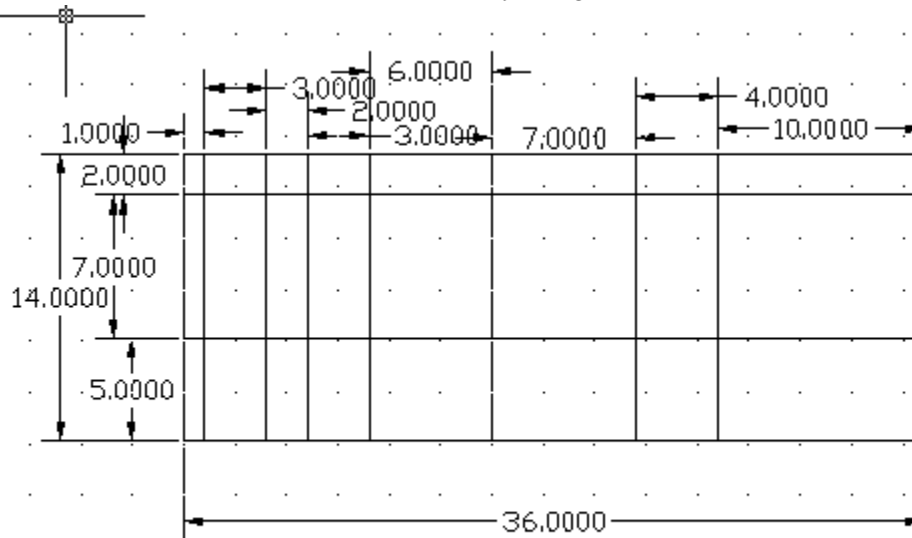 v.   An arrayed object was constructed.
 vi.   Circuit:

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Task 2:

  i.   TO CREATE A POLAR ARRAY:
 ii.   I wrote "ar" in the command line to activate array command and a dialogue box was appeared on the screen.
iii.   Chose polar array and entered the values of X and Y for the center point of the polar array.
 iv.   I entered the total number of items i.e.6. All the six items were plotted in 360 degrees.
  v.   Then, I selected the object to be arranged.
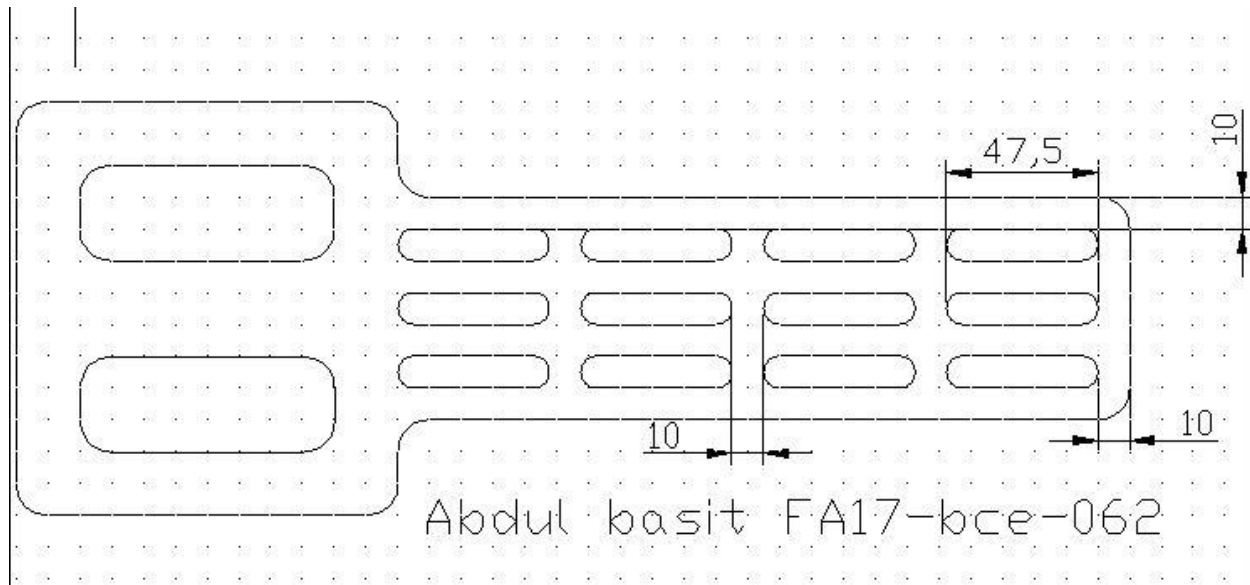
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Task 3:

i.   I selected line from the draw menu and constructed a vertical line of 14 units by entering coordinates in the command line.

ii.   I activated offset command by entering "o" in the command line and entered the distance at which I wanted another line to be plotted.

iii.   Selected the object to offset then, specified point on side to offset.

iv.   I repeated the same steps for all vertical lines.

v.   Then, I plotted a horizontal line of 31.6 units by entering coordinated in the command line.

vi.   Again, I activated offset command by entering "o" in the command line and entered the distance at which I wanted the horizontal line to be plotted.

vii.   Selected the object to offset then, specified point on side to offset.

viii. I repeated the same steps for all horizontal lines.

ix.   Then, I labeled the distance of each block by using linear command.

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Task 4:

CONCLUSION: From this lab, I came to know about copy, offset, mirror, fillet, array and rotate command. I have also learnt how rectangular and polar array can be used in AutoCAD.