

Chapter 3: Making Changes to AutoCAD Objects

- Part III : Array

As before simplify the workspace by adding Draw, Modify and Standard toolbars and closing other features on workspace. You may use following Macro.

```
_TOOLBAR Draw _Show  
_TOOLBAR Modify _Show  
_TOOLBAR Standard _Show  
_TOOLBAR CloudWorx _Hide  
_RIBBONCLOSE  
MENUBAR 1
```

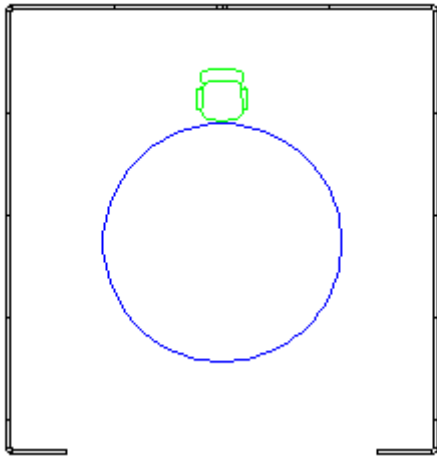
Exercise

Array Objects in the Drawing

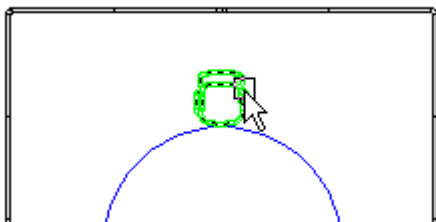
In this exercise, you create polar and rectangular arrays of various pieces of office furniture in an office floor plan. When you have completed the exercise, you will be able to use the Array command to create arrays of objects in your drawings.

Exercise Steps

1. Open *Creating-Arrays.dwg*.
2. Zoom into the area shown in the following image.



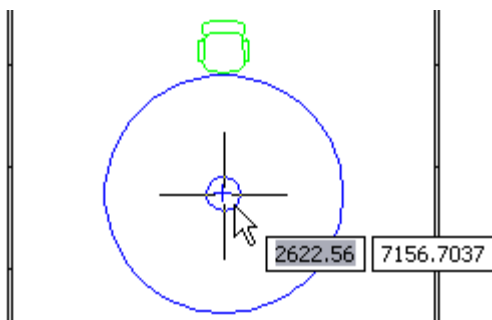
3. On the Command line, Type `Arrayclassic`. Press ENTER.
 - In the Array dialog box, click Polar Array. Click Select Objects.
 - Select the chair object. Press ENTER.



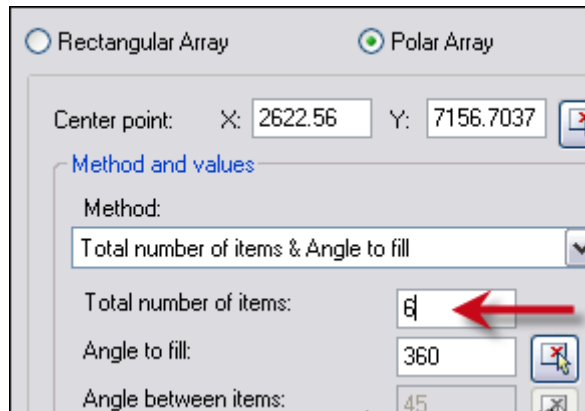
4. Check Status bar, Object snap tracking should be active. In the Array dialog box, click Pick Center Point.



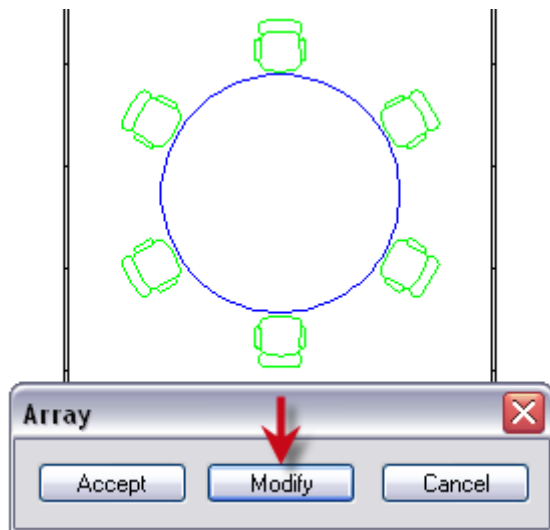
5. Select the center point of the conference table.



6. In the Array dialog box, in the Total Number of Items field, enter 6. Click Preview.



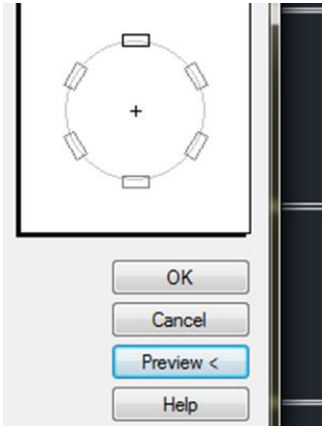
7. After previewing the array, click Modify to return to the Array dialog box. (See instructions displayed on the Command line).



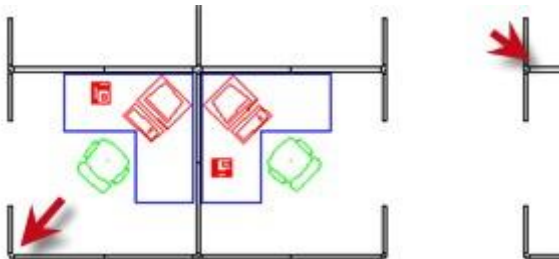
8. In the Total Number of Items field, enter 8. Click Preview.



9. Click OK.



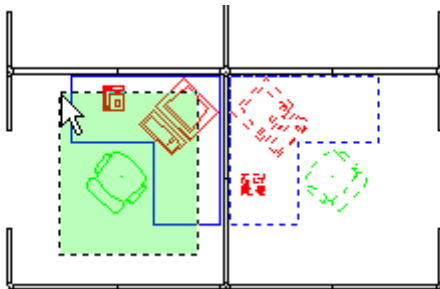
10. Zoom a window around the area indicated in the following image. Make certain the walls indicated in the image are visible.



11. Repeat the Arrayclassic command.

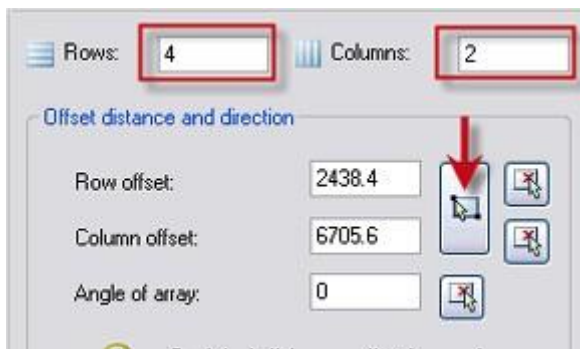
12. In the Array dialog box, click Rectangular array. Click Select Objects.

- Select the objects indicated in the following image. Press ENTER. (i.e. type c to 'Select objects' tooltip and specify a crossing rectangle as shown). Then repeat to select objects on other side of the wall).
- **Note:** Use two separate crossing windows to select the objects.

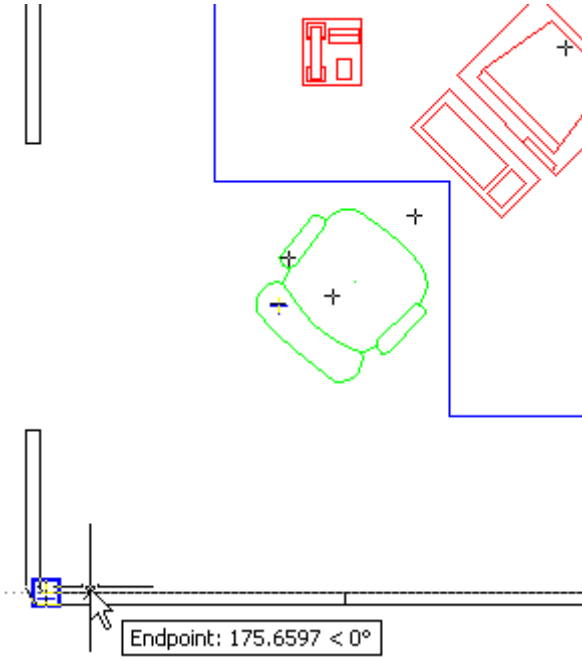


13. In the Array dialog box, enter 4 in the Rows field.

- In the Columns field, enter 2. Click Pick Both Offsets.

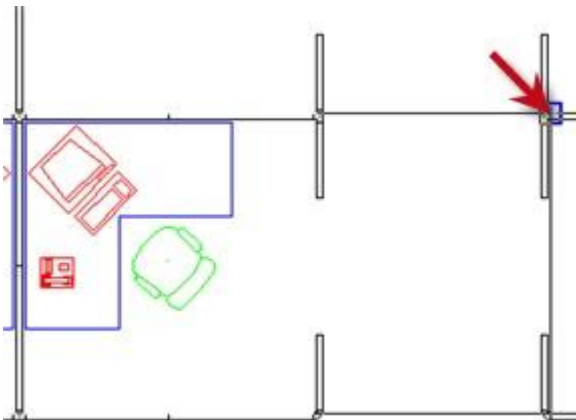


14. Click the endpoint of the lower interior wall line.

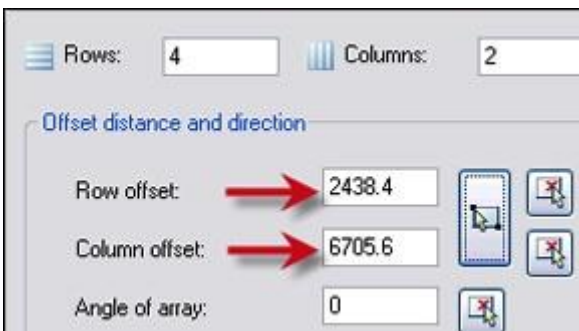


15. Click the endpoint at the same location in the room across the hall.

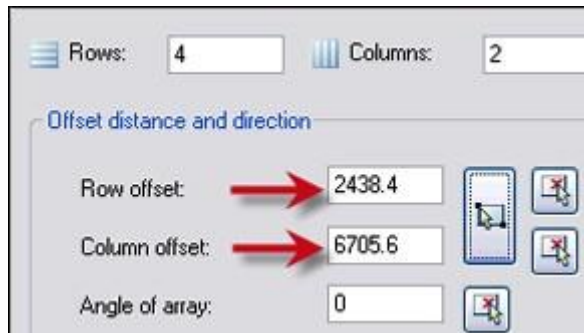
Note: You may have to pan or zoom to select the point.



16. In the Array dialog box, confirm the values for Row Offset and Column Offset. Click Preview.

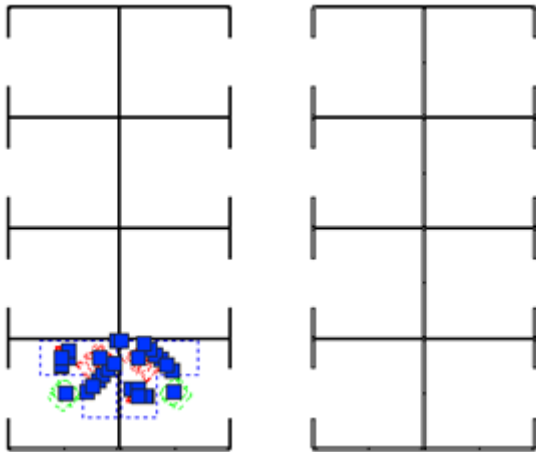


17. You will notice during a preview that you cannot zoom or pan while the Array command is active. Click Modify to return to the Array dialog box.



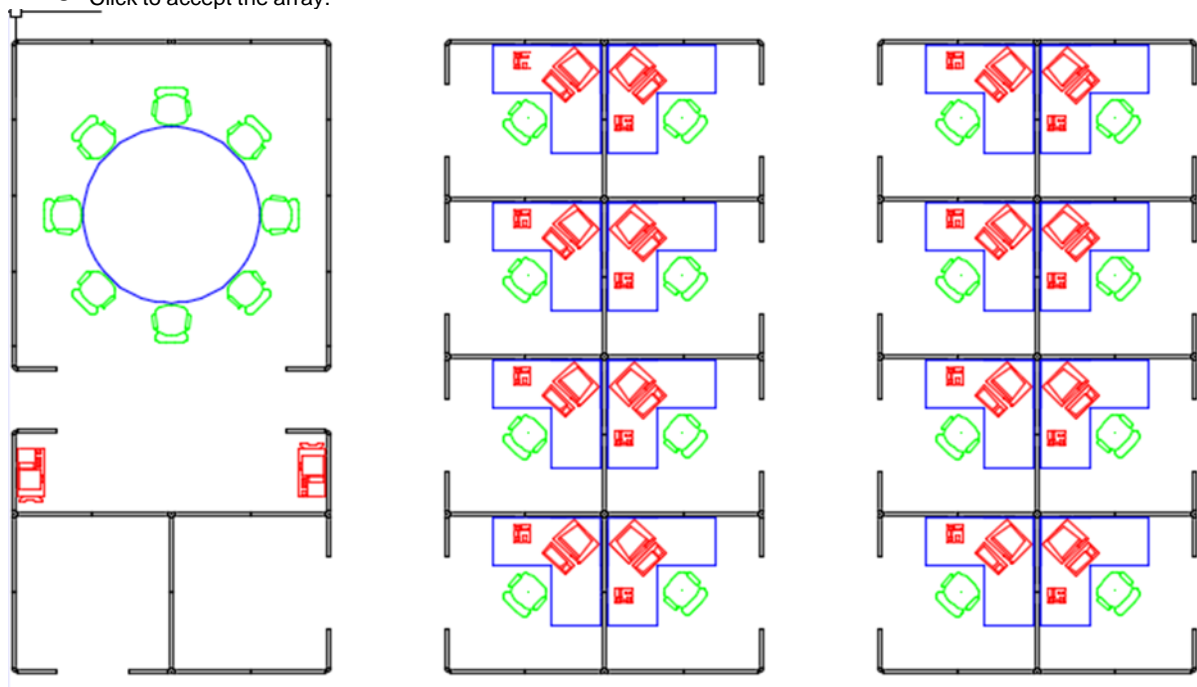
18. Click any of the Pick Point buttons. This hides the Array dialog box and lets you zoom out of the drawing.

- Zoom out to view the area shown in the following image. Press ENTER. Make certain you do not select any points.



19. In the Array dialog box, click Preview. Your array should appear as shown in the following image.

- Click to accept the array.



20. Save file as Ceating-Arrays-with-ARRAYCLASSIC.dwg and close all files.



Array Objects Revision

Now you can learn the ARRAY tool in the current version of AutoCAD by following the sequence of steps followed in the previous exercise.

1. Open Ceating-Arrays.dwg
2. Look for the array icon on Modify toolbar
3. If Polar Array icon is available, left click
4. if Rectangular Array is available hold down to bring up Arrays toolbar, and select the third icon for Polar Array. Now that Polar array is available on the Modify toolbar, left click.
5. Select chair (one next to the round table) and Press ENTER
6. Select centre point and Press ENTER (ensure Object Snap Tracking is active in status bar)
7. Press down arrow in response to 'Select grip to edit array or' in tooltip
8. Select Items and type 7
9. Accept eXit (i.e. Press ENTER)
10. Double left click a chair to edit the array. An array identifier circle will appear and the Array (Polar) CUI will be displayed. Change Items value to 8 and close CUI
11. Esc to close Polar Array
12. Revert to Rectangular Array on Modify toolbar and click
13. Select the 8 objects (Desks, computers, phones and chairs) and Press ENTER
14. Grip > Count > Columns = 2 > Rows = 4
15. Grip > Spacing > select two corresponding points in the horizontal direction for distance between columns
Then select two corresponding points in the vertical direction for distance between rows
16. If not satisfied, Grip again and correct the spacing
17. Press ENTER to exit the Array command
18. Save file as Ceating-Arrays-2.dwg and close all files.

You have completed the CAD computer lab activities set for ENGG1000.