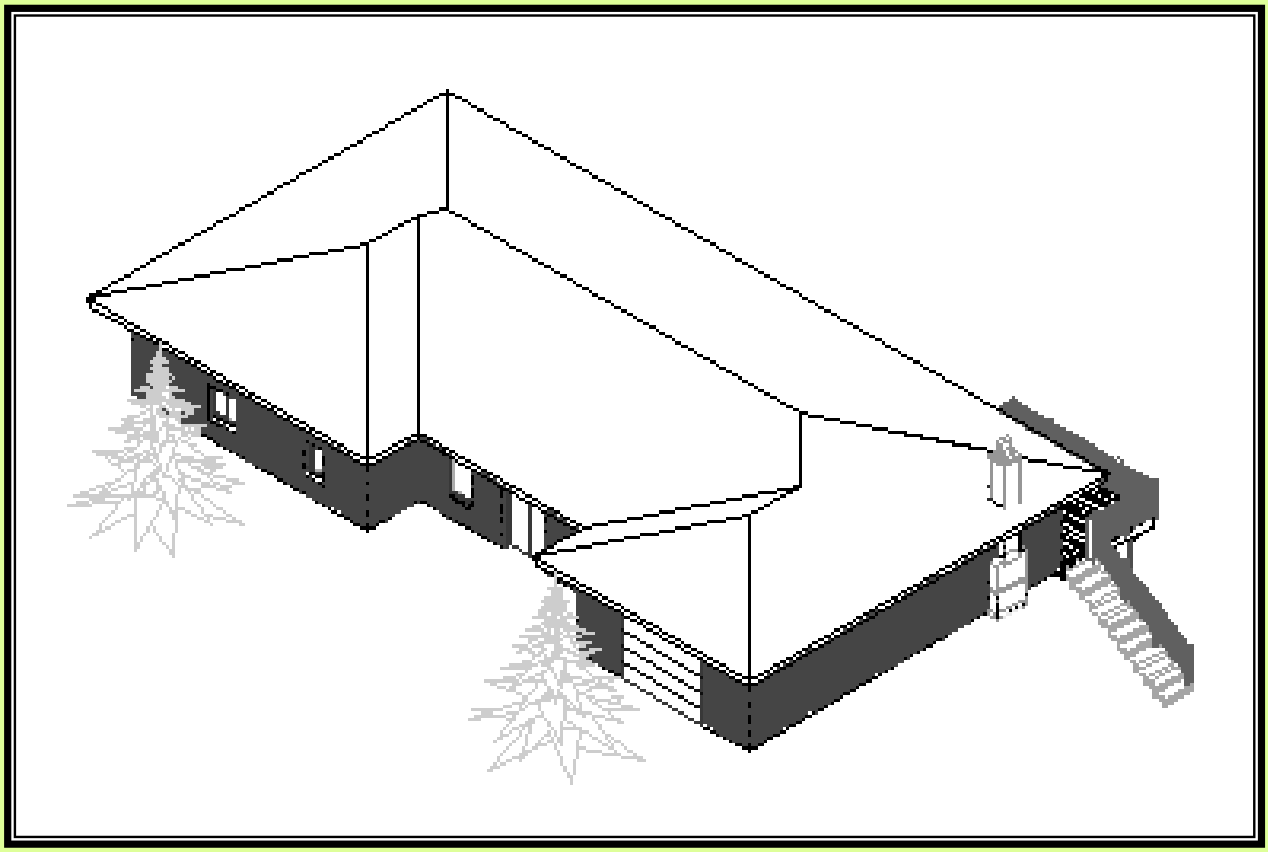
Autodesk

AutoCAD Architecture 2010

Fundamentals



Elise Moss

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Lesson 3
Floor Plans

The floor plan is central to any architectural drawing. We start by placing the exterior walls, then the interior walls, then doors, and finally windows.

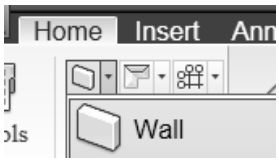
Exercise 3-1:
Creating Walls

Drawing Name: New
Estimated Time: 10 minutes

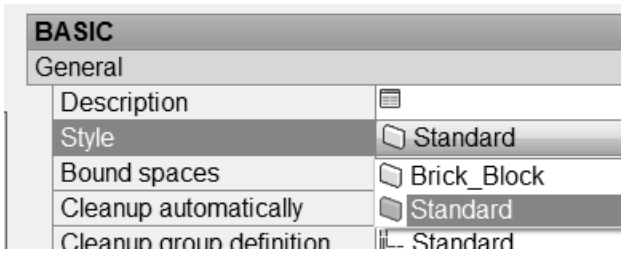
This exercise reinforces the following skills:

- Create Walls
- Wall Properties
- Wall Styles
- Model and Work space

1.  Start a new drawing using QNEW.

2. 

Select the **Wall** tool from the Home ribbon.

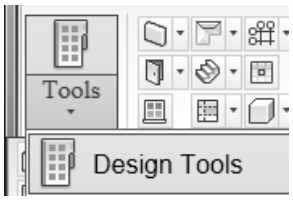
3. 

In the Properties dialog, check under the Style drop-down list.

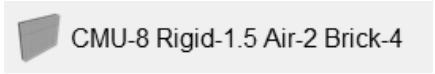
Only the Brick_Block and Standard styles are available.

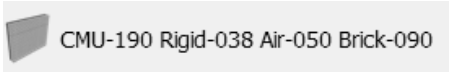
These are the wall styles that are loaded in the template.

4. Exit out of the command by pressing ESC.

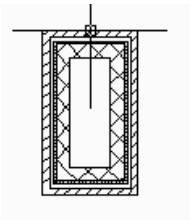
5. 

Launch the Design Tools palette from the Home ribbon.

6. 

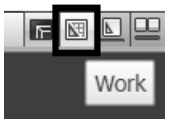


Select the CMU-8 Rigid-1.5 Air 2 Brick-4 [CMU 190 Rigid-038 Air – 050 Brick -090].

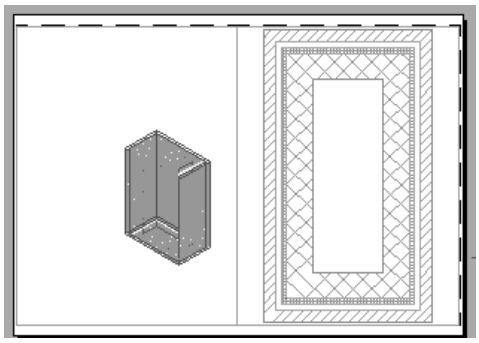
7. 

Toggle **ORTHO** ON.

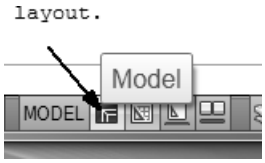
Start the wall at 0,0.
Create a rectangle 72 inches [1830 mm] tall and 36 inches [914 mm] wide.

8. 

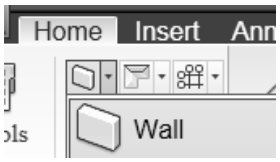
Select the **Work** tab.

9. 

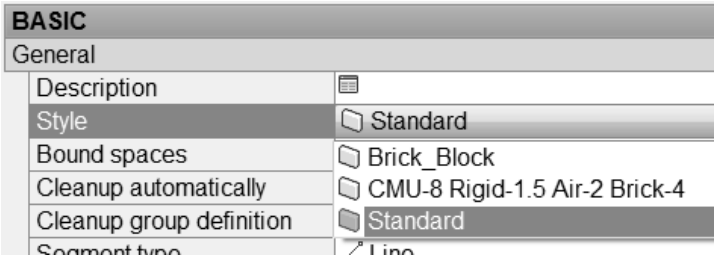
You see that the walls you placed are really 3-dimensional.

10. 

Switch back to the Model space tab.

11. 

Select the **Wall** tool from the Home ribbon.

12. 

In the Properties dialog, check under the Style drop-down list.

Note that the CMU wall style is now available under the drop-down list.

13. Exit out of the command by pressing ESC.

14. Save your drawing as *Ex3-1.dwg*.

TIP: If you draw a wall and the materials composing the wall are on the wrong side, you can reverse the direction of the wall. Simply select the wall, right click and select the Reverse option from the menu.

Exercise 3-2:

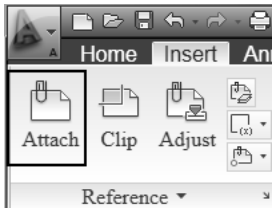
Inserting a Drawing Reference

Drawing Name: new
Estimated Time: 60 minutes

This exercise reinforces the following skills:

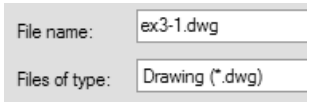
- Drawing references (previously known as external references or Xrefs)

1.  Start a new drawing using **QNEW**.

2. 

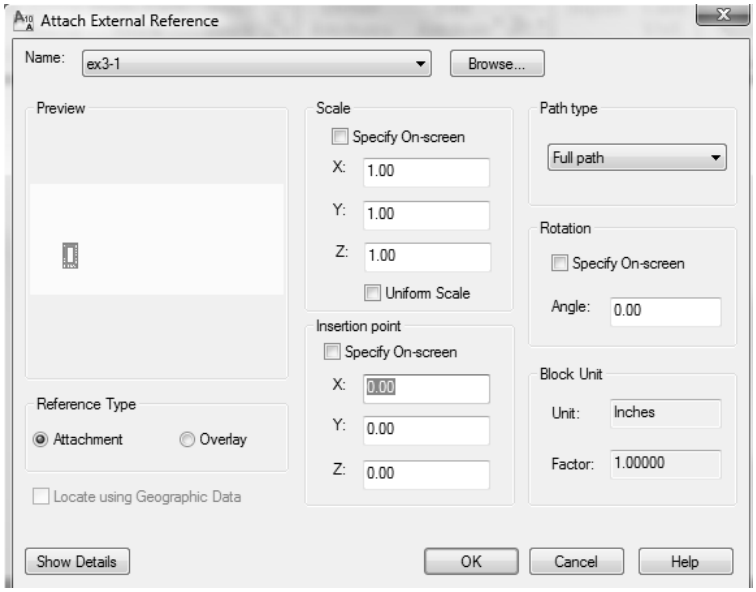
Activate the Insert ribbon.

   Select **Attach** on the Reference panel.

3. 

Locate *ex3-1.dwg.*
Press **Open**.

 **TIP:** Many architects use external drawing references to organize their projects. That way teams of architects can concentrate just on their portions of a building. External references also use less system resources.

4. 

Uncheck **Specify On-Screen** under Insertion point, scale, and rotation.

Press **OK**.
This will insert the file as an external reference at 0,0,0.

5. Save the file as *ex3-2*.

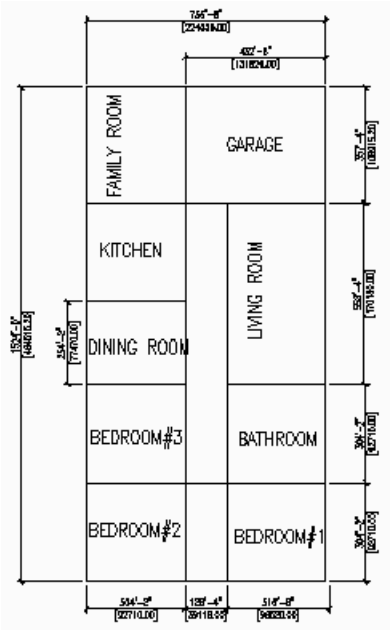
 **TIP:** You can convert lines, arcs, circles, or polylines to walls. If you have created a floor plan in AutoCAD and want to convert it to 3D, open the floor plan drawing inside of AutoCAD Architecture. Use the Convert to Walls tool to transform your floor plan into walls.

Exercise 3-3:
Convert to Walls

Drawing Name: floor plan.dwg
Estimated Time: 10 minutes

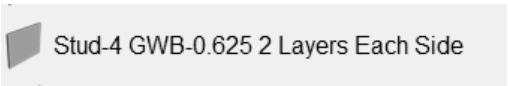
This exercise reinforces the following skills:

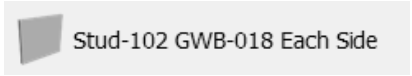
- Convert to Walls

1. 

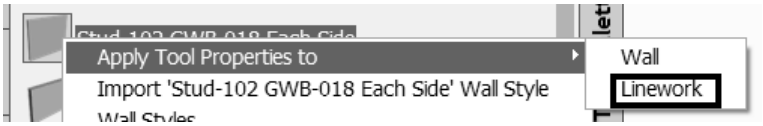
Open *floor plan.dwg*.
This file can be downloaded from www.schroff.com/resources.

This floor plan has both architectural and metric units shown.

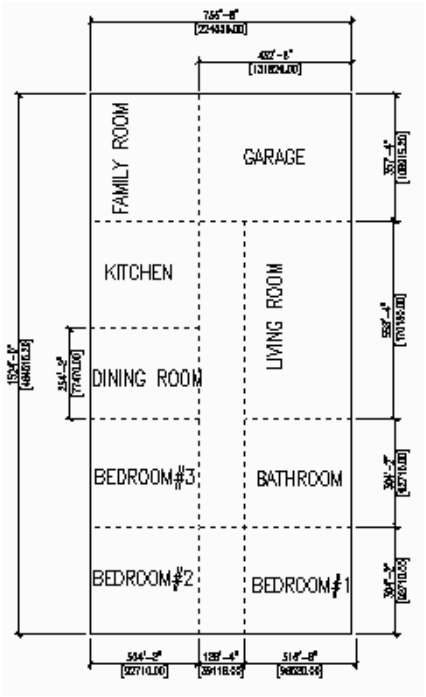
2. 



Locate the **Stud-4 GWB-0.625 2 Layers Each Side [Stud-102 GWB-018 Each Side:]** wall style on the Walls tool palette.

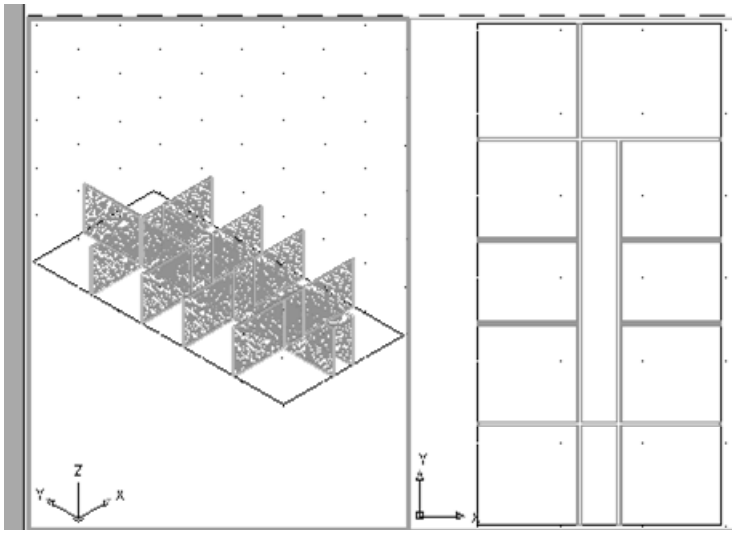
3. 

Highlight the wall tool.
Right click and select **Apply Tool Properties to → Linework**.

4. 

Select all the interior lines.

You are prompted if you want to erase the layout geometry. Type **Y** for Yes.

5. 

Switch to the Work tab so you can see how your house looks in 3D.

6. Save the file as *ex3-3.dwg.*

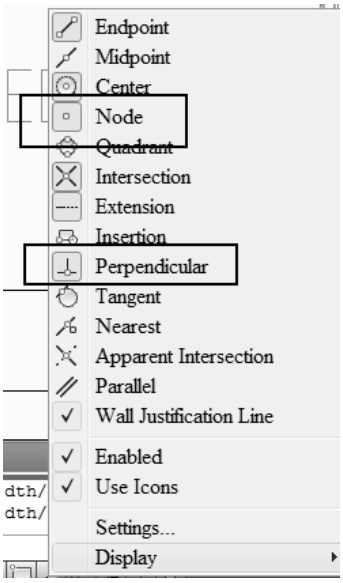
Exercise 3-4:
Wall Cleanup

Drawing Name: ex3-3.dwg
Estimated Time: 30 minutes

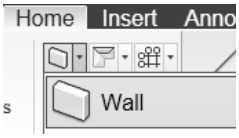
This exercise reinforces the following skills:

- Modifying Walls
- Edit Justification
- Wall Tools
- Break at Point
- Apply Tool Properties to Wall
- Cleanup Tools

1.  Open *ex3-3.dwg.* Activate Model space.

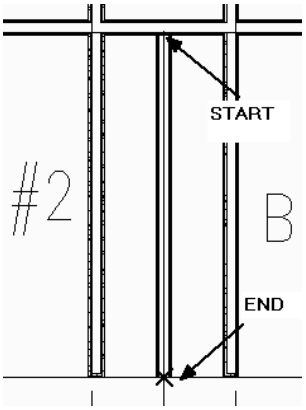
2. 

Set the Osnaps so that Node and Perpendicular are enabled.

3. 

Add a closet area between the master bedroom and Bedroom #1.

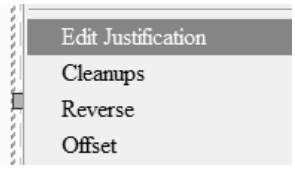
Select the **Wall** tool from the Home ribbon.

4. 

Pick the start point as shown.

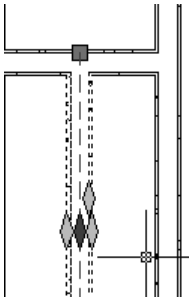
You should see a node snap at the start point.

Select the endpoint shown using a perpendicular osnap.

5. 

Select the wall just placed.

Right click and select **Edit Justification**.

6. 

Diamond grips will appear to indicate different wall justification methods (Left/Right/Center).

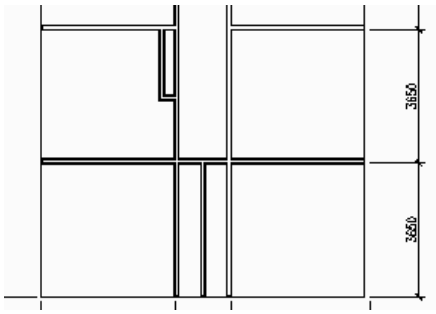
The diamond on the top indicates the current justification.

Select the Center Diamond.

This will justify the wall to the center.

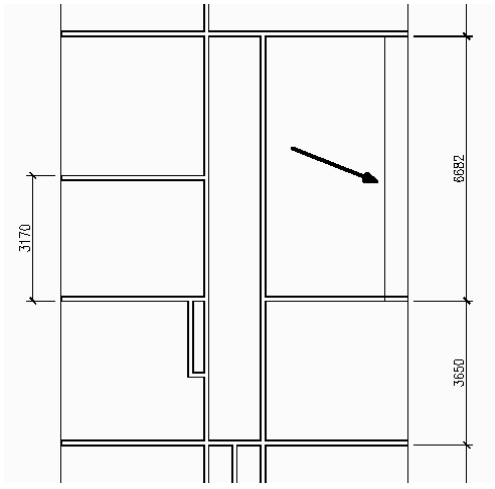
7. 

If you mouse over a diamond, you will see a tool tip to tell you what type of justification will be selected.

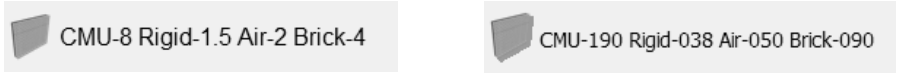
8. 

Draw a closet in Bedroom #2.

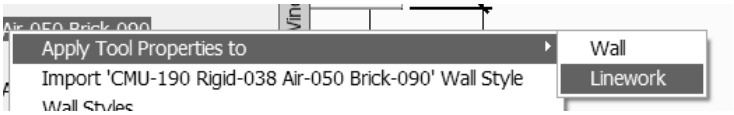
Use the same interior wall style.
Set the wall 12 inches [304 mm] from the hallway wall and 70 inches [1820 mm] in length.

9. 

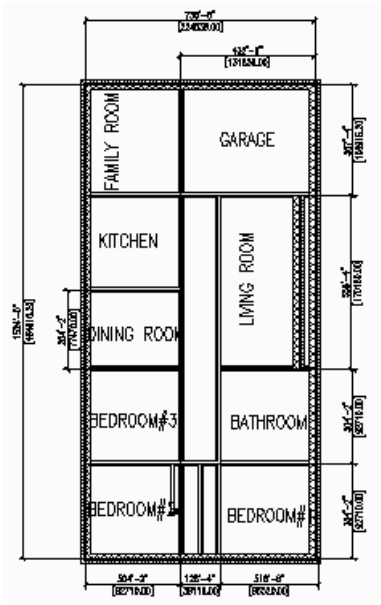
Draw a vertical line 24 inches [610 mm] inside the living room area.

10. 

Locate the exterior wall style: **CMU-8 Rigid – 1.5 Air – 2 Brick -4 [CMU-190 Rigid-038 Air-050 Brick-090]**.

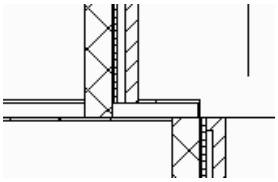
11. 

Convert the outside lines to the exterior wall style using **Apply Tool Properties to Linework**.

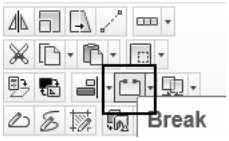
12. 

Our floor plan so far.

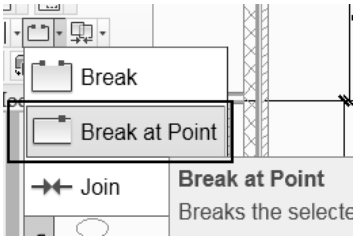
13. When prompted to erase layout geometry, enter **Yes**.

14. 

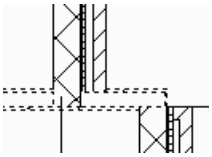
We have a small section of wall on the upper and lower right corners of the living room area that should be split so that it can be assigned the exterior wall style.

15. 

Locate the **Break** tool located on the Modify panel of the Home ribbon.

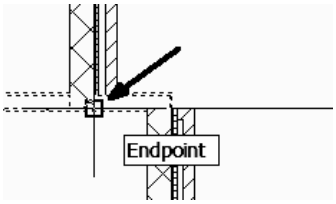
16. 

Select the **Break at Point** tool on the Break tool drop-down list to split the wall into two sections.

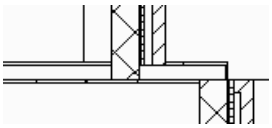
17. 

Select the wall.

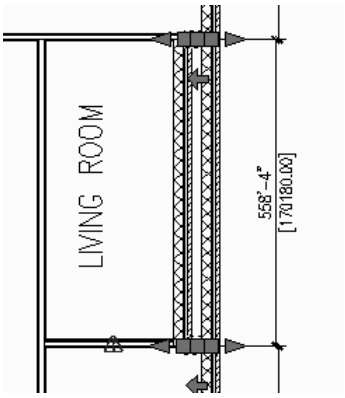
It will highlight.

18. 

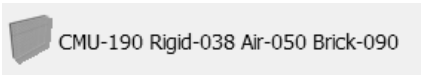
Select the point indicated as the break point.

19. 
The wall is now two separate sections.

Repeat for the other side of the wall.

20. 

Select both wall sections so they are highlighted.

21. 

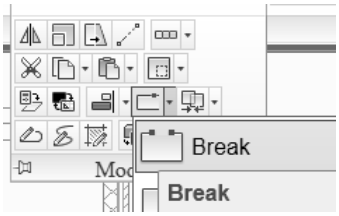
Locate the **CMU-190 Rigid-038 Air-050 Brick-090** wall style on the tool palette.

22. 

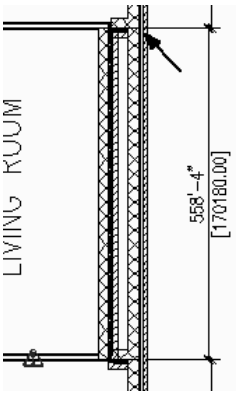
Right click and select **Apply Tool Properties to → Wall**.

23. The walls will be converted to the correct wall style.

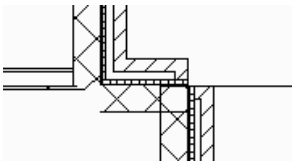
    Press ESC to deselect the walls.

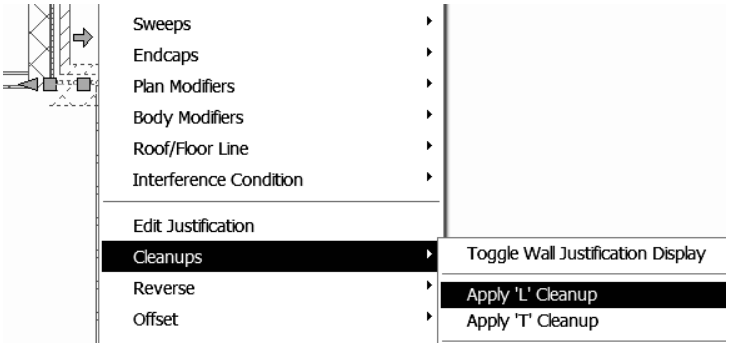
24. 

Select the **Break at two points** tool.

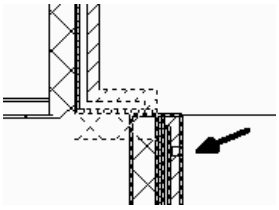
25. 

Select the point indicated to break the wall.

26. 

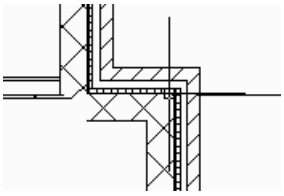


Select the small section of wall.
Right click and select **Cleanups → Apply 'L' Cleanup**.

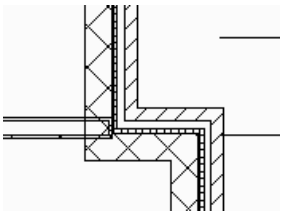
27. 

You'll be prompted to select the wall to cleanup with.

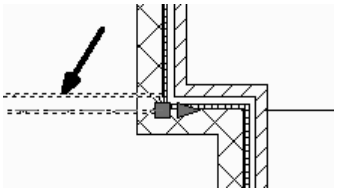
Select the wall indicated.

28. 

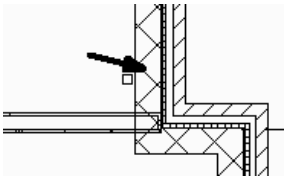
The corner is cleaned up.

29. 

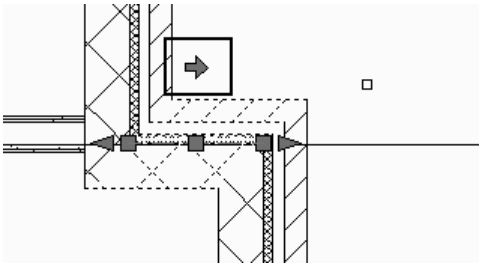
Repeat on the other corner.

30. 

Select the interior wall.
Right click and select **Cleanups → Apply 'T' Cleanup**.

31. 

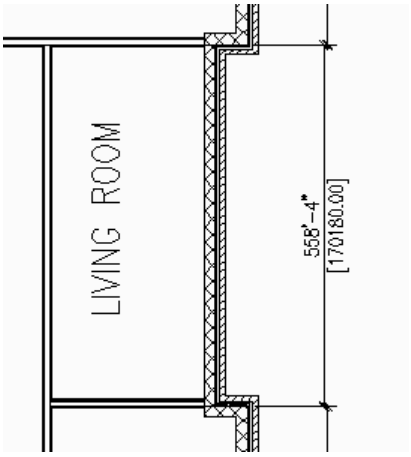
When prompted to select the boundary wall, select the wall indicated.

32. 

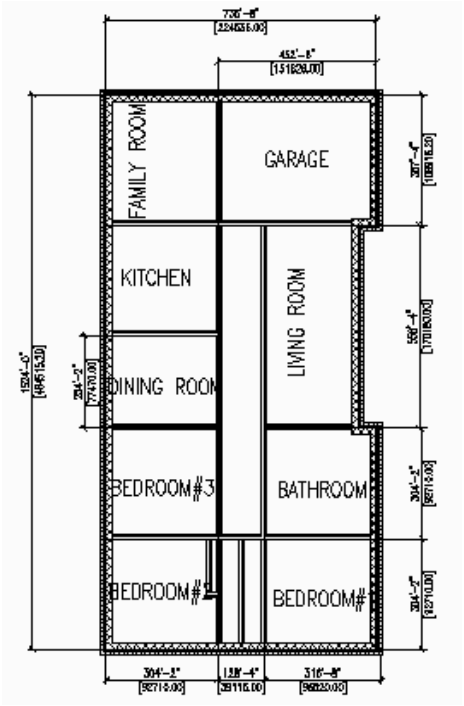
If the wall does not clean up properly, select the wall.

Use the arrow to flip the wall orientation so the exterior side of the wall is oriented properly.

Then try the Cleanup again.

33. 

The walls appear cleaner.

34. 

The drawing is now updated.

Save as *ex3-4.dwg*.

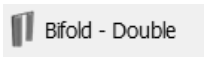
Exercise 3-5:
Adding Closet Doors

Drawing Name: Ex3-4.dwg
Estimated Time: 10 minutes

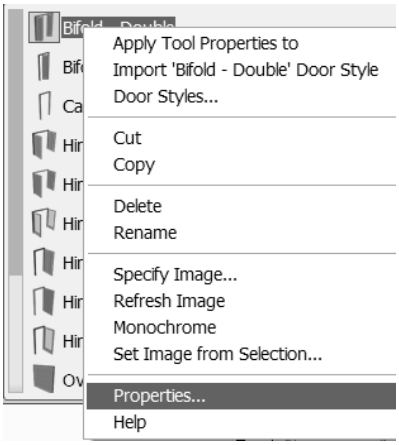
This exercise reinforces the following skills:

- Adding Doors
- Door Properties

1. Open *ex3-4.dwg*.

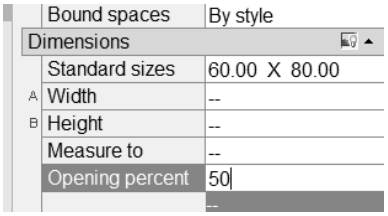
2. 

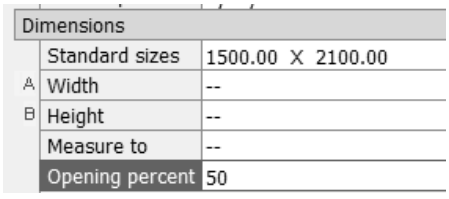
Locate the **Bifold-Double** door on the Doors tab of the Tool Palette.

3. 

Highlight the **Bifold-Double** door.
Right click and select **Properties**.

TIP: To create a freestanding door, press the ENTER key when prompted to pick a wall. You can then use the grips on the door entity to move and place the door wherever you like. To move a door along a wall, use Door → Reposition → Along Wall. Use the OSNAP From option to locate a door a specific distance from an adjoining wall.

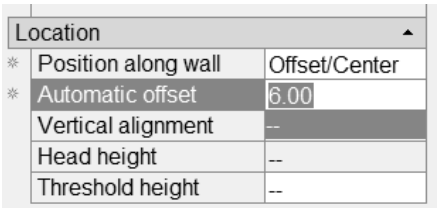
4. 

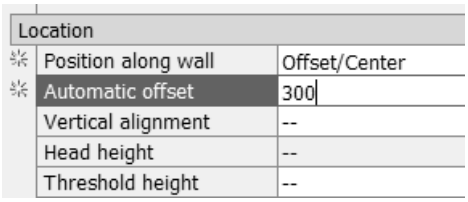


Expand the **Dimensions** section.
Set the Standard sizes to **60 inches x 80 inches [1500.00 x 2100.00]**.
Set the Opening percent to **50**.

TIP: If you left click in the field, a down arrow will appear…select the down arrow and you will get a list of standard sizes. Then, select the size you want.
A 25% opening will show a door swing at a 45-degree angle.
The value of the Opening percentage determines the angle of the arc swing.
A 50% value indicates the door will appear half-open at a 90-degree angle.

5.





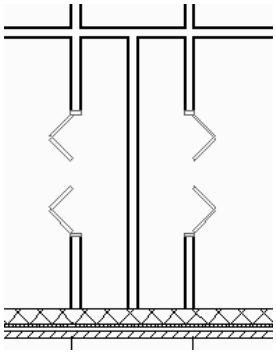
Expand the **Location** section.

Set Position along wall to **Offset/Center**.

6. Set the Automatic offset to **6.00 [300.00]**.

(This will center the closet doors along the wall.)

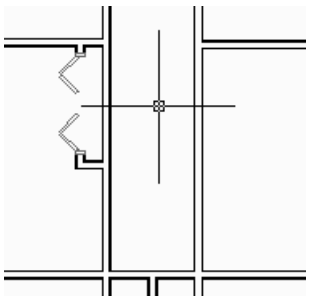
Press **OK** to close the Properties dialog.

7. 

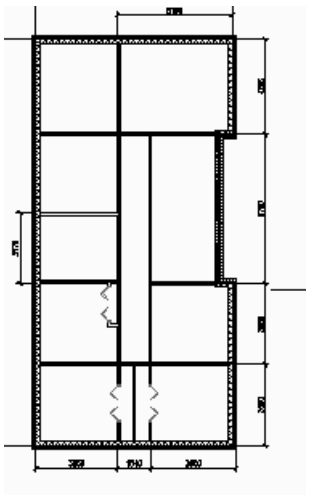
Place the Bifold Double doors at the two closets.

Note: Enable a Midpoint OSNAP to locate the doors.

The orientation of the door swing is determined by the wall side selected. In both cases, you want to select the outside face of the wall.

8. 

Place a Bi-fold Double door in the wall shown.

9. 

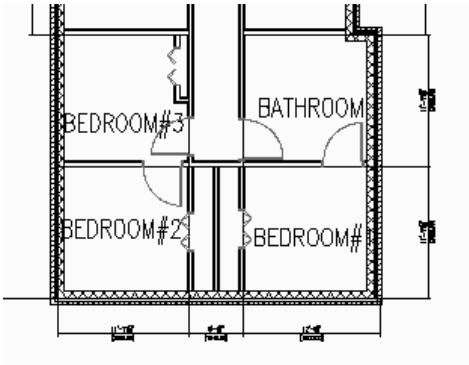
Save as *ex3-5.dwg*.

Exercise 3-6:
Adding Interior Doors

Drawing Name: ex3-5.dwg
Estimated Time: 10 minutes

This exercise reinforces the following skills:

- Adding Doors
- Door Properties



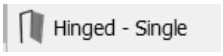
We will add single hinge doors in the areas shown.

You may need to do some wall cleanup to get the rooms to look proper.

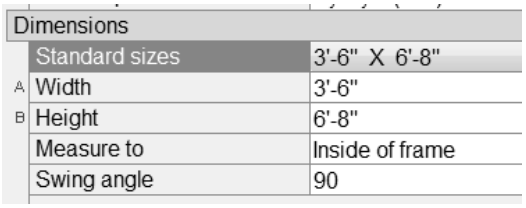
Use AddWall, Extend, and Trim as needed.

Try to keep the walls so they line up to keep the floor plan looking clean.

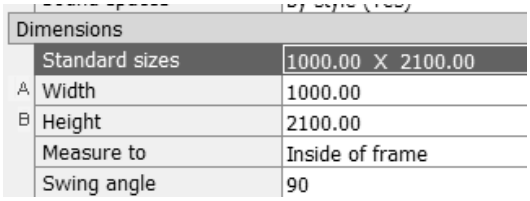
1. Open *ex3-5.dwg.*

2. 

Locate the **Single Hinged** door on the Doors tab of the Tool Palette. Right click and select **Properties**.

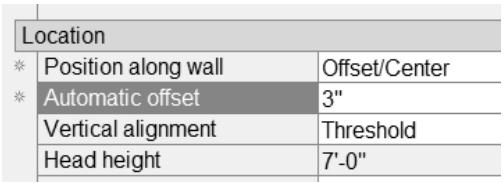
3. 

Dimensions	
Standard sizes	3'-6" X 6'-8"
A Width	3'-6"
B Height	6'-8"
Measure to	Inside of frame
Swing angle	90

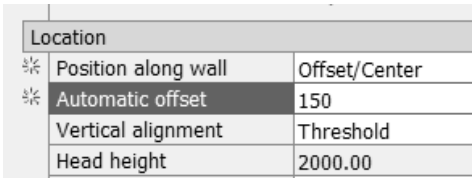


Dimensions	
Standard sizes	1000.00 X 2100.00
A Width	1000.00
B Height	2100.00
Measure to	Inside of frame
Swing angle	90

Expand the **Dimensions** section.
Set the Standard sizes to **3′6″ x 6′8″ [1000.00 x 2100.00]**.
Set the Swing angle to **90**.

4. 

Location	
Position along wall	Offset/Center
Automatic offset	3"
Vertical alignment	Threshold
Head height	7'-0"



Location	
Position along wall	Offset/Center
Automatic offset	150
Vertical alignment	Threshold
Head height	2000.00

Set the Position along wall to **Offset/Center**.
Set the Automatic offset to **3″ [150]**.

Press **OK**.

5. Place the doors as indicated.

6. Save the file *ex3-6.dwg*.

Exercise 3-7:

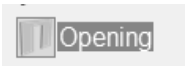
Create an Arched Opening Tool

Drawing Name: ex3-6.dwg
Estimated Time: 10 minutes

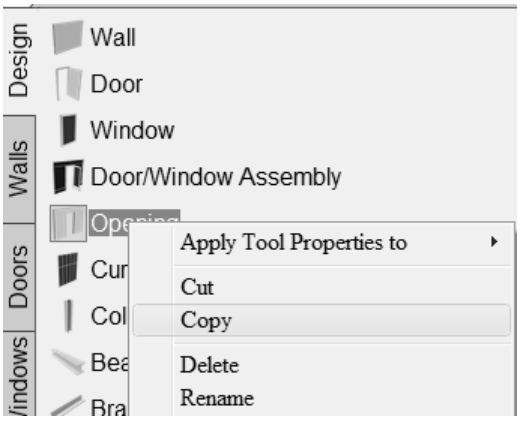
This exercise reinforces the following skills:

- Copying Tools
- Tool Properties

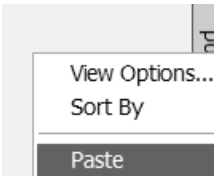
1.  Open *ex3-6.dwg*.

2. 

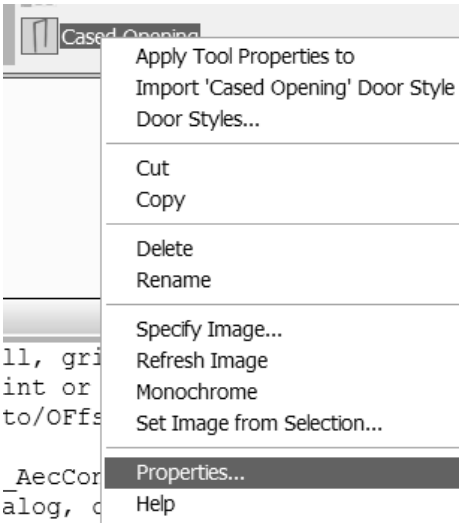
Locate the **Opening** tool on the Design tab of the Tool Palette.

3. 

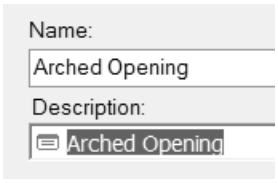
Right click and select **Copy**.

4. 

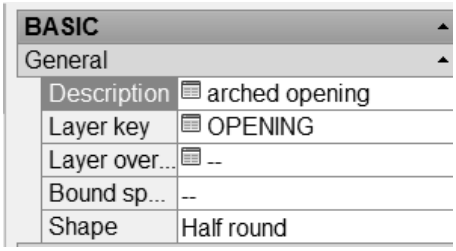
Select the **Doors** tab.
Right click and select **Paste**.

5. 

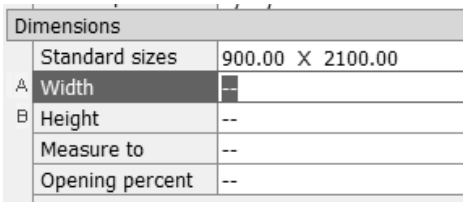
Highlight the copied tool.
Right click and select **Properties**.

6. 

Change the Name to **Arched Opening**.
Change the Description to **Arched Opening**.

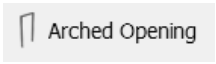
7. 

Expand the General section.
Set the Description to **Creates an Arched Opening**.
Set the Layer key to **OPENING**.
Set the Style to **Half round**.

8. 

Expand the Dimensions section.
Set the Standard Size to **3′-0″ x 6′-8″ [900.00 x 2100.00]**.

Press **OK**.

9. 

The tool is defined in the palette.

10. Save as *ex3-7.dwg*.

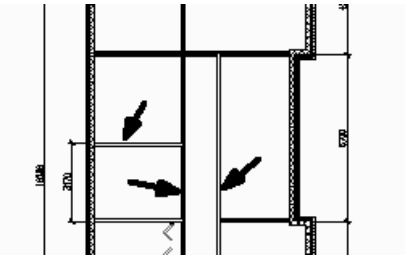
Exercise 3-8:
Adding an Opening

Drawing Name: ex3-7.dwg
Estimated Time: 10 minutes

This exercise reinforces the following skills:

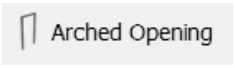
- Adding Openings
- Opening Properties
- Copying Tools
- Set Image from Selection

Openings can be any size and elevation. They can be applied to a wall or be freestanding. The Add Opening Properties allow the user to either select a Pre-defined shape for the opening or use a custom shape.

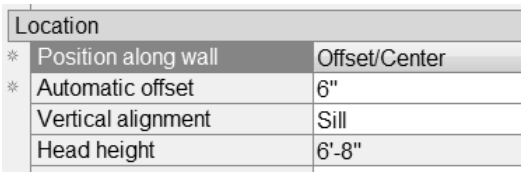


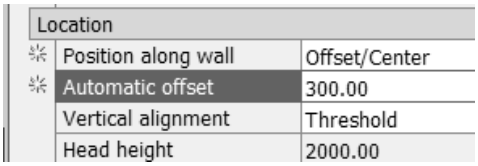
Openings will be added to the walls indicated.

1. Open *ex3-7.dwg*.

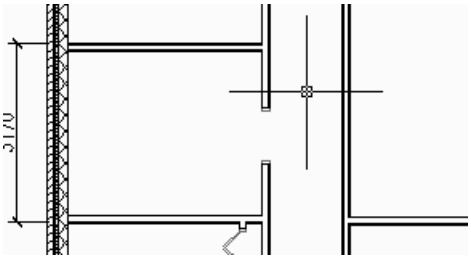
2. 

Select the **Arched Opening** tool.

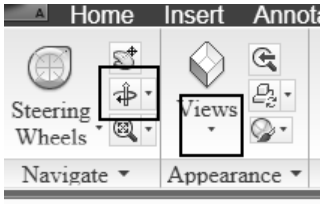
3. 

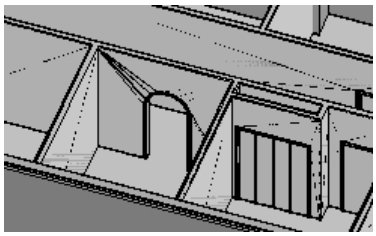


Expand the Location section.
Set the Position along wall to **Offset/Center**.
Set the Automatic offset to **6″ [300.00]**.

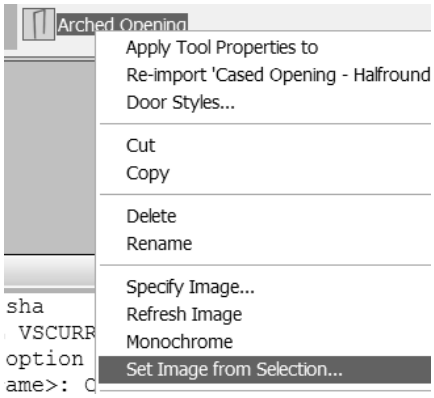
4. 

Place the arched opening in the dining room wall.

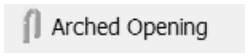
5. 

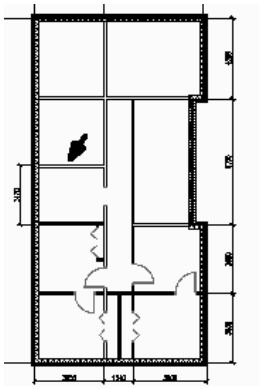


Use the View tools on the View ribbon.
View → SW Isometric and **3D orbit** to view the arched opening.

6. 

Select the **Arched Opening** icon on the tool palette.
Right click and select **Set Image from Selection**…
Pick the arched opening you created.

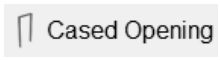
7. 



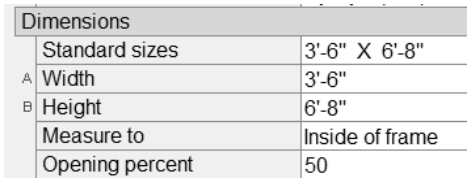
The tool icon updates with the new image.

Switch back to a Top view.

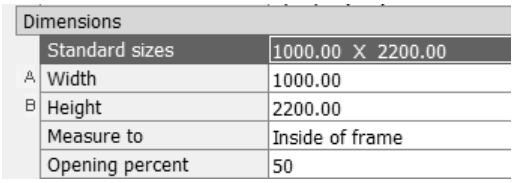
Next we place a rectangular opening in the location indicated.

8. 

Select the **Cased Opening** tool from the Doors tool palette.

9. 

Dimensions	
Standard sizes	3'-6" X 6'-8"
A Width	3'-6"
B Height	6'-8"
Measure to	Inside of frame
Opening percent	50



Dimensions	
Standard sizes	1000.00 X 2200.00
A Width	1000.00
B Height	2200.00
Measure to	Inside of frame
Opening percent	50

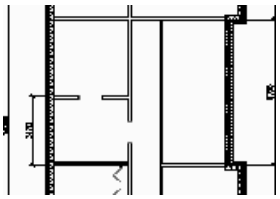
Expand the Dimensions section.
Select the Standard sizes of **3′6″ x 6′8″ [1000.00 x 2200.00]**.

10.

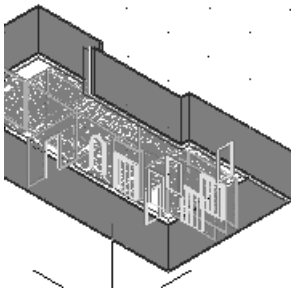
Location	
Position along wall	Offset/Center
Automatic offset	6"
Vertical alignment	Threshold
Head height	6'-8"

Location	
Position along wall	Offset/Center
Automatic offset	300.00
Vertical alignment	Threshold
Head height	2000.00

Expand the Location section.
Set the Position along wall to **Offset/Center**.
Set the Automatic offset to **6″ [300.00]**.

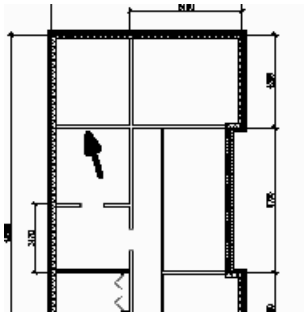
11. 

Place the opening in the wall between the kitchen and the dining room.

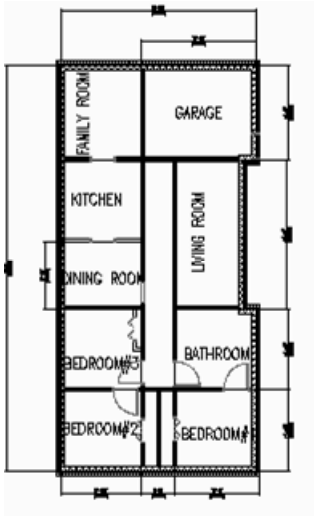
12. 

Select the **Work** tab to view the openings.

Select the **Mod el** tab.

13. 

Place a rectangular opening between the kitchen and the family room.

14. 

This is our floor plan so far.

Save the file as *ex3-8.dwg*.

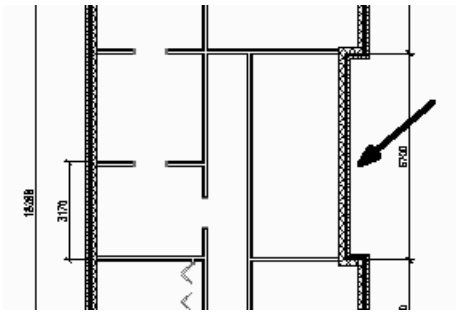
Exercise 3-9:
Adding Doors

Drawing Name: ex3-8.dwg
Estimated Time: 20 minutes

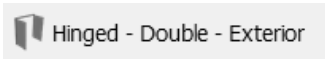
This exercise reinforces the following skills:

- Adding Doors

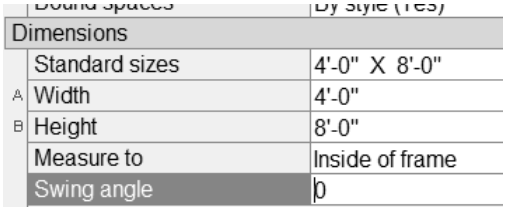
1. Open *ex3-8.dwg*.

2. 

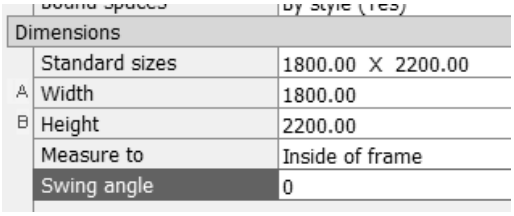
We will add an entry door on the wall indicated.

3. 

Select the **Hinged-Double-Exterior** door.

4. 

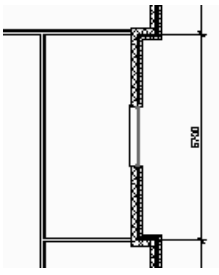
Dimensions	
Standard sizes	4'-0" X 8'-0"
A Width	4'-0"
B Height	8'-0"
Measure to	Inside of frame
Swing angle	0



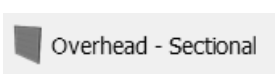
Dimensions	
Standard sizes	1800.00 X 2200.00
A Width	1800.00
B Height	2200.00
Measure to	Inside of frame
Swing angle	0

Expand the Dimensions section.
Set the Standard size to **4′ x 8′ [1800.00 x 2200.00]**.
Set the Swing angle to **0**.

Expand the Location section.
Set the Position along wall to **Offset/Center**.
Set the Automatic offset to **6″ [300]**.

5. 

Place the door so it is centered in the wall.

6. 

Select the **Overhead-Sectional** door.

7.

Dimensions	
Standard sizes	8'-0" X 7'-0"
A Width	8'-0"
B Height	7'-0"
Measure to	Inside of frame
Opening percent	0

Dimensions	
Standard sizes	2440.00 X 2134.00 (Custom Size)
A Width	2440.00
B Height	2134.00
Measure to	Inside of frame
Opening percent	0

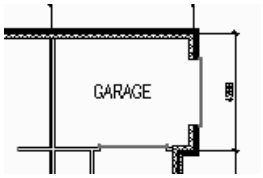
Expand the Dimensions section.
Set the Standard size to **8′-0″ x 7′-0″ [2440.00 x 2134.00]**.
Set the Swing angle to **0**.

8.

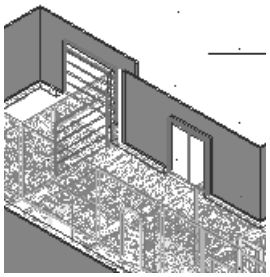
Location	
Position along wall	Offset/Center
Automatic offset	6"
Vertical alignment	Threshold

Location	
Position along wall	Offset/Center
Automatic offset	300.00
Vertical alignment	Threshold
Head height	2134.00

Set the Position along wall to **Offset/Center**.
Set the Automatic offset to **6″ [300.00]**.

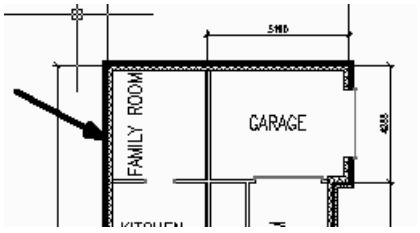
9. 

Place the door in the garage wall.

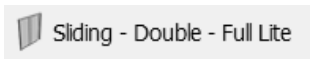
10. 

Switch to the Work tab to view the garage door and front entry door.

Switch back to the Model tab.

11. 

Next we add a sliding door to the family room wall indicated.

12. 

Select a **Sliding Door –Double Full Lite** to add to the family room.

13.

Dimensions	
Standard sizes	6'-0" X 7'-0"
Width	6'-0"
Height	7'-0"
Measure to	Inside of frame
Opening percent	0

Dimensions	
Standard sizes	1800.00 X 2200.00
Width	1800.00
Height	2200.00
Measure to	Inside of frame
Opening percent	0

Expand the Dimensions section.
Set the Standard size to **6′-0″ x 7′-0″ [1800.00 x 2200.00]**.
Set the Swing angle to **0**.

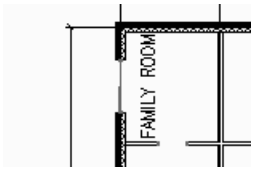
14.

Location	
Position along wall	Offset/Center
Automatic offset	6"
Vertical alignment	Threshold

Location	
Position along wall	Offset/Center
Automatic offset	300.00
Vertical alignment	Threshold
Head height	2134.00

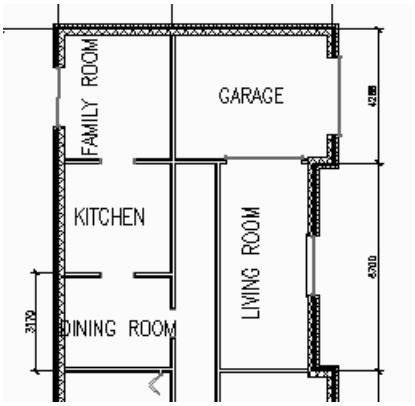
Expand the **Location** section.
Set the Position along wall to **Offset/Center**.
Set the Automatic offset to **6″ [300]**.

15.



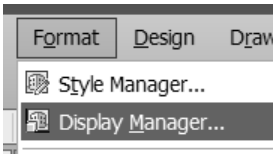
Place the sliding door.

16.



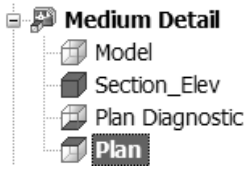
If your doors don't look proper, use the Display Manager to modify the appearance.

17.



Go to **Format → Display Manager**.

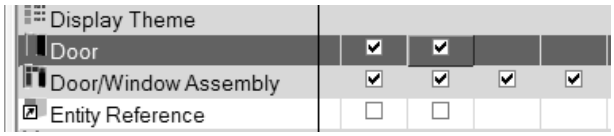
18.



Expand the Configurations folder.

Locate the **Plan** configuration under Medium Detail.

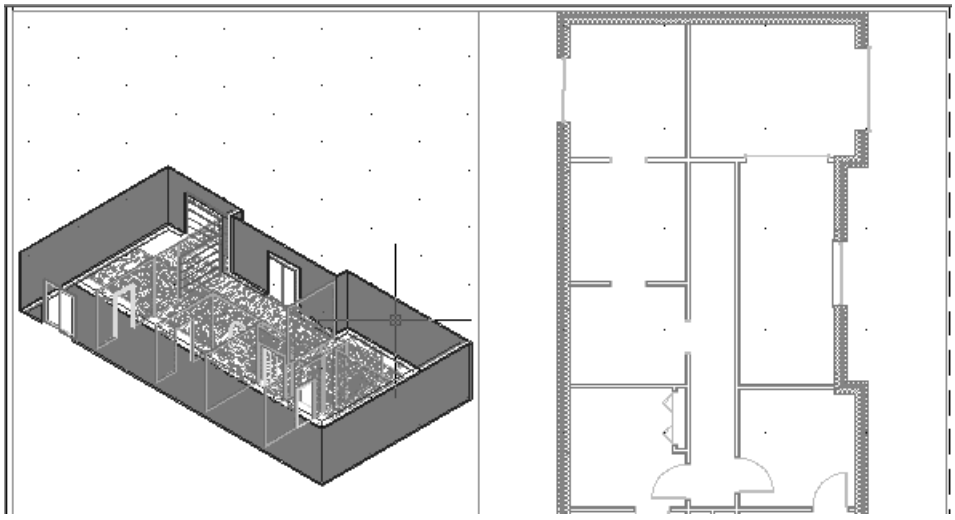
Note that this configuration is in bold because it is the current active configuration.

19. 

Place a check mark for Doors and Door/Window Assembly to set them visible in all views.

20. Press **Apply** and **OK**.

21.  Select the Work tab to view your model.



22. Save the file as *ex3-9.dwg*.

Exercise 3-10:
Add Window Assemblies

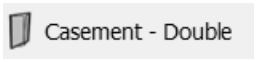
Drawing Name: Lesson 3-9dwg
Estimated Time: 30 minutes

This exercise reinforces the following skills:

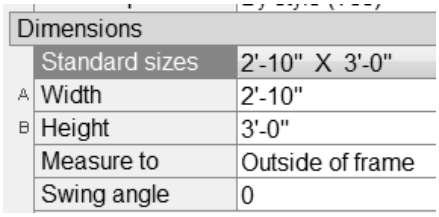
- Add Windows

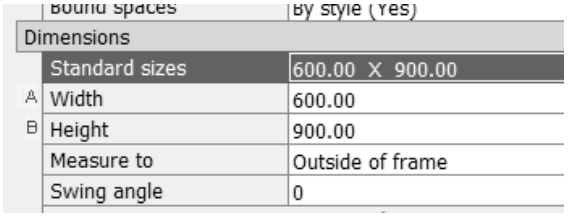
1.  Open *ex3-10wg.*

2.  Select the Model tab.

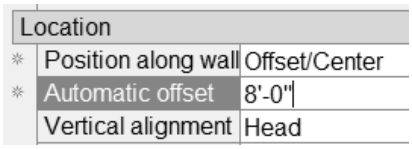
3. 

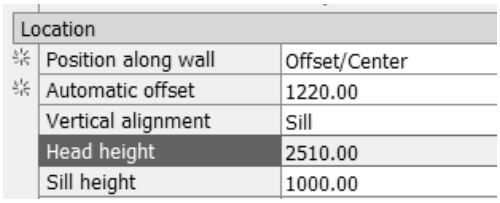
Select the Windows tab of the Tool Palette.
Select the **Casement-Double** window.

4. 

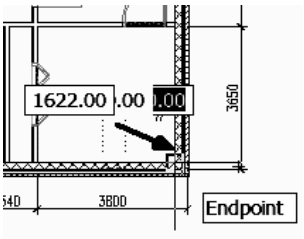


Expand the Dimensions section.
Set the size to **2′-10″ x 3′-0″ [600 x 900]**.

5. 



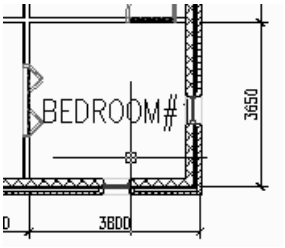
Expand the Location section.
Set the Position along wall to **Offset/Center**.
Set the Offset to **8′-0″ [2510.00]**.

6. 

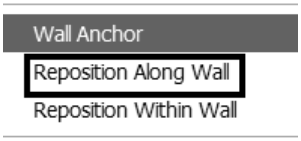
Select the wall shown and the endpoint indicated.

The endpoint is where the offset is calculated from.

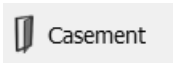
7. Select the **Casement-Double** window again.

8. 

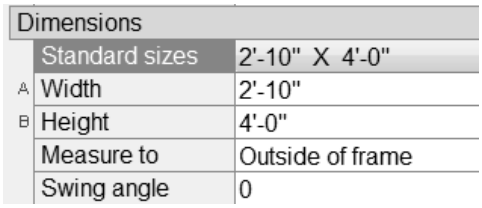
Place the window on the vertical bedroom wall.

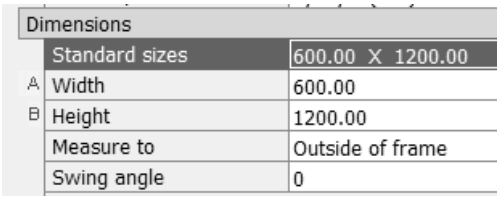


Remember – if you don't like the position of any of the Windows, you can reposition them. Just select the window, right click, and select **Reposition Along Wall**.

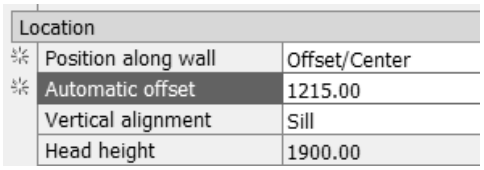
9. 

Select the **Casement** window.

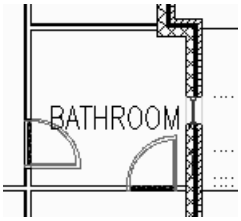
10. 



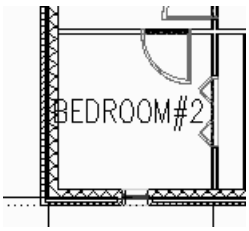
Expand the Dimensions section.
Set the size to **2′-10″ x 4′-0″ [600.00 x 1200.00]**.

11. 

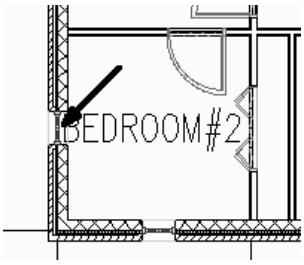
Expand the Location section.
Set the Position along wall to **Offset/Center**.
Set the Offset to **3′-1″ [1215]**.

12. 

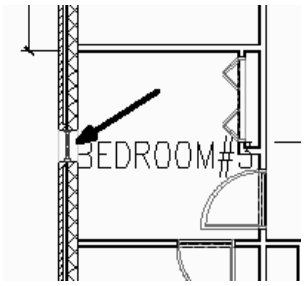
Place the window in the bath wall.

13. 

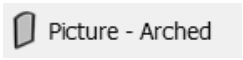
Place a Double Casement window in Bedroom #2.

14. 

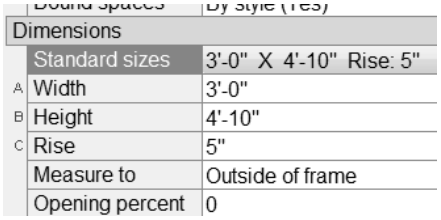
Place a Double Casement window in Bedroom #2 on the left vertical wall.

15. 

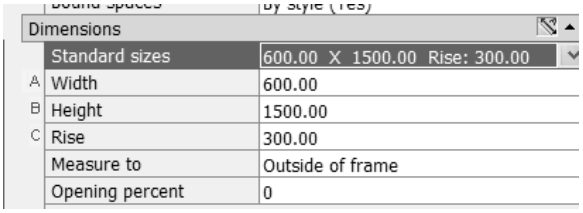
Place a Double Casement window in Bedroom #3 on the left vertical wall.

16. 

Locate the **Picture - Arched** to place in the left dining room wall.

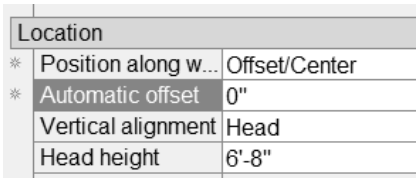
17. 

Dimensions	
Standard sizes	3'-0" X 4'-10" Rise: 5"
A Width	3'-0"
B Height	4'-10"
C Rise	5"
Measure to	Outside of frame
Opening percent	0

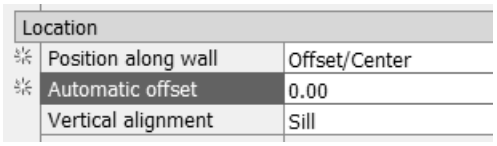


Dimensions	
Standard sizes	600.00 X 1500.00 Rise: 300.00
A Width	600.00
B Height	1500.00
C Rise	300.00
Measure to	Outside of frame
Opening percent	0

Expand the Dimensions section.
Set the size to **3′-0″ x 4′10″ Rise: 5″ [600.00 x 1500.00 Rise 300.00]**.

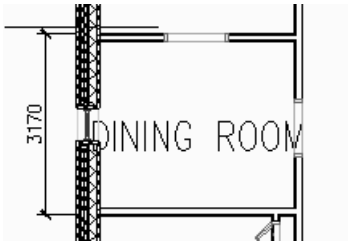
18. 

Location	
Position along w...	Offset/Center
Automatic offset	0"
Vertical alignment	Head
Head height	6'-8"

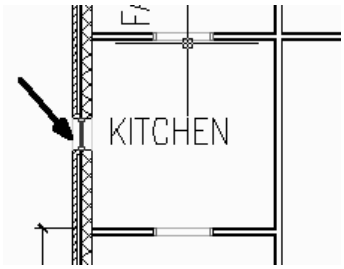


Location	
Position along wall	Offset/Center
Automatic offset	0.00
Vertical alignment	Sill

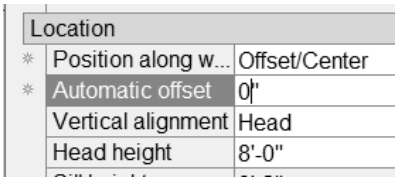
Expand the Location section.
Set the Position along wall to **Offset/Center**.
Set the Offset to **0″ [0.00]**.

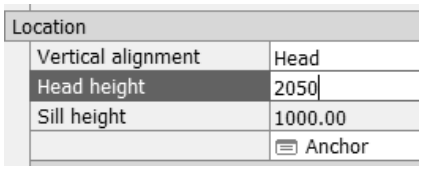
19. 

Place the window.

20. 

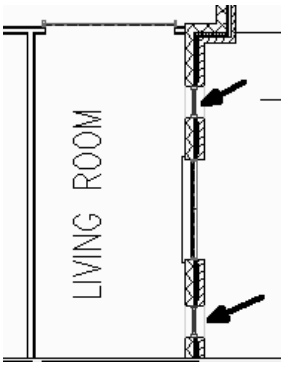
Add a **Casement: Single** window to the kitchen.

21. 

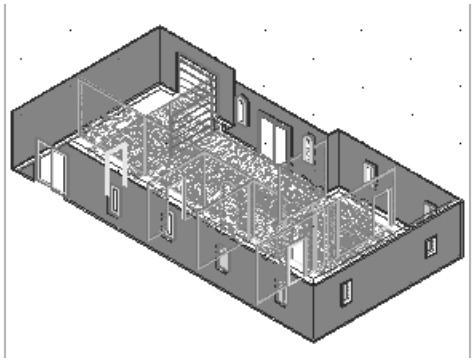


Set the Head height to **8′-0″ [2050]**.

This will ensure that any cabinetry in the kitchen does not interfere with the window.

22. 

Place an **Arched Picture** window with an offset of 0″ on each side of the entry door in the right living room wall.

23. 

Your floor plan should look similar to the one shown here.

Save as *ex3-10.dwg*.

Exercise 3-11:
Adding a Fireplace

Drawing Name: ex3-10.dwg
Estimated Time: 20 minutes

This exercise reinforces the following skills:

- Using the Design Center
- Adding Openings

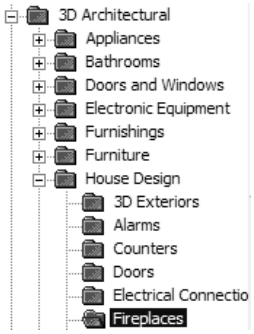
In this exercise, we add a fireplace to the family room. You can download the fireplace from the publisher's website or use the fireplace available from the Design Center.

1. Open *ex3-10.dwg.* Select the Model tab.

2. Select the **Design Center** tool or type **ADC** on the command line.

3. DC Online — Select the **DC Online** tab.

   Note: In order to access DC Online, you must have an active internet connection. If you do not have an active connection, you can download the file from the publisher's website and come back to this exercise.

4. 

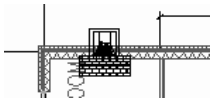
   In the *Standard Parts* section, browse to **Fireplaces** under *3D Architectural/House Design*.

5. 

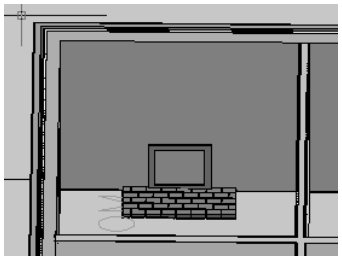
   There is a 3D model with a Hearth.

6. 

   Hover the mouse over the file icon; an eyedropper will appear. This means the content is idrop-enabled. Hold down your left mouse button to fill the eyedropper, then keep the left mouse button down, move the mouse into the graphics window; release the left mouse button to drag and drop the symbol into the drawing file.

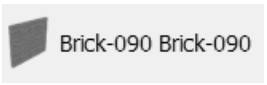
7. 

   Place the fireplace into the family room wall.

8. 

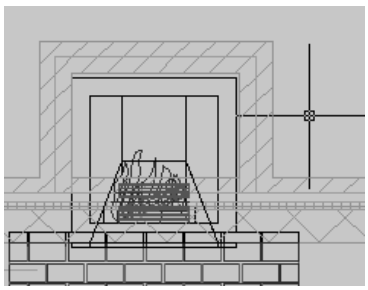
   Use the 3D Orbit tool to inspect how the fireplace appears.

   Go back to a plan view.

9. 

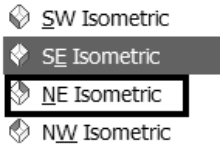
Go to the **Walls** tool palette.

Select the **Brick-090 Brick-090** wall style.

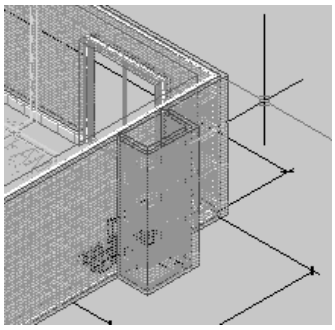
10. 

Add walls in the vertical direction and in the horizontal direction to enclose the hearth.

Switch **Justification** using the Properties dialog as you place the walls.

11. 

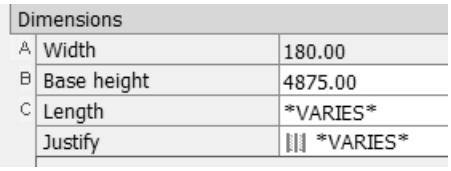
Switch to a NE Isometric view to inspect the chimney.

12. 

We need to make the chimney taller.

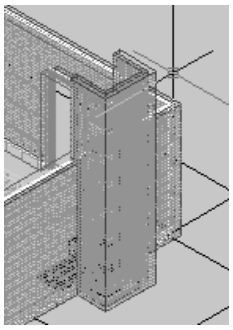
Select the walls for the chimney that were just placed.

Right click and select **Properties**.

13. 

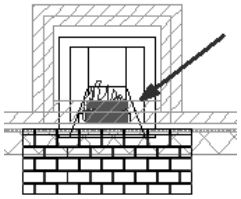
Under Dimensions:

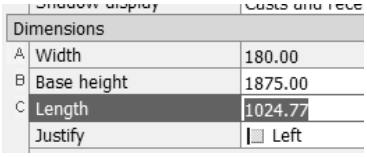
Set the Base Height to **4875.00**.

14. 

The chimney now looks better.

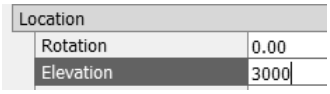
Switch back to a plan view.

15. 



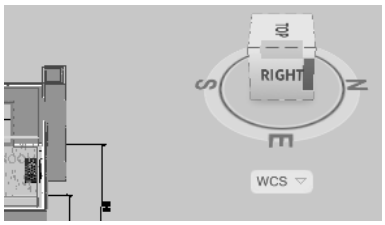
Place a small section of wall to enclose the chimney. Set the height to **1875.00**.

16. Select the wall for the chimney that was just placed. Right click and select **Properties**.

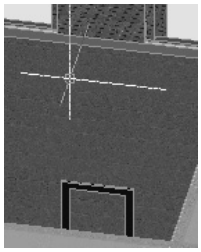
17. 

Scroll down to Location:

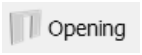
Set the Elevation to **3000**.

18. 

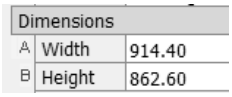
Use new ViewCube tool to inspect your work so far.

19. 
If you switch to a Realistic visual style, you see that we need an opening in our fireplace.

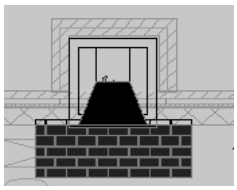
Switch back to a plan view.

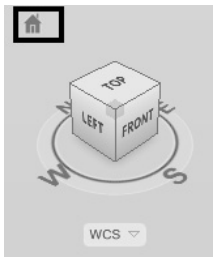
20. 

Select the **Opening** tool from the Design Palette.

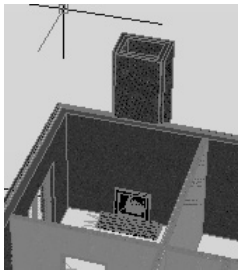
21. 

Change the Width to **914.4**.
Change the Height to **862.6**.

22. 
Place the opening in the wall.

23. 

Select the Home icon to switch to a 3D view.
Then use the ViewCube to inspect the opening in the fireplace.

24. 
Your finished fireplace and chimney should look similar to this.

Save the file as *ex3-11.dwg*.

Close all open drawings.
You can do this by typing **CLOSEALL** on the command line.