Practice exercise

Drawing a Box and Cylinder, Editing the Objects.

Draw a 3D Solid Box and Cylinder using coordinates and Dynamic Input. Apply editing tools to the newly drawn Box and Cylinder.

1. From the Start page, begin a new drawing using the pcad (Imperial Architectural).dwt template file.
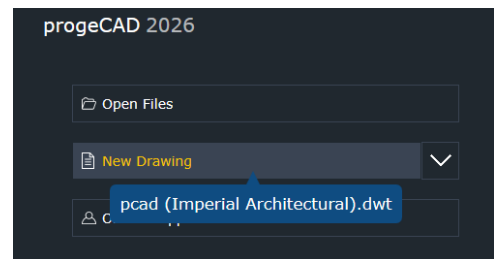

Figure 1. The Start Page menu.

2. Your first task is to set up the drawing editor for working in 3D. Change the workspace to Ribbon Full. Using the Viewport Tools, set the editor to SW Isometric and the Visual Style to Realistic.
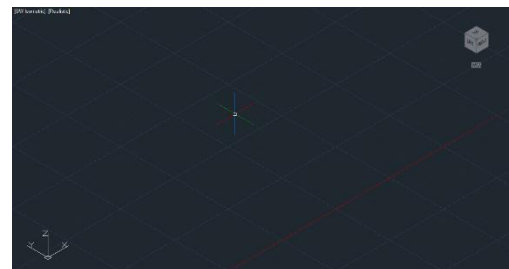

Figure 2. The drawing editor in a 3D Isometric view.

3. Your second task is to draw a 3D Solid Box object. Select the Box command. The first point is at the coordinates of 2,2. Use Dynamic Input to define the other point as 3 and 3. Define the height to be 3 also.
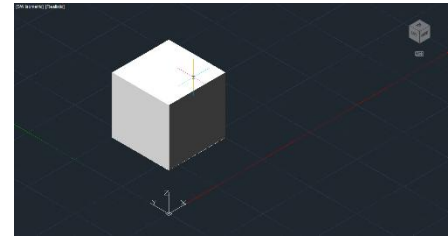

Figure 3.The 3D Solid Box.

4. Your third task is to draw a cylinder. Select the Cylinder command from the pulldown menu under the Box command. The first point is at the coordinates 3.5, 3.5. The radius is .5. Define the height to be 5.
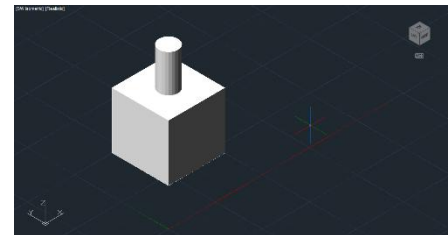

Figure 4. The Box with a Cylinder in the middle..

5. Your next task is to create a hole in the box. Select the Subtract command from the ribbon. Select the box and press Enter. Select the cylinder and press Enter.
6. Use Orbit by holding down the Shift key and the mouse wheel. Move the mouse around to inspect your work and verify the hole.
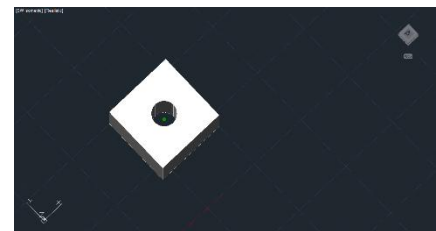

Figure 5. The Box with a hole within it.

7. Your next task is to Fillet the vertical edges of the Box. Select the Fillet command from the ribbon. Press the arrow down on your keyboard and select Radius from the menu. Set the Radius to 1". Select the vertical edge closest to you and press Enter twice. (cont.)
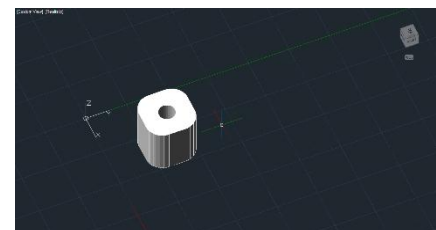

Figure 6. The Box with fillets applied.

8. Proceed to Fillet the other three vertical edges. The radius is already set at 1", so there is no need to change it again. Use Orbit with your mouse to twist the view so that the back edge becomes visible.

9. From the Application Menu, expand the Save As icon and select Save As. Navigate to the same folder as your 2D files and name this one **3D-exercise1.**
10. Close the file tab.
11. *NOTE:* Going forward, this file will make a great starting point for creating and editing other types of 3D Solids.
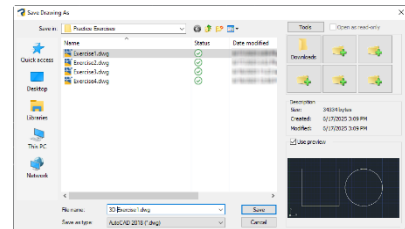

Figure 7. The Saveas dialog box