

EX.No.-2.2 CREATE A 3D SOLID MODEL FROM ISOMETRIC DRAWING

AIM:

To create a 3D model from the given isometric drawing using fusion 360 tool.

REQUIREMENTS:

1. Autodesk fusion 360
2. Windows 10
3. 16 GB of RAM (integrated graphics recommend 1 GB or more)
4. 2.5 Mbps or faster download; 500 Kbps or faster upload

STEP-2: Select the Sketch Plane

Select the TOP (XY) Plane

STEP-3: Create a Sketch

1. Select Sketch > Rectangle > Center Rectangle.
2. Now hover over the origin (center) of the sketch. You should see the cursor snap to this location.
3. Click once to begin placing the rectangle.
4. Type the Tab button and enter the values 56 mm and 18mm for the width and height respectively.
5. Select Sketch > Arc > Center point arc.
6. Click again to place the value (Both end of the sketch). You should see the cursor snap to this location
7. Type the Tab button and enter the values R 18mm
8. Select Sketch > circle > Center point circle.
9. Click again to place the value (Both side of the sketch). You should see the cursor snap to this location
10. Type the Tab button and enter the values dia 16mm
11. Click again to place the sketch.
12. Click Finish Sketch after completing.

STEP-4: Extrude Sketch in XY Plane

1. Select Extrude.
2. Select the sketch.
3. Click again to place the value.
4. Type in the value of 8mm.
5. Press ENTER to accept the value.

STEP-5: Start the sketch command

Select Sketch > Create Sketch.

STEP-6: Select the Sketch Plane

STEP-7: Create a RECTANGLE

1. Select Sketch > RECTANGLE > CENTER RECTANGLE.
2. Now hover over the origin (center) of the sketch. You should see the cursor snap to this location.
3. Click once to begin placing the RECTANGLE.
4. Type the Tab button and enter the values 40mm and 10mm for the width and height respectively
5. Click again to place the RECTANGLE.
6. Click Finish Sketch after completing.

STEP-8: Extrude RECTANGLE

1. Select Extrude.
2. Select the Rectangle sketch.
3. Click again to place the value.
4. Type in the value of 32mm.
5. Press ENTER to accept the value.

STEP-9: Create a TRIANGLE

1. Select Sketch > TRIANGLE > CENTER TRIANGLE .
2. Now hover over the origin (center) of the sketch. You should see the cursor snap to this location.
3. Click once to begin placing the TRIANGLE.
4. Type the Tab button and enter the values 32mm and 12mm for the width and height respectively
5. Click again to place the TRIANGLE.
6. Click Finish Sketch after completing.

STEP-10: Extrude TRIANGLE

1. Select Extrude.
2. Select the TRIANGLE sketch.
3. Click again to place the value.
4. Type in the value of 6mm in both direction option.
5. Press ENTER to accept the value.

STEP-11: Create a PENTAGON

1. Select Sketch > polygon > circumscribed polygon.
2. Now hover over the origin (center) of the sketch. You should see the cursor snap to this location.
3. Click once to begin placing the polygon.
4. Type the Tab button and enter the values 40mm and 30mm, for the width and height respectively and Choose 3 Side
5. Click again to place the polygon.
6. Click Finish Sketch after completing.

STEP-12: Extrude PENTAGON

1. Select Extrude.
2. Select the PENTAGON sketch.
3. Click again to place the value.
4. Type in the value of 10mm.
5. Press ENTER to accept the value.

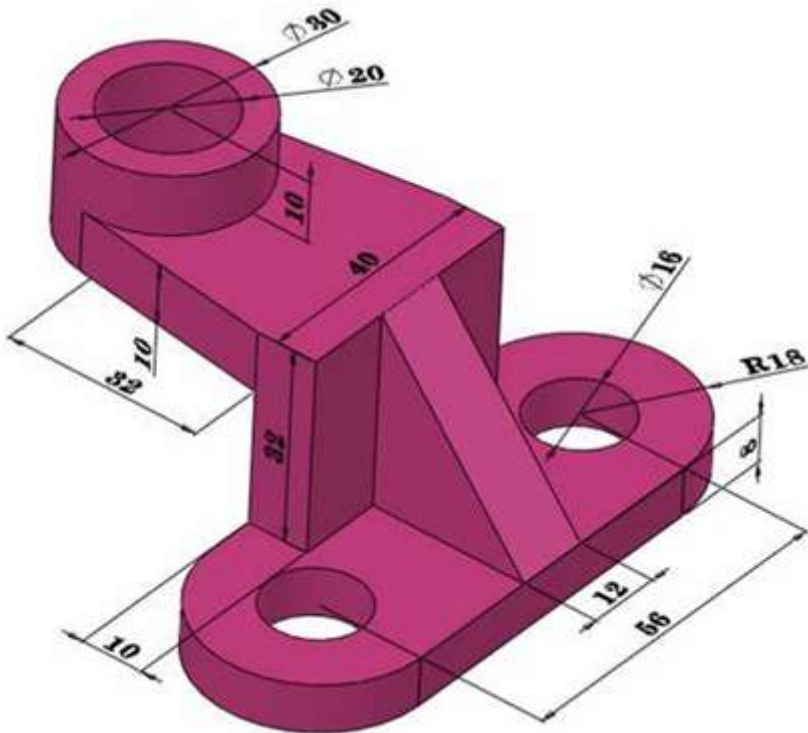
STEP-13: Create a CIRCLE

1. Select Sketch > CIRCLE > CENTER CIRCLE.
2. Now hover over the origin (Pentagon end side) of the sketch. You should see the cursor snap to this location.
3. Click once to begin placing the CIRCLE.
4. Type the Tab button and enter the value DIA 30mm and 20mm, inner and outer diameter respectively .
5. Click again to place the circle.
6. Click Finish Sketch after completing.

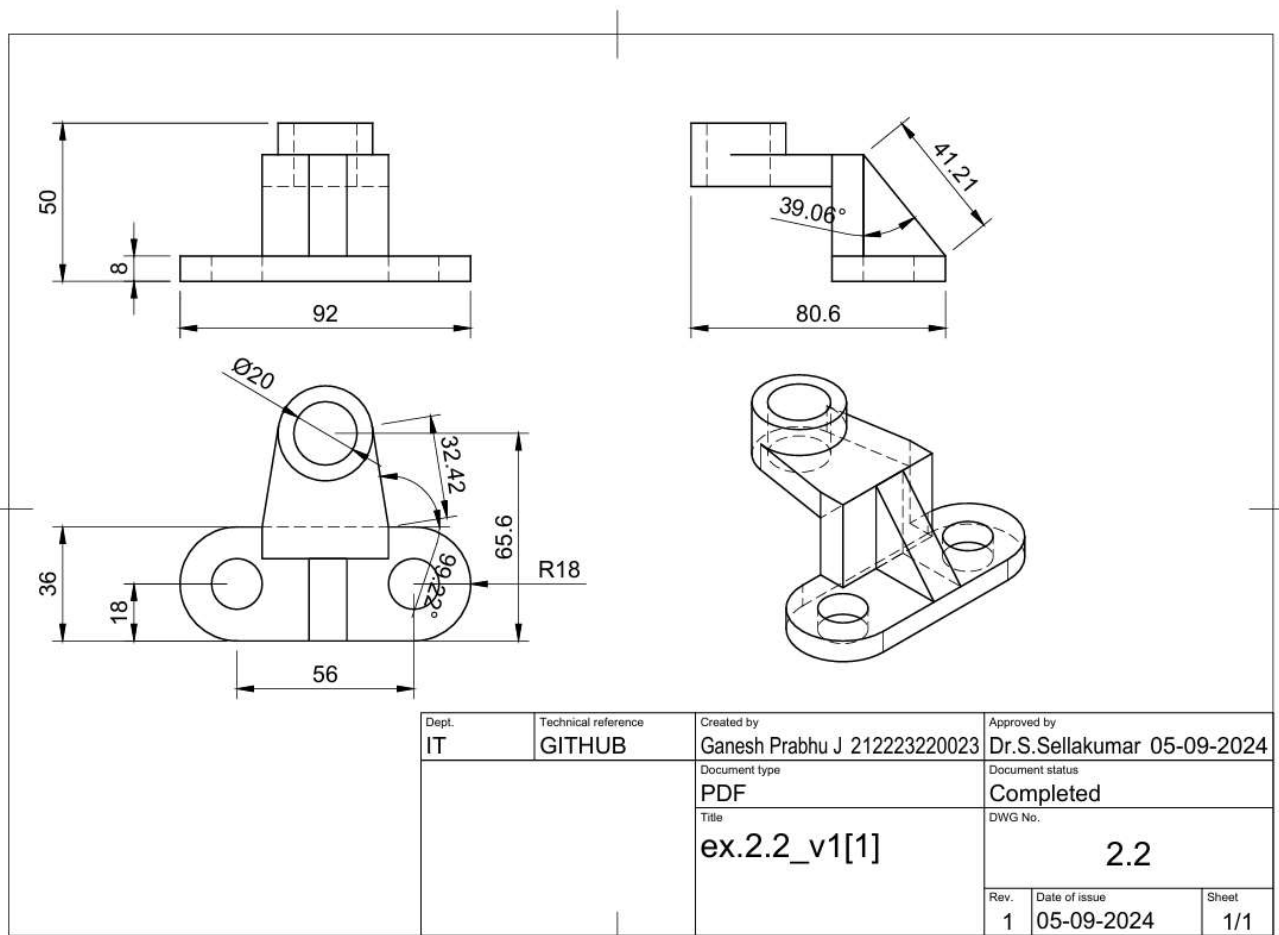
STEP-14: Extrude CIRCLE

1. Select Extrude.
2. Select the pentagon sketch.
3. Click again to place the value.
4. Type in the value of 10mm on both side.
5. Press ENTER to accept the value.

INPUT:



Output:



RESULT:

Thus, the 3D model is created from given isometric drawing.