

Exercise duration: ~20 minutes

Use direct modeling tools to modify a design

Use direct modeling tools to change the location of features, remove fillets and adjust the overall size of a part.

Learning objectives:

- Use Measure to inspect dimensions.
- Use Move to adjust feature locations.
- Use Fillet.



The completed exercise

1. Upload and open the supplied dataset, ***Direct Edit Plate - Practice.f3d***.



Figure 1. Uploaded Design

2. Use Inspect > Measure to identify the distance horizontally between holes is 4.00 in.

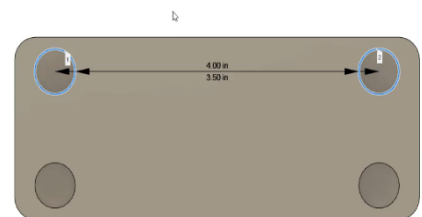


Figure 2. Measure Hole Distances

3. Use Inspect > Measure to identify the distance vertically between holes is 1.25 in.

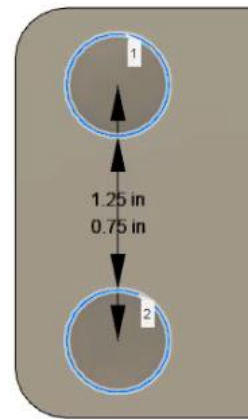


Figure 3. Measure Hole Distances

4. Use Move with the Face type option and select the two hole faces on the left side of the part.



Figure 4. Select Faces

5. Using the manipulator or numerical inputs move the hole faces 0.5in to the right.

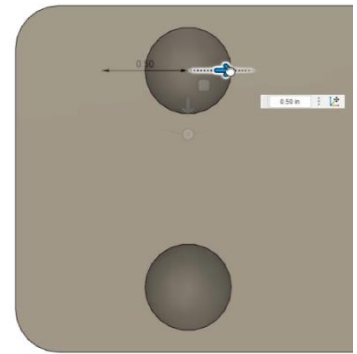


Figure 5. Move Faces

6. Repeat the face move operation with the two holes on the right moving them 0.5 in. in the left direction.



Figure 6. Move Faces

7. Repeat the face move operation moving the two upper hole faces down a distance of 0.125 in.



Figure 7. Move Faces

- 8.** Repeat the process one last time moving the lower two hole faces up a distance of 0.125 in.

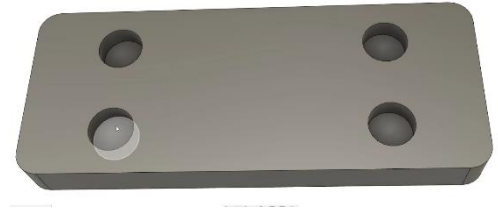


Figure 8. Move Faces

- 9.** Select the four fillet faces and press DEL on the keyboard or use Modify > Delete to remove them.



Figure 9. Remove Fillets

- 10.** Use the Move tool on each outside face moving them a distance equal to the amount each hole moved.

NOTE: Side faces will move in 0.5 in. and top and bottom faces will move 0.125 in.

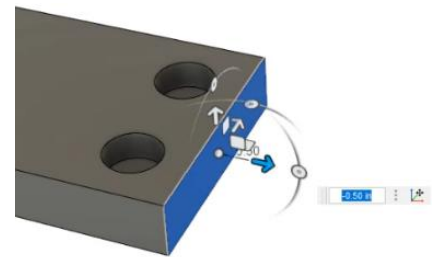


Figure 10. Move Faces

- 11.** Use Fillet to add 0.25 in. radii fillets to each vertical edge on the design.

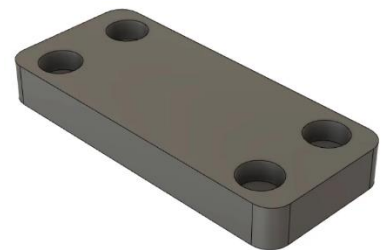


Figure 11. Add Fillets

12. Save the drawing.

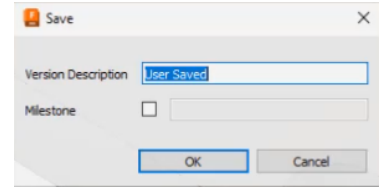


Figure 12. Save