Lesson: Create a Basic Sketch

In this lesson, you’ll learn several different methods to create and edit sketches.

Learning Objectives

- Create a new sketch.
- Create sketch entities.
- Edit a sketch.

The completed exercise

1. To continue the folder organization that was started in a previous lesson, use the Data Panel to create a new Week 3 folder inside the Course 1 folder. Navigate to the Week 3 folder so any new work will be saved inside it. After the folder is created, create a new untitled design. Minimize the Data Panel after you’re finished.

2. Sketches need to be created on either a plane or a planar face. One method for selecting a plane is to expand the Browser’s origin folder. Select a plane by clicking on the plane you want to sketch.
3. A different way to create sketches is to click Create> Create Sketch. Alternately, you can right-click on the XY plane in the Browser and select Create Sketch from the drop-down menu.

4. A third method for creating sketches is to select a plane in the Canvas area. Right-click the plane and select Create Sketch from the Marking Menu’s drop-down menu. If the planes are not visible in the Canvas area, click the eyeball icon next to the Origin folder.

5. A different way to create a sketch is to press a keyboard shortcut for a tool. Press the L key to open the Line tool. After the tool is open, you will need to select the plane on which you want to sketch. Choose one of these methods to begin a sketch on the XY plane.
6. Once a sketch is started, the camera will rotate normal to the sketch plane and the ribbon’s Sketch tab will automatically open. Investigate the tools in the Sketch tab.

7. Some sketch tools can also be found in the Marking Menu’s drop-down menu.

8. A different way to access the sketch tools is to activate the Shortcut menu. To do this, press the S key on the keyboard.

9. Click Create> 2- Point Rectangle.
10. Inside the Sketch Palette, choose the Center Rectangle option.

11. In the Canvas area, left click the origin to fix the center of the rectangle to the origin. Drag the cursor outwards and left click a second time to place the rectangle. The lines describing the perimeter of the rectangle are blue, which indicates the rectangle is underdefined. The term underdefined means that the sides of the rectangle can be repositioned or resized. Once the rectangle is fully defined, the sides will turn from blue to black and they will not be will able to move. Press the Esc key to leave the Rectangle tool.

12. Hover your cursor over each sketch entity. The constraint icon with the two parallel diagonal lines indicates a parallel constraint. The sides of the rectangle will always be parallel with each other regardless of the location or size of the rectangle. Hover over the rectangle’s corner and notice the perpendicular constraints appear. This constraint ensures the two sides are perpendicular to each other. One of the rectangle’s sides also has a horizontal constraint.
13. The rectangle can be resized by clicking on a corner point and dragging it to a new location. Despite the size of the rectangle, the horizontal, parallel, and perpendicular constraints will be respected. Release the mouse button when you have reached the size rectangle you want. Left click in an open area of the canvas to deselect any sketch entities.

14. To finish the sketch, click the Finish Sketch button in the ribbon. Alternately, you can click the Finish Sketch button at the bottom of the Sketch Palette.

15. A sketch can be edited after the Finish Sketch button has been clicked. Expand the Browser’s Sketches folder. Right-click on Sketch1 and choose the Edit Sketch option from the drop-down menu. Also note the other options available in the drop-down menu such as the ability to redefine the sketch’s plane.
16. A different way to edit a sketch is to right-click on the sketch’s icon in the timeline. Select Edit Sketch from the drop-down menu. You can also edit a sketch by double-clicking on the sketch’s icon in the timeline.

17. Once inside the sketch, you can adjust the sketch to suit your new requirements.
18. Click Create > 2-Point Rectangle and choose the Center Rectangle option from the Sketch Palette. Beginning at the origin, add a second rectangle inside the first rectangle. Click the ribbon’s Finish Sketch button when you are finished. Continue to explore sketches and continue to the next module after you finish.