

Lesson 1:

Topics Covered:

Parametric Modeling vs Direct Modeling

- Different tools for different uses
- SketchUp versus Fusion360

Resources/Models/Pictures are from

Tutorial Books. Autodesk Fusion 360 Basics Tutorial (p. 13). Tutorial Books. Kindle Edition.

Why Parametric Modeling?

- Parametric modelling excels at manufacturing hence why its used most often in the manufacturing industry
- Types of parameters
 - Dimensions (length, unit, deg)
 - Constraints (midpoint, horizontal, perpendicular, equal, parallel)
- Often Feature-Based - Features are shapes that are combined to build a part.
 - You can modify these shapes individually.
- Features are sketch-based.
 - A sketch is a 2D profile and can be extruded, revolved, or swept along a path to create features.

Tour of Fusion360

Design Workspace (What is it?)

Generative Design (What can it be?)

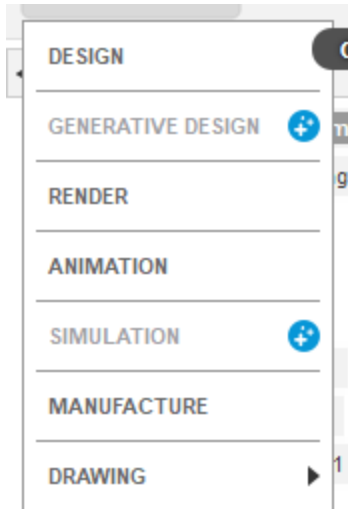
Render (How will it look?)

Animation (How will it operate?)

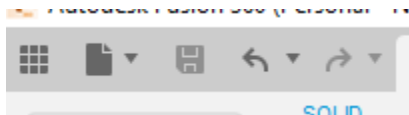
Simulation (Will it work?)

Manufacture (How will I make it?)

Drawing (How can I show it to you?)



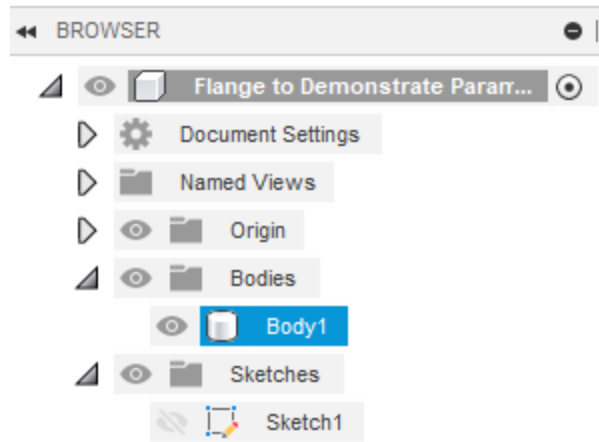
File Menu



View Cube



Browser Bar



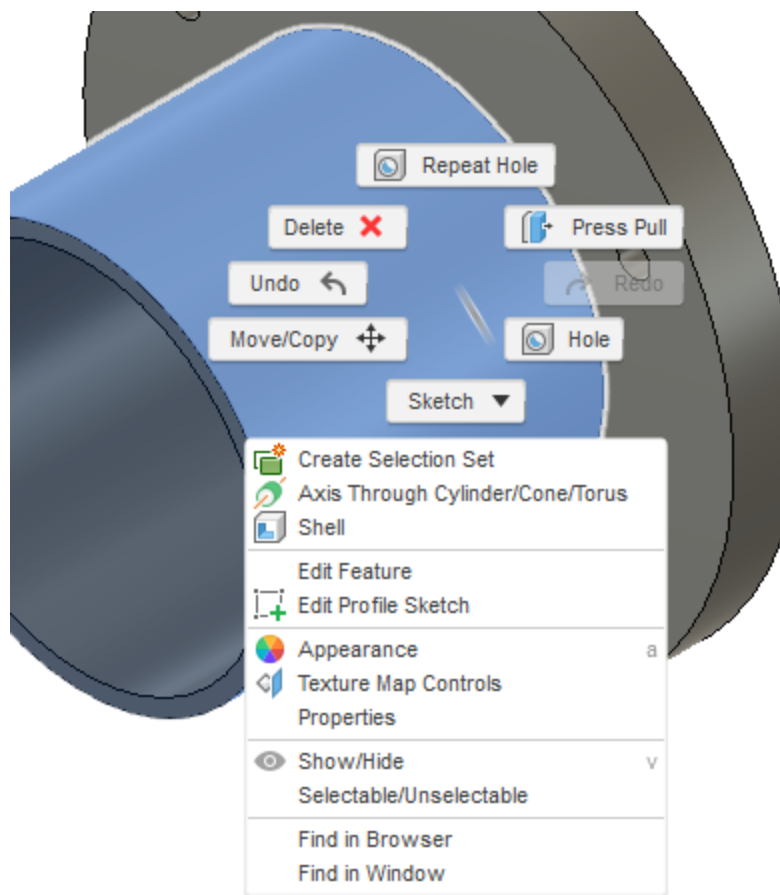
Timeline



Navigation Bar

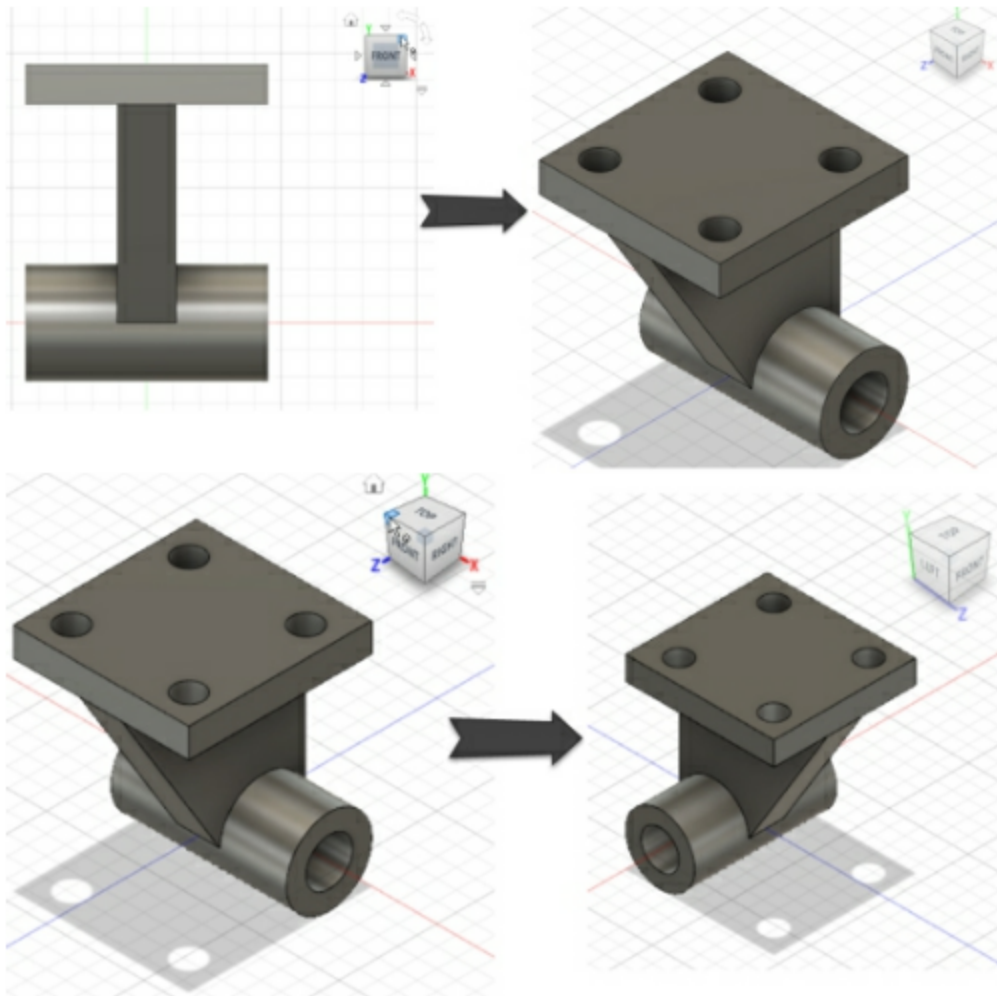


Shortcut/Marking Menu



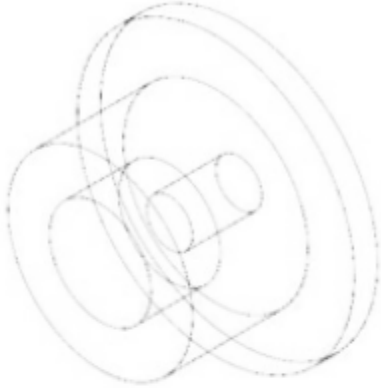
View Cube

It is located at the top right corner of the graphics window. It is used to set the view orientation of the model.



Viewing Styles

Wireframe



Wireframe with Hidden Edges



Wireframe with Visible Edges Only

Today's Objective:

Become comfortable with Fusion's 3 to 6 basic functions/looks in the Design Workspace.

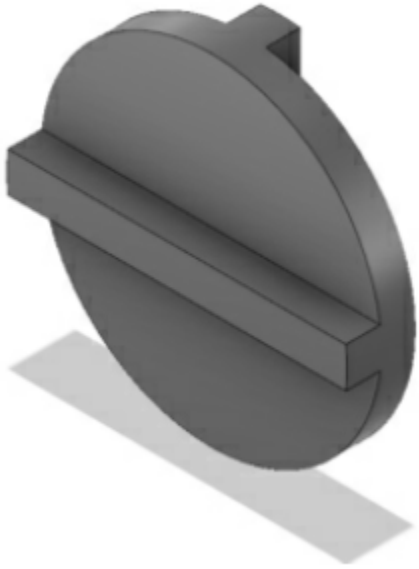
Tools:

Sketch

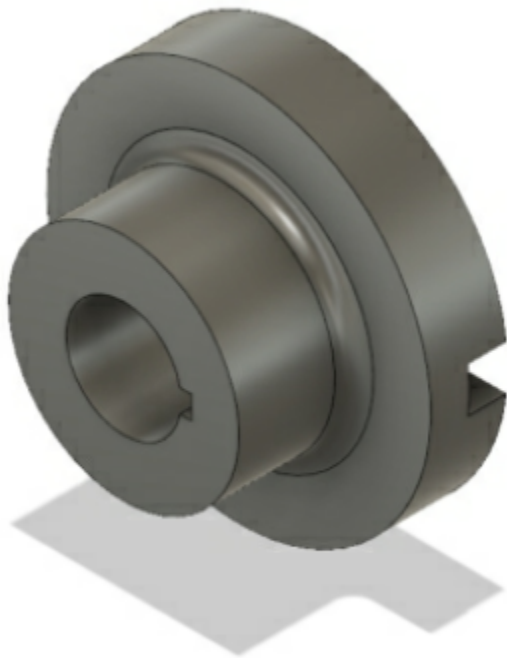
Circle

Dimension

First project:



Project 2

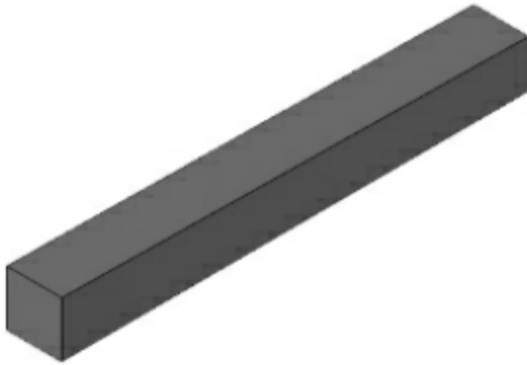


Project 3:



Project 4:

- Creating a Box feature
- Applying draft



Project 5:

Student Choice



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