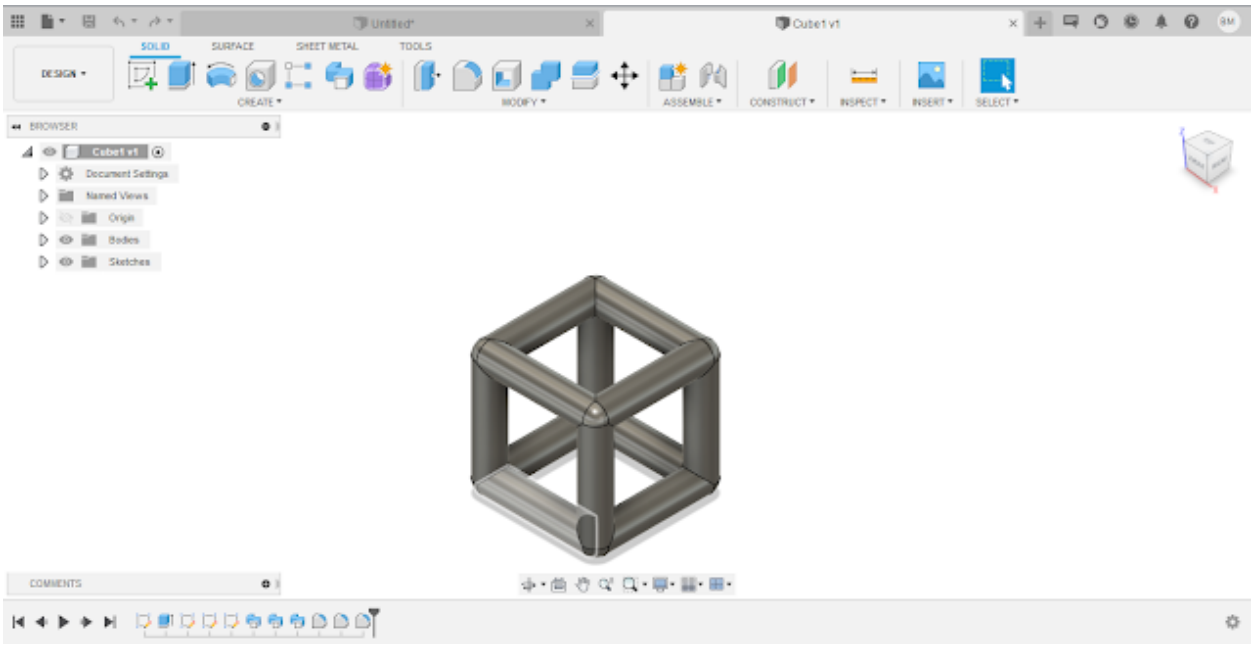
How to make a cube!

This is a good spot to start with fusion 360.



In this Tutorial I will cover how to make a cube in fusion 360. This Cube is a very good place to start. The operations that I will use are very basic. This model was based on the torture cubes for calibration of 3d printers.

You will need

1. Fusion 360 License (Personal/Education)

2. Computer with Fusion 360

3. 3d Printer **OR** 3d printing service. (Optional) - This model is just to learn how to use this tool…

- I recommend reading this first: https://files.benja.ml/mp/FusionTutorial1.pdf

Notes:

- All of these (⌨) are based on the standard keyboard shortcuts for Fusion 360, If you have changed any of these they will not work at all.
- If you are using inches just type mm at the end.

We will be using these Functions

I would pin Fillet to the shortcuts

Solid tab.

- Create Sketch
- Extrude (⌨E)
- Sweep
- Fillet (⌨F)

Sketch Tab

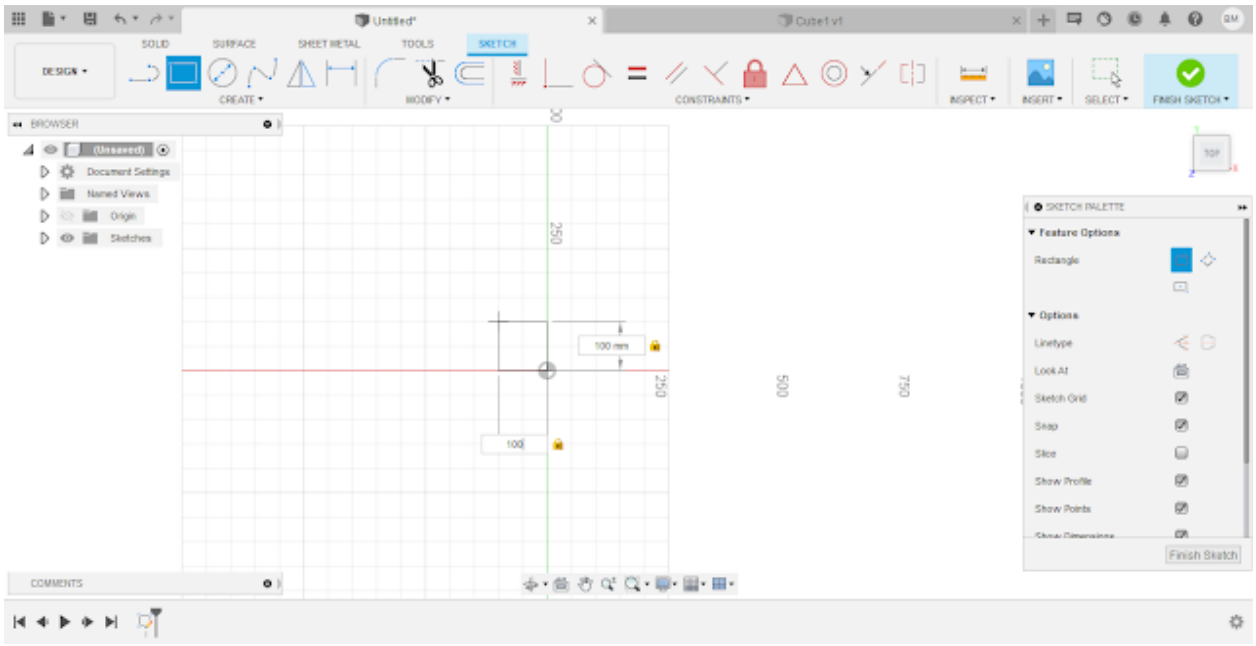
- Two point rectangle (⌨R)
- Line (⌨L)

No cylinders ;)

Step 1: Create The first Sketch.

In this step

- Create sketch
- Two point rectangle (⌨R)



Use a two point rectangle (⌨R) To Create the base of the cube. The base should be 100mm*100mm. (Type 100mm Then press the tab key to go to the next dimension.) Hit enter when you are finished making the square

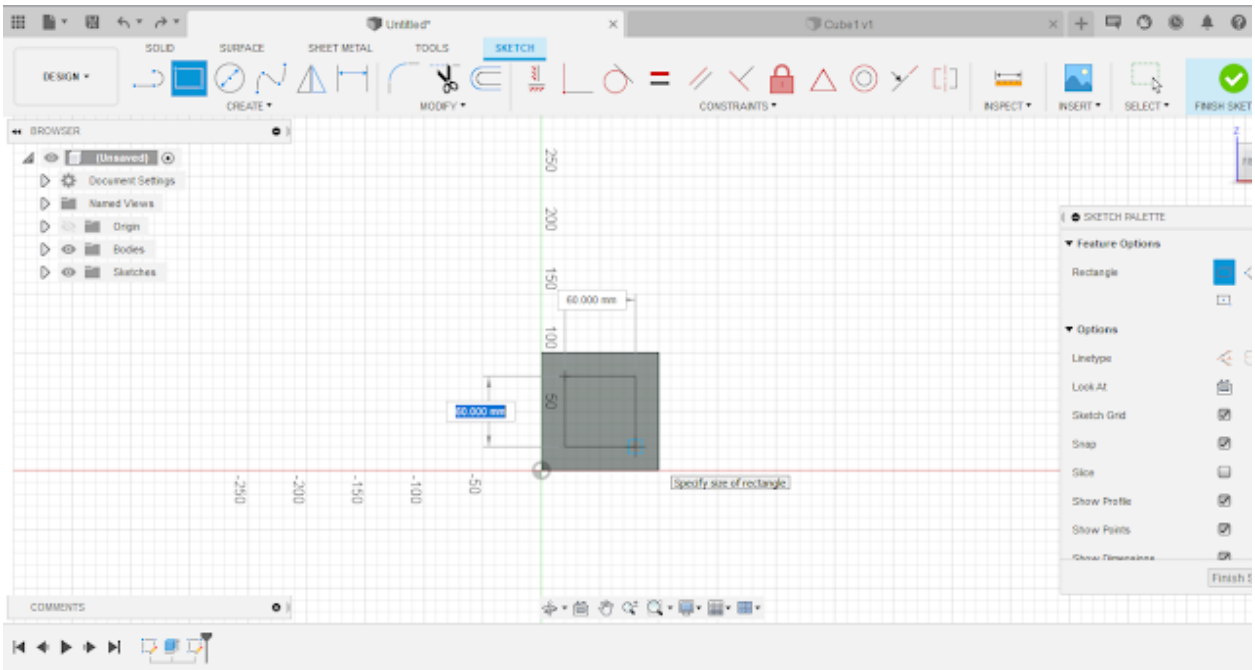
Use the E key to Save, Exit and Extrude. Extrude it 100mm.

Step 2: Creating The Profiles and Paths.

In this step

- Create sketch
- Two point rectangle (⌨R)

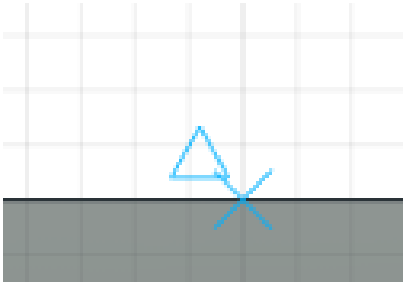
Create your sketch on one of the Sides of the cube (Hit create sketch, Select a face).



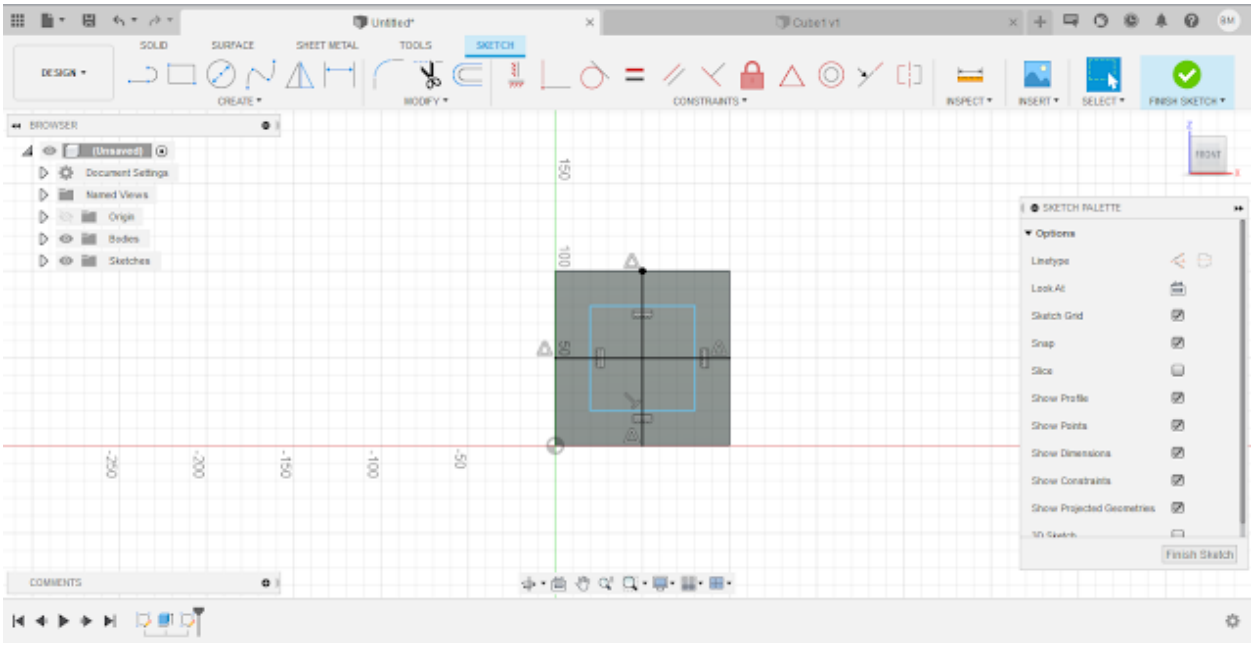
Use the two-point rectangle (⌨R) to create a square (60mm*60mm).

Draw two lines going Horizontal and vertical. Make sure that they are going down the middle of the face. You will see a Triangle Indicating that it is the mid point. If you make

a mistake you can always use the midpoint tool. (Select the top point then the sketch line)

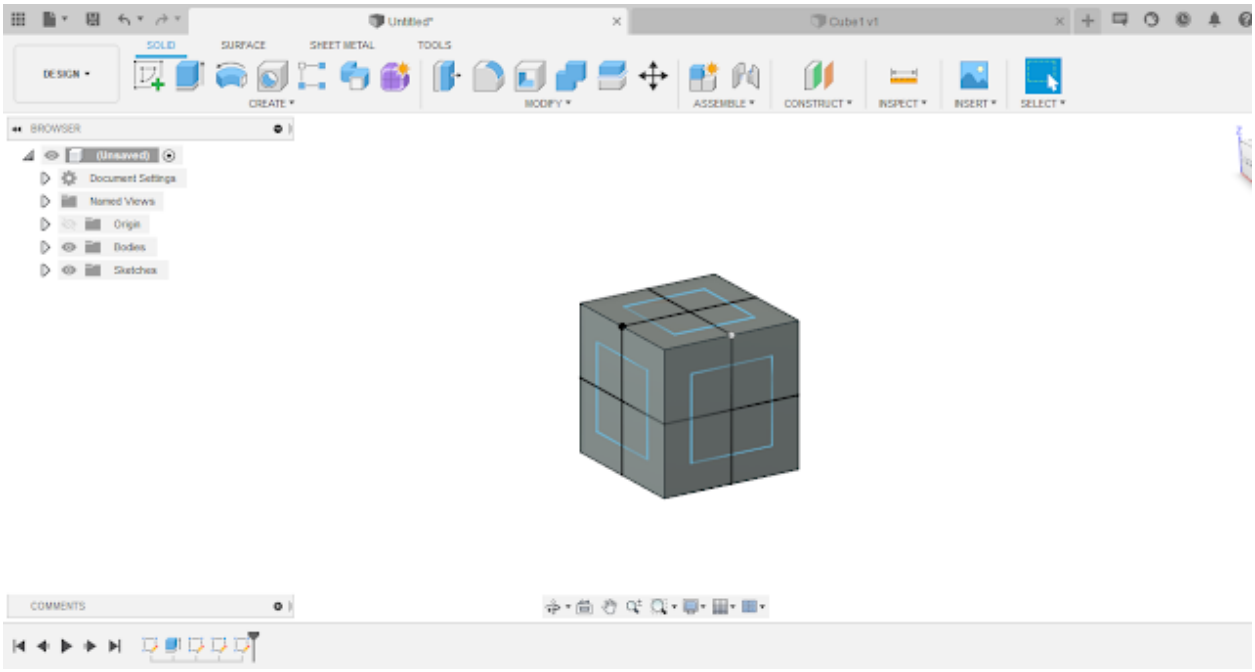


The sketch should look like this at the end:



Get familiar with this step because you will be doing it three times. (Top, Left and Right sides)

All three should look like this:



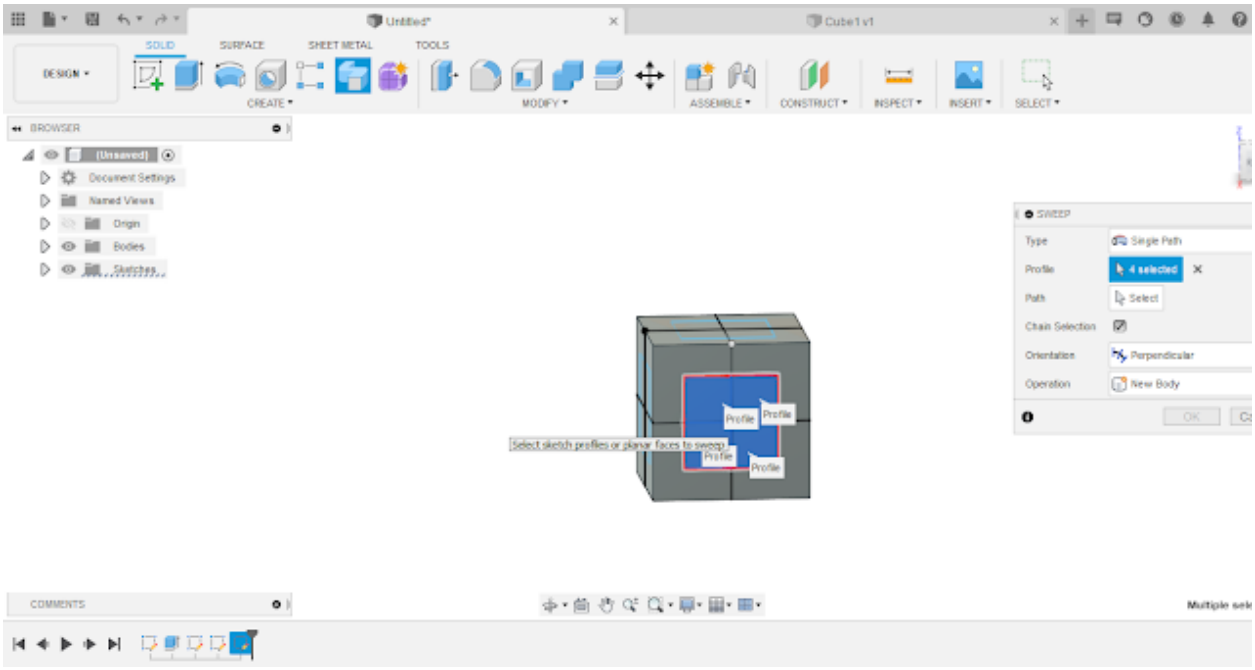
Step Three: Sweeping!

In this step

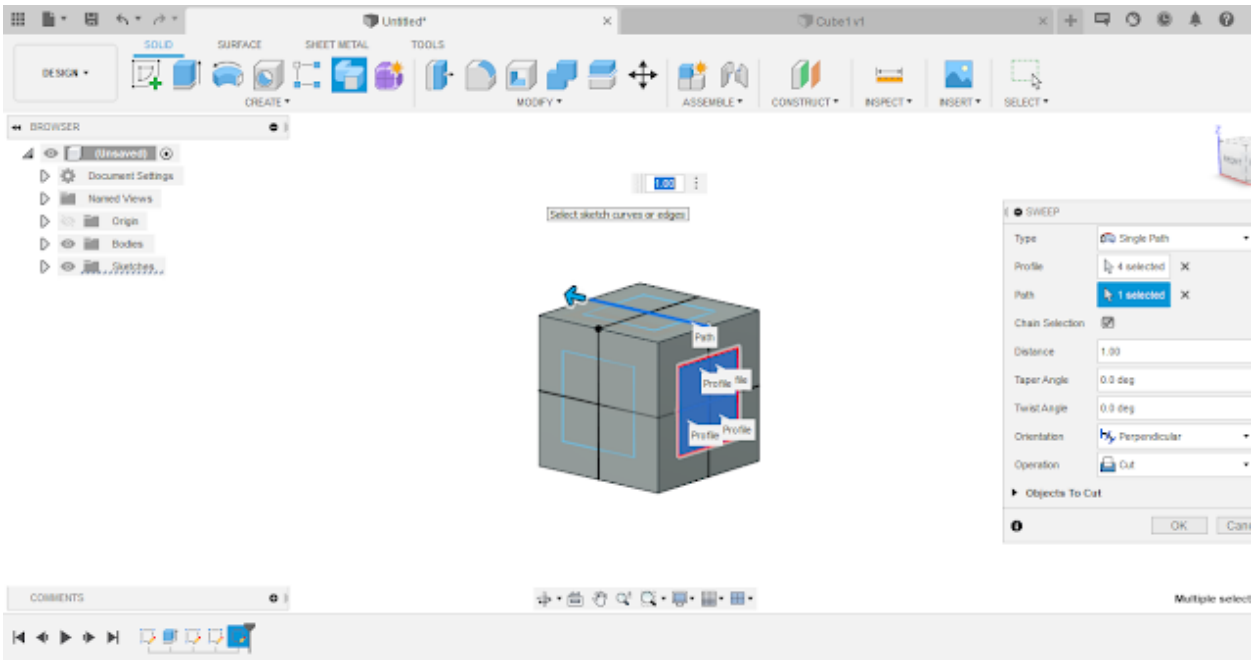
- Sweep

Use the sweep tool to create the holes.

First you want to select ALL Squares on one side:



Then you want to select the Line that goes over the Profile.

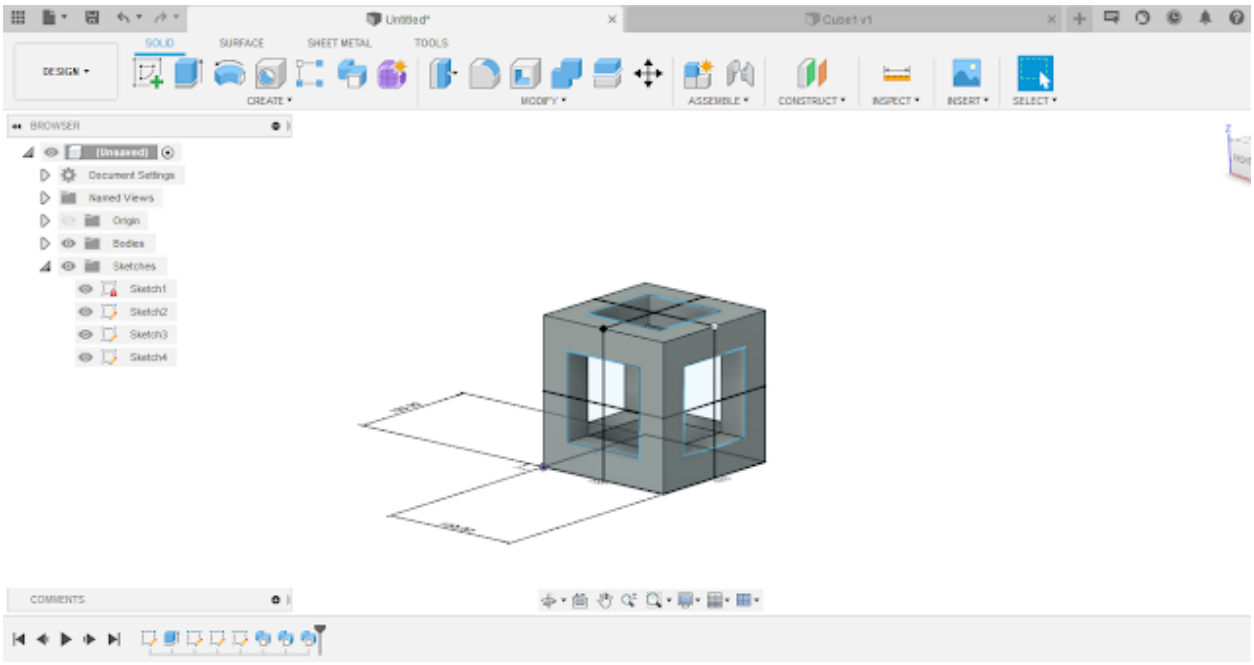


Hit enter and we are done!

Go down in to the sketch menu and re-show all sketches

You want to do that Three different times (Top, Left and Right sides)

Your cube should now look like this:



Hide all of the sketches.

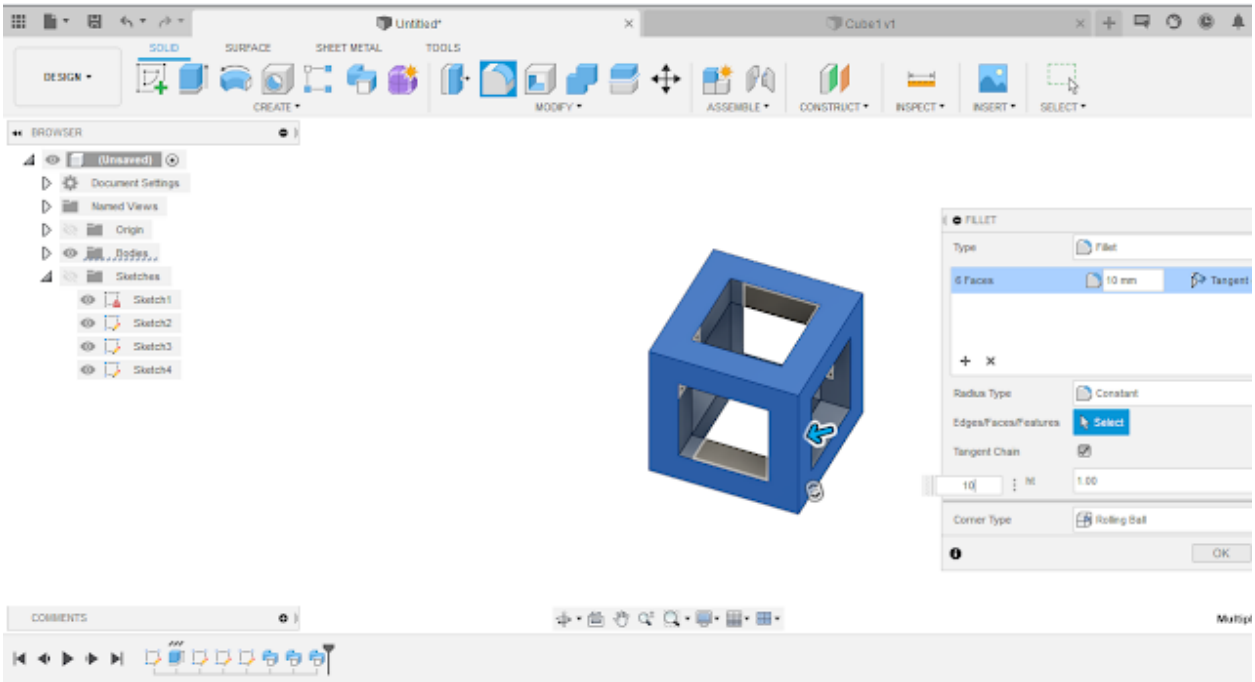
Step Four: Rounding The edges.

In this step:

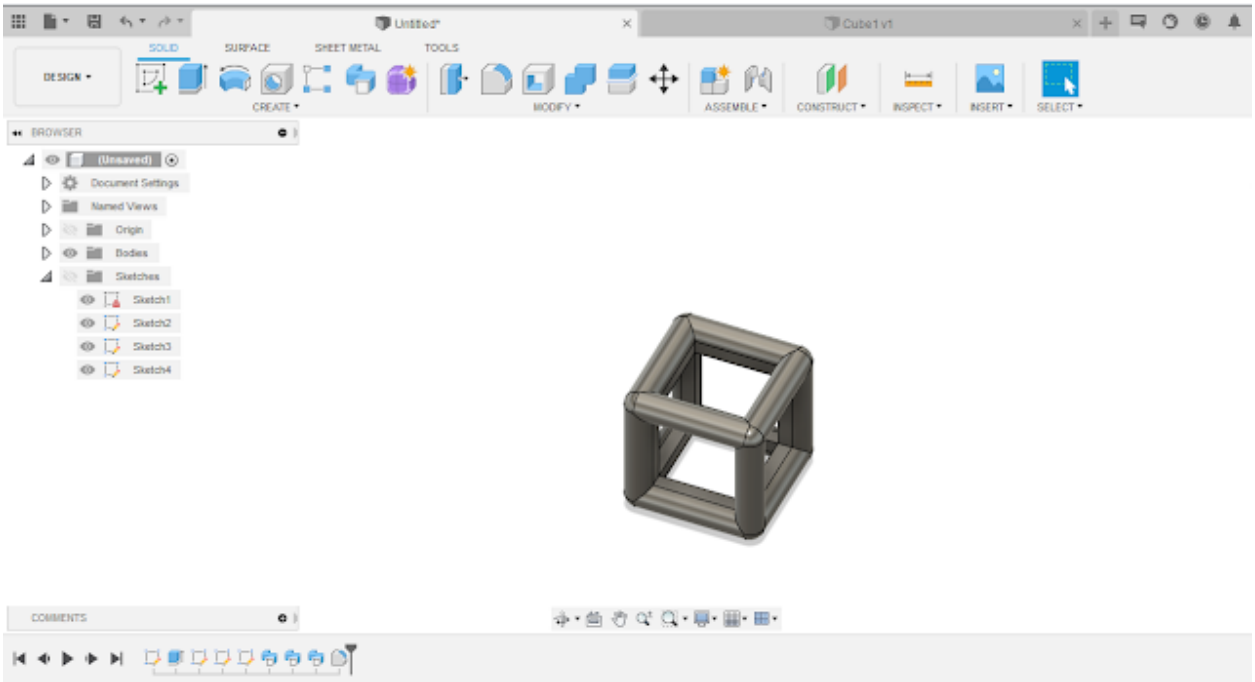
- Fillet (⌨F)

This step gives it the Rounded edges that we see.

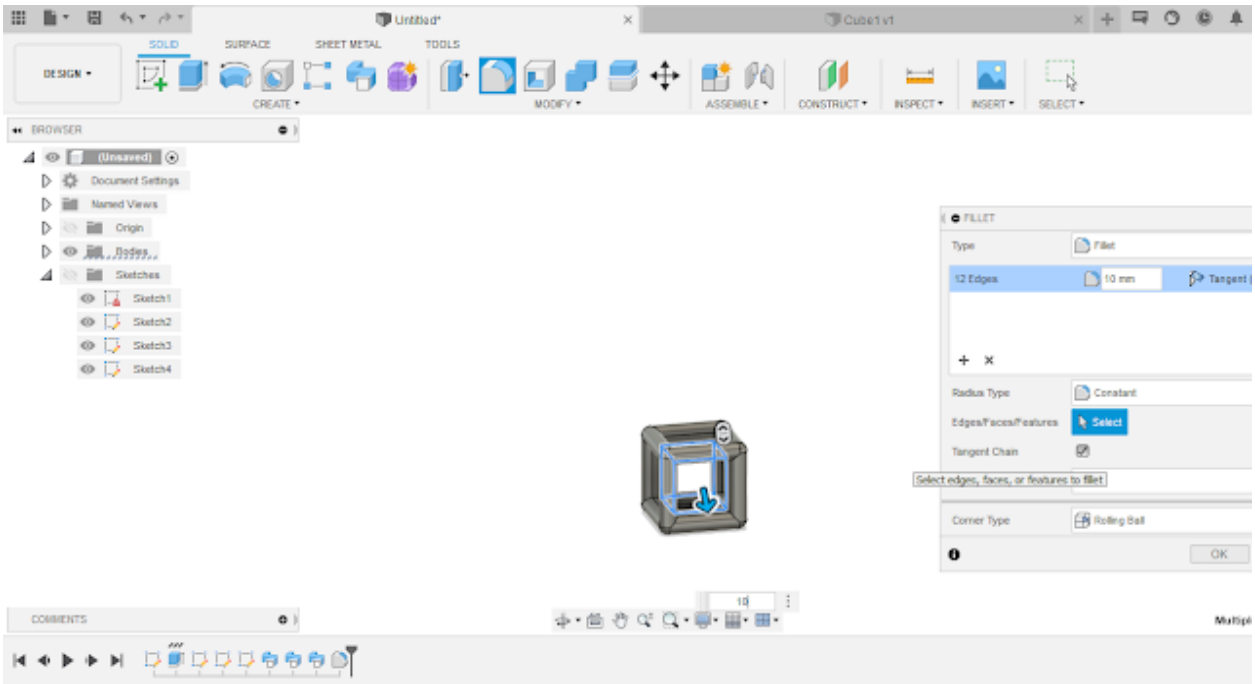
Click Fillet (⌨F), Select all outside faces (6).



Enter 10mm, Enter.



Then we want to select all of the inside edges.



Enter 10mm then hit Enter. The cube is complete!

Learn more:

Q: Using a tool that we have not used how would I make a 3*3 Cube?

A: Use the Move/Copy Tool (⌨M), Select the cube and make three copies of it!

[1]Print:

Nozzle temp: 220 °C

Bed temp: 70 °C

Infil: 20%

2021 Monster designs

Please keep all atrubutions!

[1] These are the settings recommended by the manufacturers. Printers & Filament vary consult manufacturer's guidelines (PLA) Please follow all safety guidelines when printing.