Bucknell UNIVERSITY

Formlabs Form 2

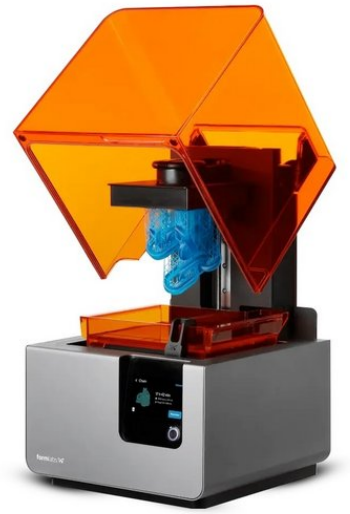
Tutorial for use of Formlabs Form 2 resin printer.

Written By: Jacob Nickle



This document was generated on 2024-11-03 05:02:40 PM (MST).

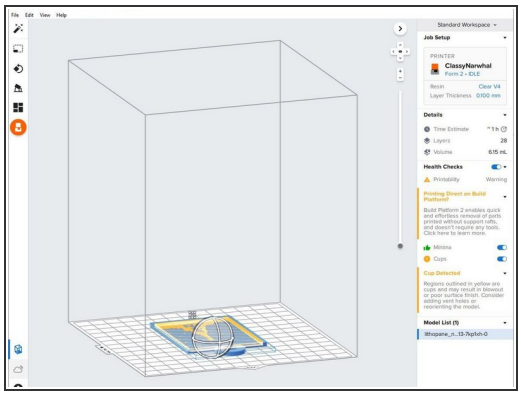
Step 1 — Formlabs Form 2



- Form 2 printer is a stereolithography (SLA) resin curing based 3D printer.
- There are a few differences and similarities to SLA 3D printing when compared to the typical FDM printing
- Simplistically, a 405nm violet laser cures resin layer by layer until a 3-dimensional part is produced. A video explaining further can be found here.
- This tutorial will teach only the basics of resin printing to get you started and is not an all-inclusive guide to resin printing.
- It is assumed that the user has a 3D model that fits within the Form 2 build volume and is a valid part file

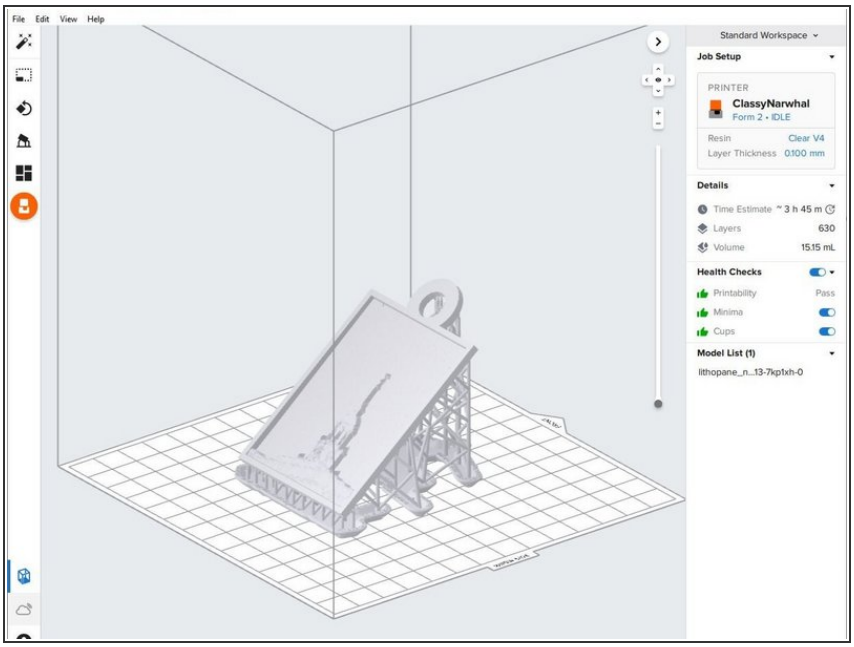
Step 2



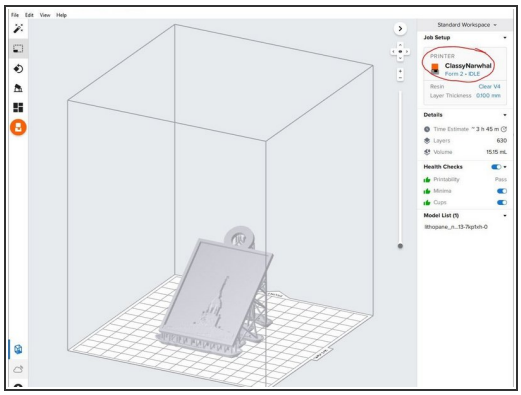
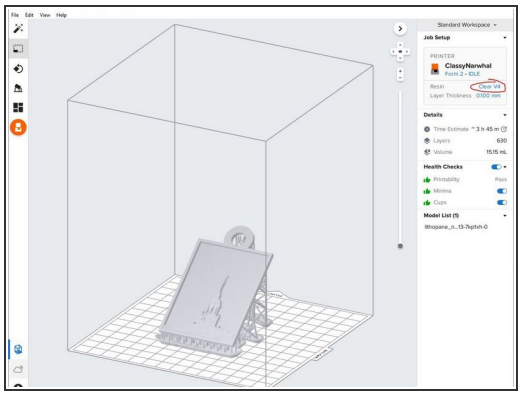
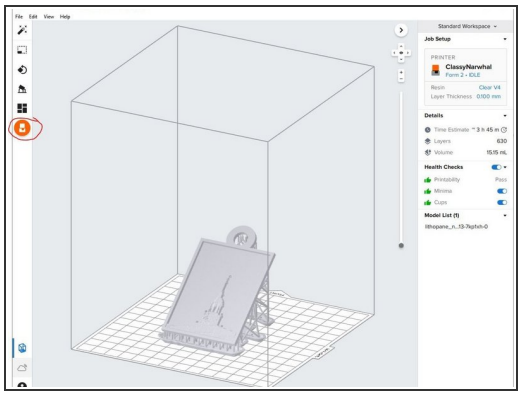
- log onto the BME Laptop in Fab lab using credentials provided at the top of the screen
- Click on PreForm slicer icon as seen in image
- Open 3d file within PreForm with a STL/OBJ/3MF file format

Step 3



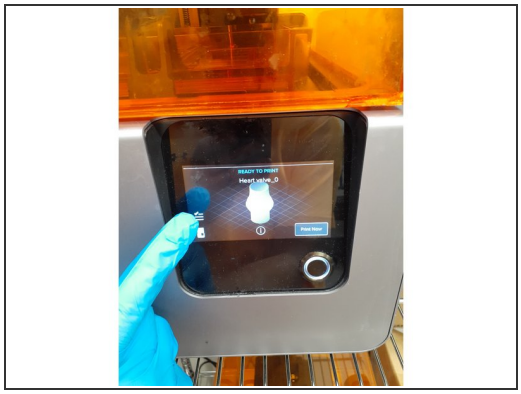
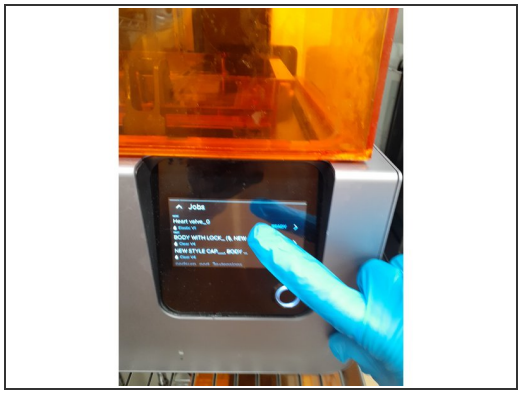
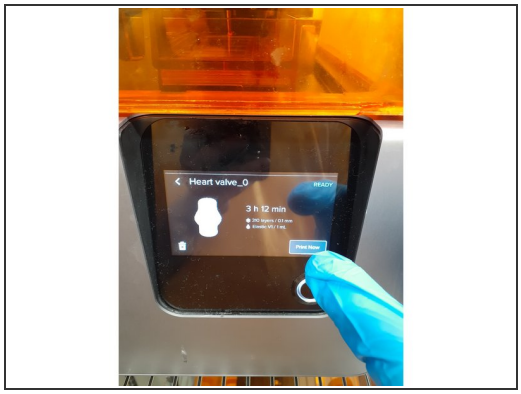
- Roughly verify scaling of part by visually identifying size of object on the screen. If needed, scale your part
- Orient your part so as to avoid cupping or other common issues by using the orientation icon
- Autogenerate supports . Supports are needed in areas that would otherwise not be connected to the build plate or need extra support in order to print properly

Step 4 — File transfer to printer

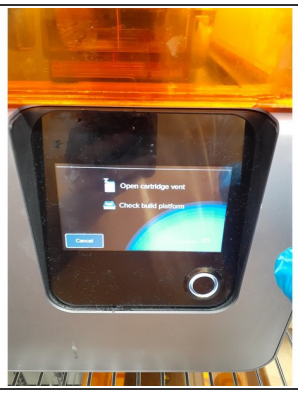
- Verify printer is connected to PreForm slicer. The printer is named "ClassyNarwhal"
- Verify the material type you intend to print with. The default material is the "Clear V4"
- If another resin type is desired than what is currently in the printer, ask the Lab Director for assistance in changing the resin tank and resin cartridge
- Transfer file to printer by clicking the orange print icon on the left of the screen

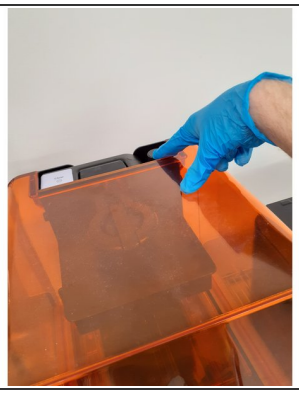
Step 5 — Starting Print on Form 2

- Before touching machine, put on PPE including safety glasses and gloves
- Find the file that you put on the printer via home screen
- Tap **Print Now**. This will not immediately start the print. It will only begin the process and prompt you on next steps

Step 6







- The screen will now show two items to verify before printing
- Open cartridge vent as seen on the image to allow the printer to autofill with resin
- Verify that the build platform is securely on the printer as seen in image
- Press the push button to start the print

Step 7 — Washing



- After a print is finished, it needs to be washed in Isopropyl alcohol.
- Before transferring the part to the Form Wash, put on gloves
- Please be considerate and mindful by cleaning up any resin that drips onto the floor or workspace.
- A great video explaining washing of your part can be found here.
- The specific settings for length and quantity of washes can be found here.

Step 8 — Final Cure



- FormLabs provides cure times and temperatures in this chart.
- Currently we do not have the FormLabs cure station but alternatively use an Elegoo Mercury Plus to cure parts
- To use the cure station follow these steps:
- remove lid
- place washed part on stage
- replace lid
- add cure time according to FormLabs chart (15-30 min for clear)
- start curing procedure by pushing play