Computer Engineering Department

CE102L: Computer Aided Engineering Design Lab

Lab 13

Open Ended Lab: Design a real-life project on SolidWorks that resolves the issue faced by you at home. Also print using 3D printer and present the resolved issue.

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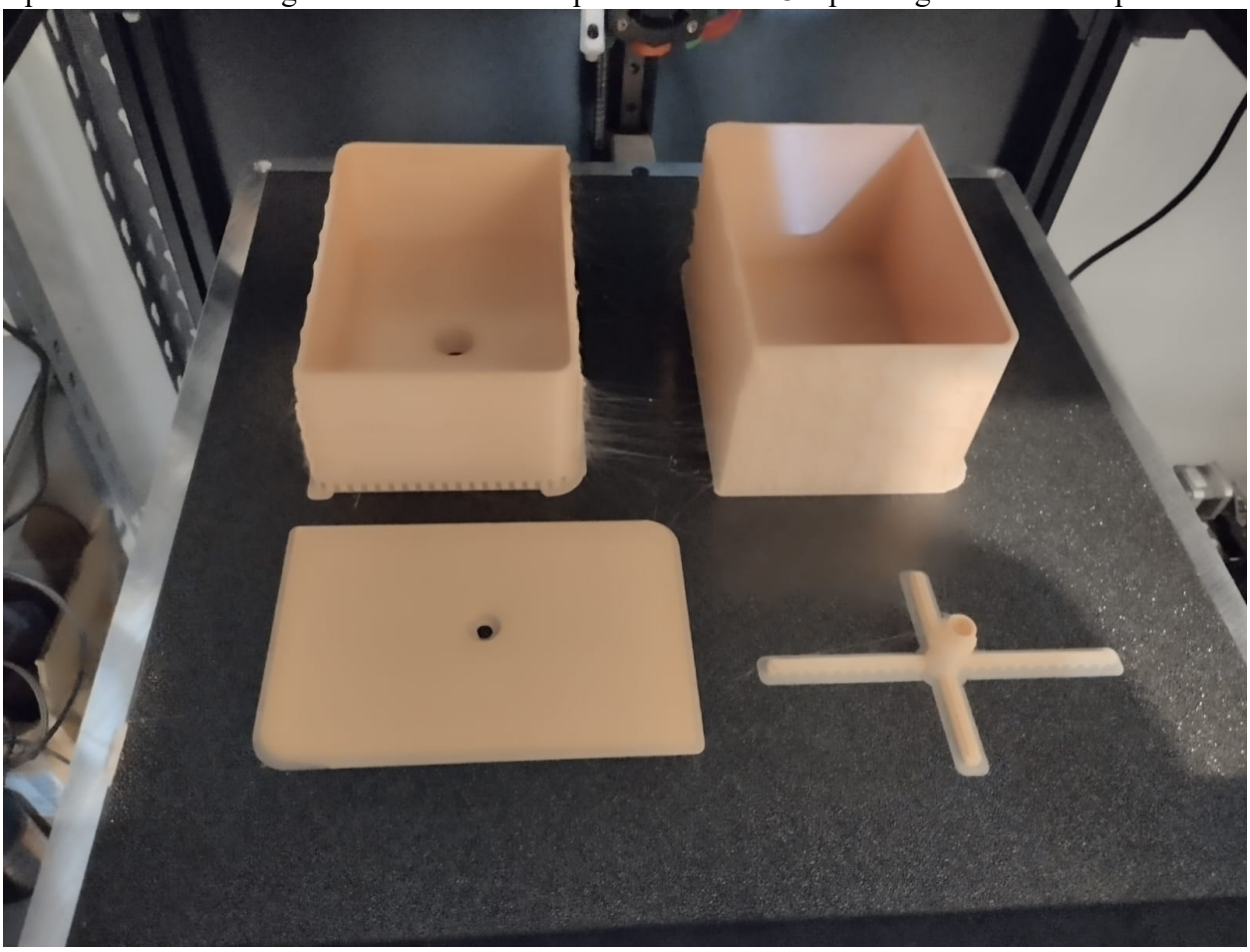
Printing of 3D model:

The part files are converted into STL files which are then turned into real objects using a 3D printer. First, the STL files are converted to machine language (G-code) using a process called slicing. Attached below is a picture after the 3D printing had been completed:



Placement of model at point:

The 3D model is to be used in the kitchen for storing soap and sponge in a well-organized manner. Below is a picture of the model at usage point:

Stake holder Analysis:

The model is being used in the kitchen and it works perfectly. It has solved the problem of buying a new bottle every time, now we just must buy sachets of soap, or just use water and powdered soap and fill the dispenser. It also provides space to keep the sponge. Now the kitchen sink looks nicer and the unpleasant odor of used soap and sponge is also gone as the soap is always concealed inside the dispenser. It also takes much less space than when the soap and sponge were stored separately, and it adds to the charm of my kitchen.

Whenever any relatives come over to my house and see his dispenser on my clean kitchen sink, they are always impressed and say that it would help them a great deal if they had something like this to help store the dishwashing materials.

Conclusion:

The model is working perfectly. It stores the soap and pumps it nice and smooth. A decent amount of soap is pumped when required which improves the efficiency and makes it last longer, and as the sponge can be completely placed on the lid, no drop of soap goes to waste.