ID NUMBER:2000031715	SECTION: NS05	NAME:Medepalli Prem Chandu

EXPERIMENT NO: 1_Assignment **DATE:26-05-2021**

Slicing a .stl file in Cura with suitable parameters and 3D printing using FDM process

Aim:

To slice a .stl file in Cura with suitable parameters and 3D printing using FDM process.

Software Requirements:

Fusion 360, Ultimaker cura app, Laptop with minimum 4Gb ram and i3 core, FDM(Fusion Deposit Modelling).

Procedure:

1. Firstly, design a 3D model using Autodesk Fusion 360 which is in .f3d format. Now convert it to .stl format using export option in Autodesk.
2.Now convert that .f3d format into .stl format.
3. Now open ultimaker cura software and select the file which you want to be converted.
4. After selecting the file and we must set the dimensions before printing.
5.In scaling we have to keep the axis correctly according to our picture.
6.After that we must give temperature according to material and we have to give skirt option in build plate adhesion.

7.now in standard quantity option we must give in fill as 30 and enable support option.
8. after you completed all changes and save the file.
9.Now it is ready to slice after clicking slice button.
10.Now the ultimate cura can convert your .stl file into .gcode format.
11.we must copy the gcode file into to card reader and should insert the memory card in FDM.
12.Now we must arrange the nasal in such a way that it comes to origin position by selecting Auto home.
13.after the bed reaches 50'c temperature. Our model will start to print by FDM.

observation

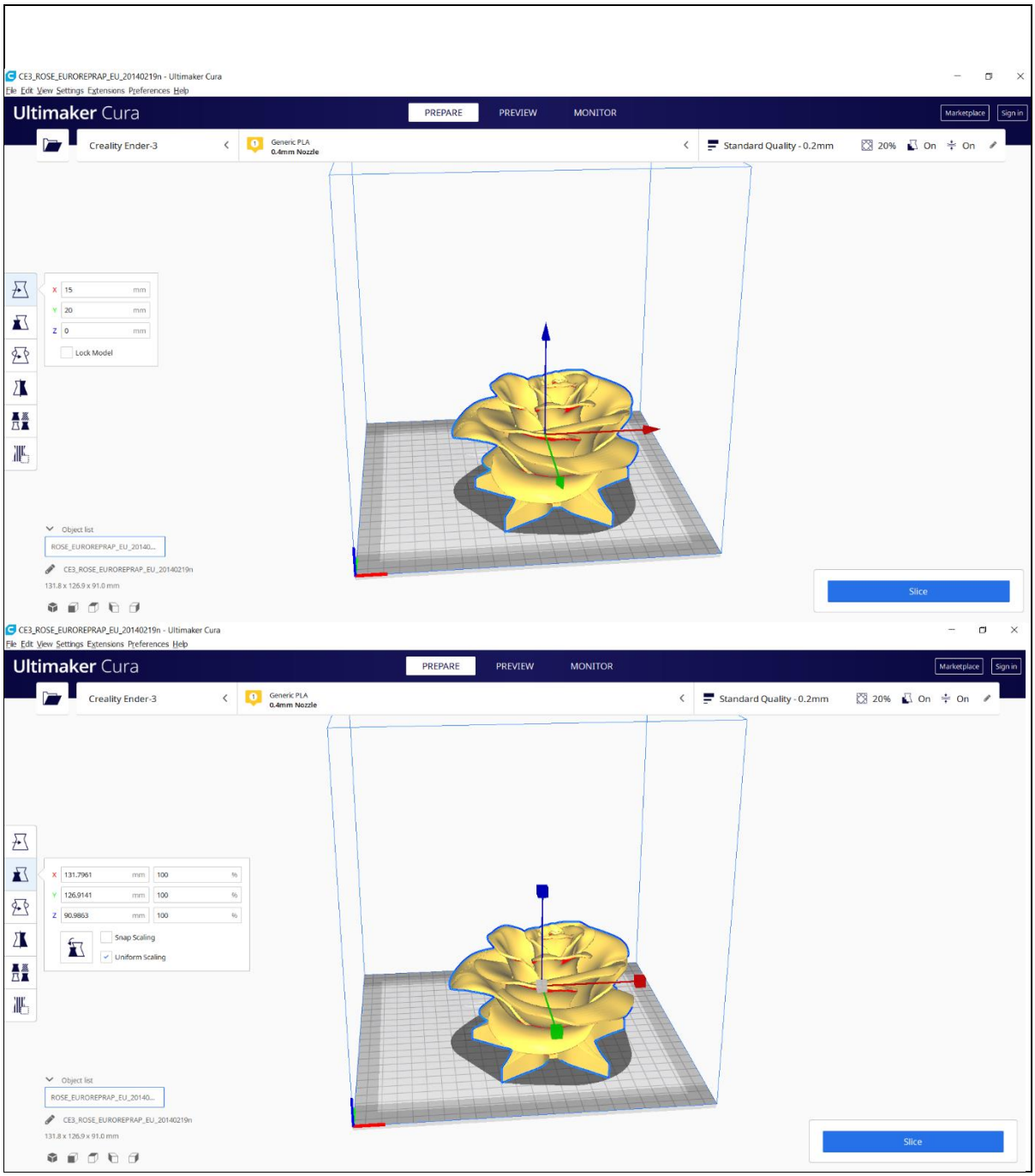
• We have observed that how the .stl file is converted into .gcode in Ultimaker Cura for Slicing.
• 3d printer has printed the material layer by layer from bottom to top.
• We have observed that the design 3d model has printed by using the 3d printer (Creality Ender-3).

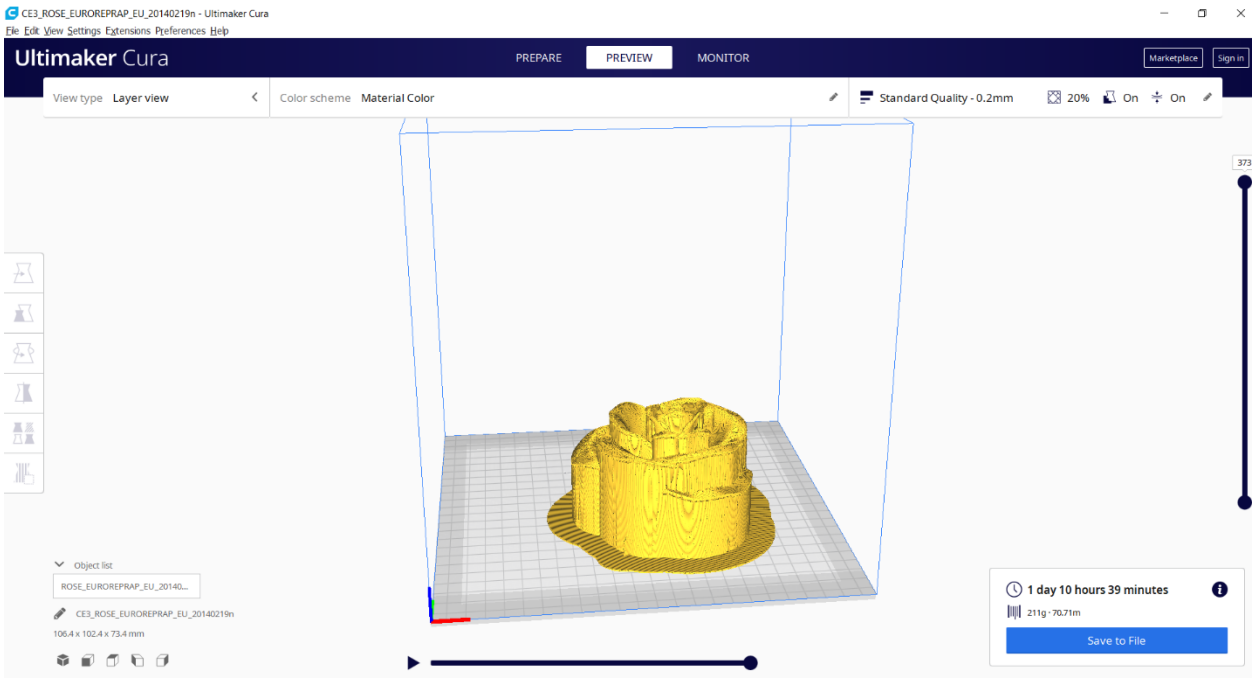
Cura Parameters:

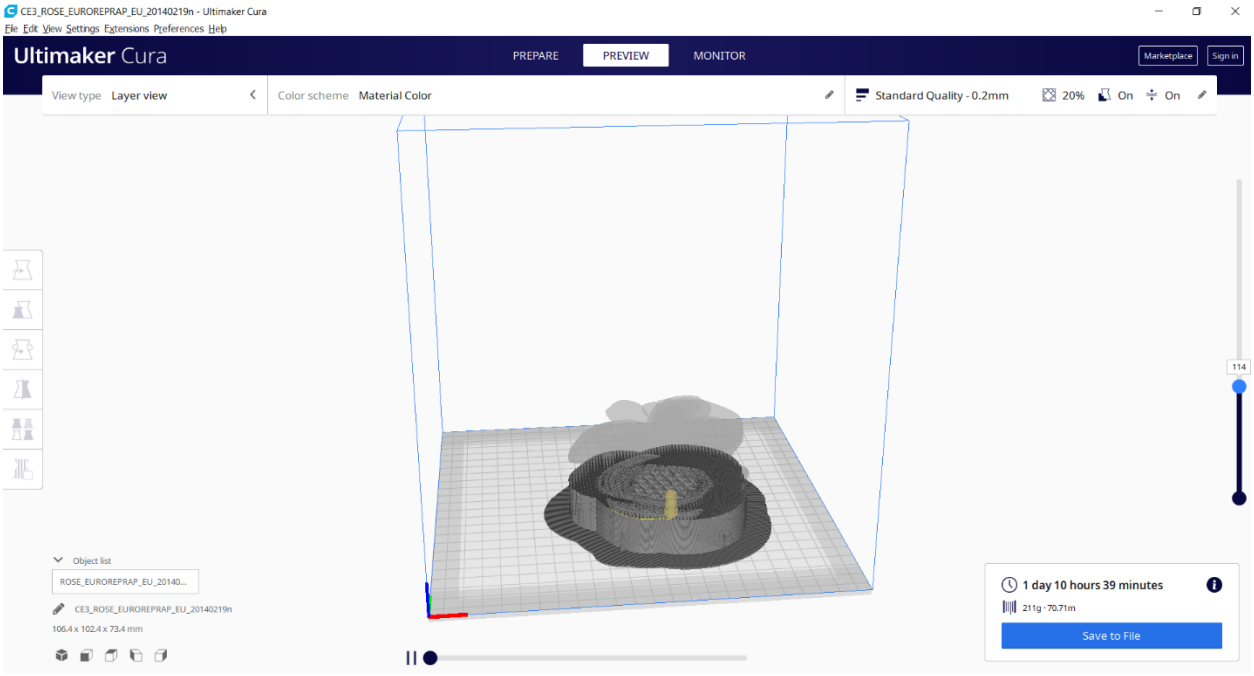
S.NO	CURA PARAMETER NAME	VALUE
1	Nozzle dia	0.4mm
2	Material and quantity	211g . 70.71m

3	Printing duration	1day10hours 39minutes
4	Bed temperature	50
5	Nozzle temp	200
6		
7		

Results (All screen shots need to paste here):




CE3_ROSE_EUROREPRAP_EU_20140219n - Ultimaker Cura
File Edit View Settings Extensions Preferences Help
Ultimaker Cura
PREPARE
PREVIEW
MONTOR
Marketplace
Sign in
View type Layer view
Color scheme Material Color
Standard Quality - 0.2mm
20%
On
On
373
Object list
ROSE_EUROREPRAP_EU_20140...
CE3_ROSE_EUROREPRAP_EU_20140219n
106.4 x 102.4 x 73.4 mm
1 day 10 hours 39 minutes
211g · 70.71m
Save to File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LAB REPORT RUBRIC

LAB REPORT ITEMS	Points	Points Received
VIVA	5	
EXPERIMENT REPORT (All steps clearly stated)	15	
OBSERVATIONS AND DATA		
TOTAL	20	