Design day pitch script

Poster board tables, paragraphs, visuals, etc

Team 19

OctoPi

Tom:

We, Group 19 seeks to design a system and user interface that improves the problems of automating the use of 3D printers while eliminating the troubles with SD cards to enhance the user and staff experience with 3D printing, organizing, time management, and ease of use.

Senthura:

This is our final prototype. It consists of a 3D printed case for the raspberry pi. This is connected to a printer via a printer cable. The raspberry pi is charged with a 3 amp/ 5 volt charging block connected with a micro usb.

This is the UI of OctoPrint. It allows you to upload a print and then sends the g-code to the 3D printer through the raspberry pi.

Dayu:

This is our UI. It currently holds the data of 4 printers, but this is because of budgeting issues, it could hold more. The first column displays the status of the printer, the second if it is printing and how much time is remaining. When the print is done, a button will appear and when clicked the row is reset to operational. On the far right the user can the progress bar of their print, the name of their file and how much filament is left.

Alex:

Moving forward we would like to test with more printers, more raspberry pi's, implement more Octoprint functions and find a way project the Dashboard online. We would also like to test our product with more users that occupy Maker Space.

Part Name	Picture of Template	Description/ Specification	Quantity	Cost (CAD)
Raspberry Pi		N/A	1	$55.97
Micro SD		16 GB	1	$9.30
Printer Cable		6ft/1.8m	1	$4.43
Printer Cable		6ft/1.8m	3	$4.60
3D Printed Case + Stand		ABS/PLA	1	$0
Wall plug		3 Amp/5Volt	1	$13.99
TOTAL COST(GST =3.59)				**$101.08**

Some test cases were carried out where multiple prints were executed with different conditions and each test case has been labeled with its corresponding condition(s).

(*Short print = Time < 20 min, Long print = Time > 20 min)

3D Print	3D Model	Test case description
		A long print with a somewhat good quality outcome. Majority of the print executed properly and made pristine quality print until right before the end. The head of the print became a poor outcome. This test case was sliced with CURA
		A short print with a poor print quality but the design printed properly; not many overlaps/over extruding. Slic3r was used to slice this print case. There was no support material enabled however compared with the other prints sliced with CURA, this Vader can be considered a decent test case that has

		been printed so far. The print quality increased as time passed.
		A long print with a decent quality. The STL file was sliced using slic3r. No support material was used for the test case, and considering so, it can be said this print is a successive print case comparatively to using supporting material
		A short print with pristine quality. The STL file was sliced with slic3r. There were no external factors incorporated from allowing the print to finish. Overall the quality of the print made this test case one of the best successive test cases.

Printer		Status	Time		Complete	Key Details	
RED	UTM#1	Cancelling	Print Time Left	00:00:00	Print Bed Is Free	Progress(%):	0
			Time Spent Printing	00:00:00		File Name:	No File Uploaded
						Filament Left:	734.45 g
BLACK	UTM#2	Printing	Print Time Left	00:00:00	Printing	Progress(%):	0
			Time Spent Printing	00:00:00		File Name:	No File Uploaded
						Filament Left:	403.77 g
PURPLE	UTM#3	Printer Is OFF	Print Time Left	00:00:00	Offline	Progress(%):	0
			Time Spent Printing	00:00:00		File Name:	No File Uploaded
						Filament Left:	953.03 g
BLUE	UTM#4	OctoPrint State	Print Time Left	00:00:00	Offline	Progress(%):	0
			Time Spent Printing	00:00:00		File Name:	No File Uploaded
						Filament Left:	966.37 g

Time Left In Makerspace:	00:00:00

Printer		Status	Time		Complete	Key Details	
RED	UTM#1	OctoPrint Error	Print Time Left	00:00:00		Progress(%):	0
			Time Spent Printing	00:00:00		File Name:	No File Uploaded
						Filament Left:	773.99 g
BLACK	UTM#2	OctoPrint Error	Print Time Left	00:00:00		Progress(%):	0
			Time Spent Printing	00:01:39		File Name:	UM2_YO-1.GCO
						Filament Left:	408.00 g
PURPLE	UTM#3	Printing	Print Time Left	00:00:37	Printing	Progress(%):	99
			Time Spent Printing	01:44:14		File Name:	UM2_chamanderchaveiro.gcode
						Filament Left:	1000.00 g
BLUE	UTM#4	Printer Is OFF	Print Time Left	00:00:00	Offline	Progress(%):	0
			Time Spent Printing	00:00:00		File Name:	No File Uploaded
						Filament Left:	1000.00 g

Time Left In Makerspace:	00:00:00

Printer		Status	Time		Complete	Key Details	
RED	UTM#1	OctoPrint Error	Print Time Left	00:00:00		Progress(%):	0
			Time Spent Printing	00:00:00		File Name:	No File Uploaded
						Filament Left:	773.99 g
BLACK	UTM#2	OctoPrint Error	Print Time Left	00:00:00		Progress(%):	0
			Time Spent Printing	00:01:39		File Name:	UM2_YO-1.GCO
						Filament Left:	408.00 g
PURPLE	UTM#3	Printing	Print Time Left	00:00:37	Printing	Progress(%):	99
			Time Spent Printing	01:44:14		File Name:	UM2_chamanderchaveiro.gcode
						Filament Left:	1000.00 g
BLUE	UTM#4	Printer Is OFF	Print Time Left	00:00:00	Offline	Progress(%):	0
			Time Spent Printing	00:00:00		File Name:	No File Uploaded
						Filament Left:	1000.00 g

| | | | Time Left In Makerspace: | 00:00:00 | | | |

Printer		Status	Time		Complete	Key Details	
RED	UTM#1	Printing	Print Time Left	01:09:47	Printing	Progress(%):	41
			Time Spent Printing	00:55:04		File Name:	yoda.gcode
						Filament Left:	771.95 g
BLACK	UTM#2	Operational	Print Time Left	00:00:00	Print Bed Is Free	Progress(%):	100
			Time Spent Printing	00:55:45		File Name:	chamanderchaveiro.gcode
						Filament Left:	404.53 g
PURPLE	UTM#3	Printing	Print Time Left	01:25:59	Printing	Progress(%):	26
			Time Spent Printing	00:38:29		File Name:	yoda.gcode
						Filament Left:	978.86 g
BLUE	UTM#4	Printing	Print Time Left	00:07:10	Printing	Progress(%):	87
			Time Spent Printing	00:54:36		File Name:	Vader.gcode
						Filament Left:	1000.00 g

| | | | Time Left In Makerspace: | 04:57:38 | | | |

Printer		Status	Time		Complete	Key Details		
RED	UTM#1	Printing	Print Time Left	01:01:06	Printing	Progress(%):		49
			Time Spent Printing	01:03:05		File Name:		yoda.gcode
						Filament Left:		771.95 g
BLACK	UTM#2	Heating Up	Print Time Left	00:00:00	Print Bed Is Free	Progress(%):		0
			Time Spent Printing	00:00:00		File Name:		vader_cup_v03.gcode
						Filament Left:		404.53 g
PURPLE	UTM#3	Printing	Print Time Left	01:17:04	Printing	Progress(%):		34
			Time Spent Printing	00:46:30		File Name:		yoda.gcode
						Filament Left:		978.86 g
BLUE	UTM#4	Operational	Print Time Left	00:00:00	Print Is Complete	Progress(%):		100
			Time Spent Printing	01:02:25		File Name:		Vader.gcode
						Filament Left:		992.41 g

Time Left In Makerspace: 04:49:38

Printer		Status	Time		Complete	Key Details		
RED	UTM#1	Printing	Print Time Left	01:00:42	Printing	Progress(%):		49
			Time Spent Printing	01:03:28		File Name:		yoda.gcode
						Filament Left:		771.95 g
BLACK	UTM#2	Heating Up	Print Time Left	00:00:00	Print Bed Is Free	Progress(%):		0
			Time Spent Printing	00:00:00		File Name:		vader_cup_v03.gcode
						Filament Left:		404.53 g
PURPLE	UTM#3	Printing	Print Time Left	01:16:40	Printing	Progress(%):		34
			Time Spent Printing	00:46:52		File Name:		yoda.gcode
						Filament Left:		978.86 g
BLUE	UTM#4	Operational	Print Time Left	00:00:00	Print Bed Is Free	Progress(%):		100
			Time Spent Printing	01:02:25		File Name:		Vader.gcode
						Filament Left:		992.41 g

Time Left In Makerspace: 04:49:15