



Secure and Remote 3D Printing

By: Tiffanie Petersen, Isaiah Thomas, Carl Mann, & Nick Cottrell

General Information:

Meeting Dates:

- November 29th

Faculty Sponsor

Dr. Sid Bhattacharyya

Client

Mike C Newton

Milestone 3

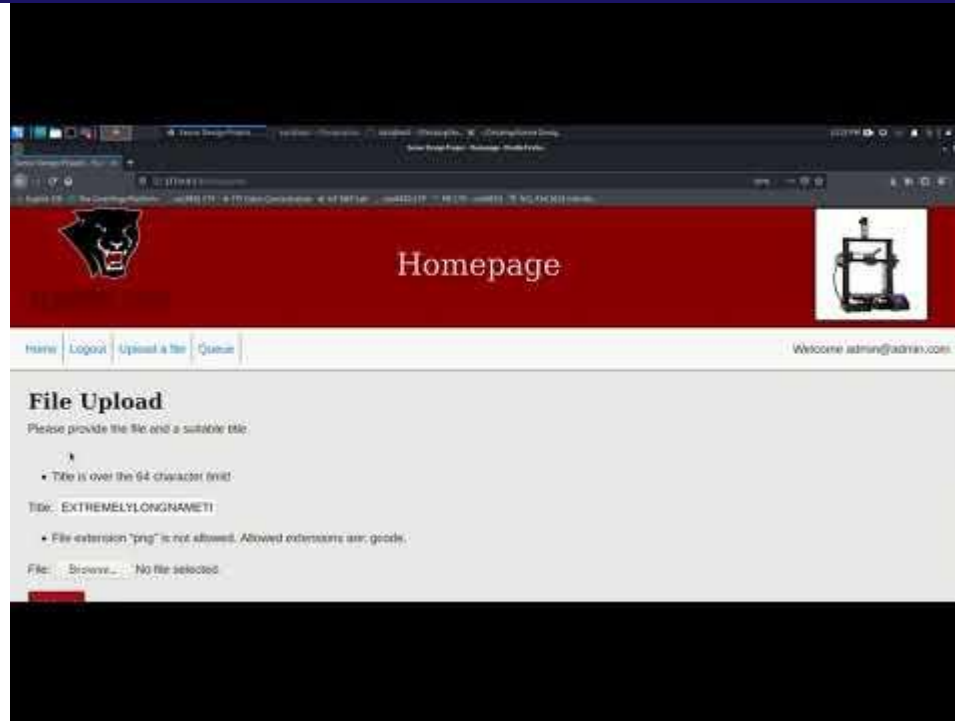
1. Implement, test, and demo the remote printing of a gcode project through the web application.
2. Implement, test, and demo edge cases for web application usage and printing.
3. Implement, test, and demo queue system for current projects.
4. Upload docker to Raspberry Pi

Additions from Dr. Sid

5. Create a higher level systems diagram which better conveys the interactions of the user, raspberry pie, octoprint / web application, and the printer.
6. Services/software deployment diagram allocating software to a device
7. Request a Raspberry Pie

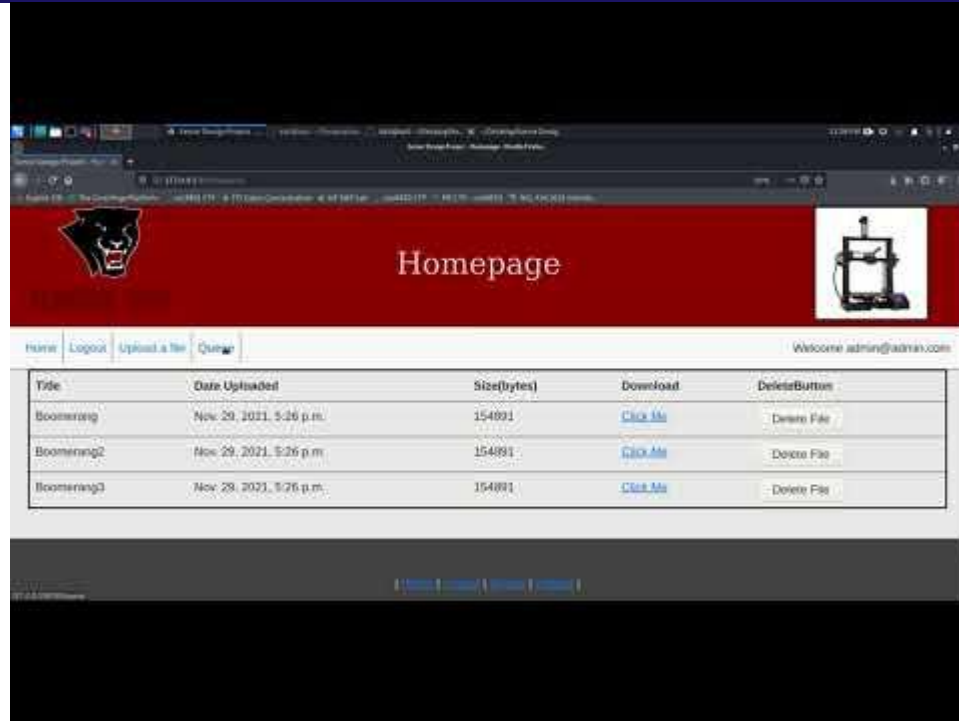
Task	Completion	Tiff	Carl	Isaiah	Nick	To do
1. Implement, test, and demo the remote printing of a gcode project through the web application.	0%	0%	0%	0%	0%	Other senior design team has taken the 3D printer home (no access)
2. Implement, test, and demo edge cases for web application usage.	70%	0%	0%	70%	0%	Test edge cases of printing
3. Implement, test, and demo queue system for current projects.	75%	0%	75%	0%	0%	Change deletion to print (see Task #1), aesthetic
4. Upload docker to Raspberry Pi	0%	0%	0%	0%	0%	Waiting to hear if we can take over the other groups pi when they graduate
5. Create a higher level systems diagram which better conveys the interactions of the user, raspberry pie, octoprint / web application, and the printer.	100%	100%	0%	0%	0%	
6. Services/software deployment diagram allocating software to a device	100%	100%	0%	0%	0%	
7. Request raspberry pi and other materials	100%	0%	100%	0%	0%	

Edge Cases



<https://www.youtube.com/watch?v=DMiG0mgc90>

Queue System



The screenshot displays a web application interface. At the top, there is a red header bar with a logo on the left and the word "Homepage" in the center. Below the header, there is a navigation bar with links: "Home", "Logout", "Upload a file", and "Queue". On the right side of the navigation bar, it says "Welcome admin@admin.com".

The main content area features a table with the following columns: "Title", "Date Uploaded", "Size(bytes)", "Download", and "DeleteButton". The table contains three rows of data:

Title	Date Uploaded	Size(bytes)	Download	DeleteButton
Boomerang	Nov 29, 2021, 5:26 p.m.	154891	Click Me	Delete File
Boomerang2	Nov 29, 2021, 5:26 p.m.	154891	Click Me	Delete File
Boomerang3	Nov 29, 2021, 5:26 p.m.	154891	Click Me	Delete File

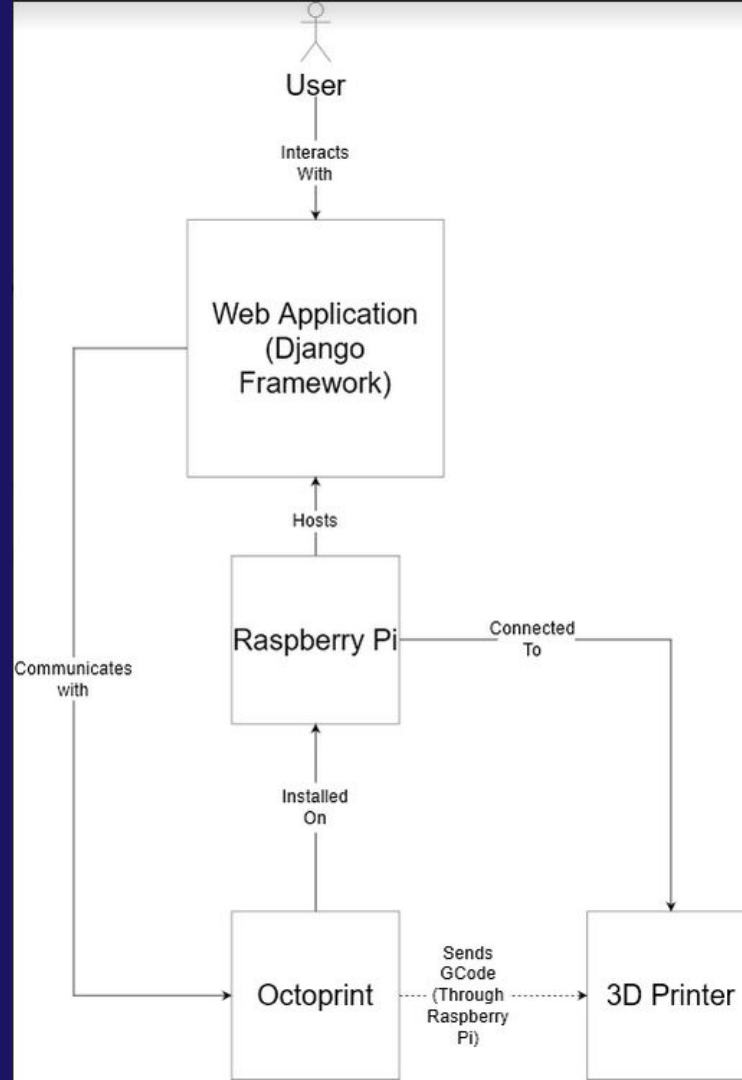
At the bottom of the interface, there is a footer section with a copyright notice: "© 2021 All Rights Reserved".

<https://www.youtube.com/watch?v=vBLKZerW8ng>

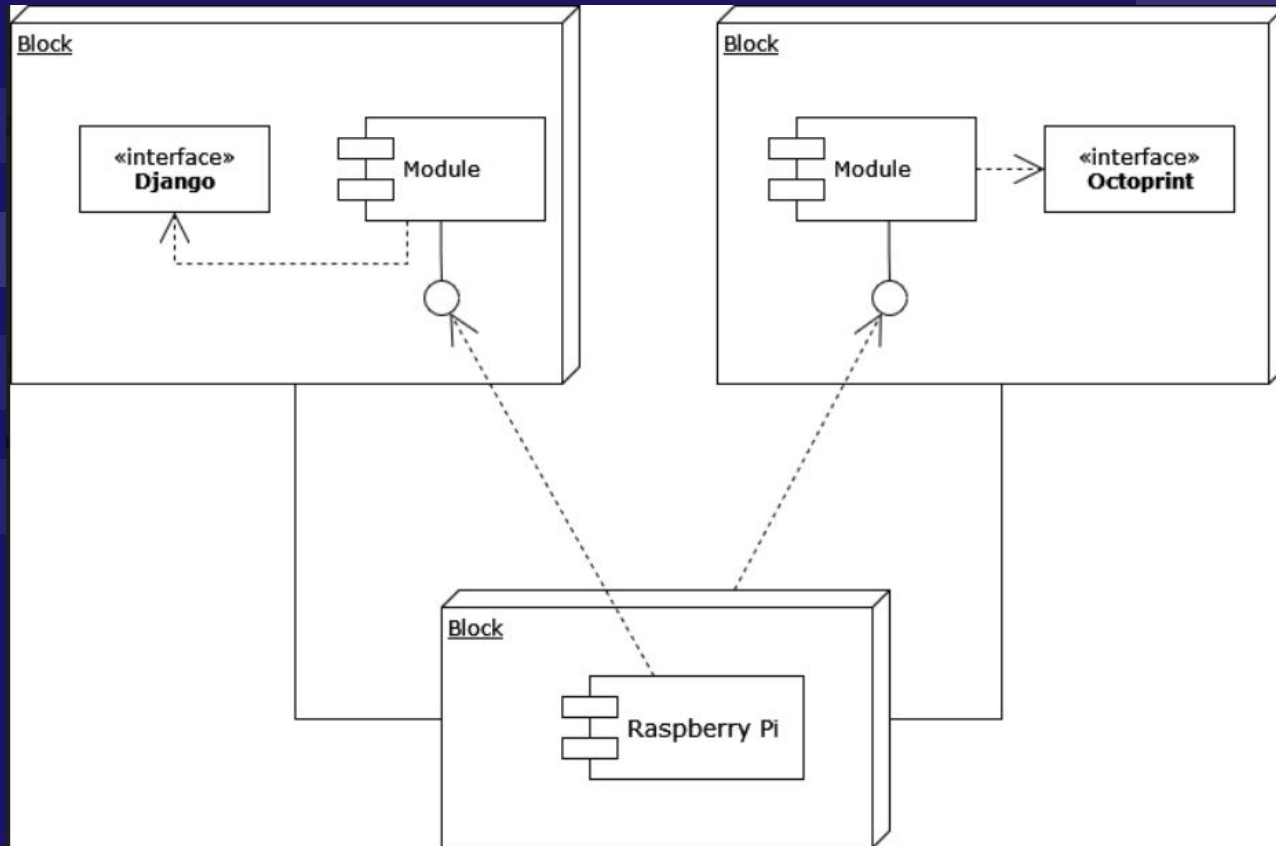
Queue System Live Demo

Carl's live demonstration of the
queue's latest implementation

Higher Level Systems Diagram

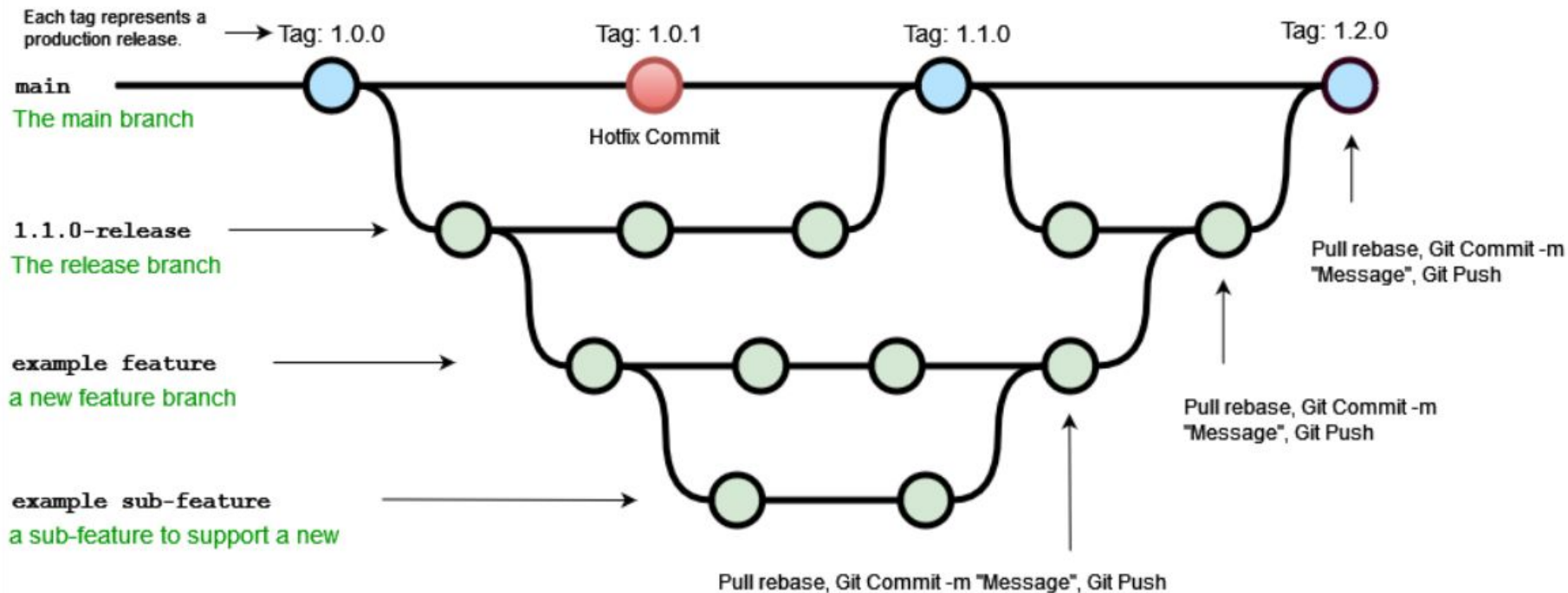


Services/software Deployment Diagram



GitFlow Diagram

Workflow Diagram:



Milestone 4

Task	Tiffanie	Carl	Isaiah	Nick
Enhance website appearance	25%	25%	25%	25%
Final website functionality	25%	25%	25%	25%
Deploy website	25%	25%	25%	25%
Begin MitM of 3D printer	25%	25%	25%	25%

**Any
Questions?**

Thank You!