Secure and Remote 3D Printing

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

General Information:

Meeting Dates:

- November 29th

Client
Mike C Newton
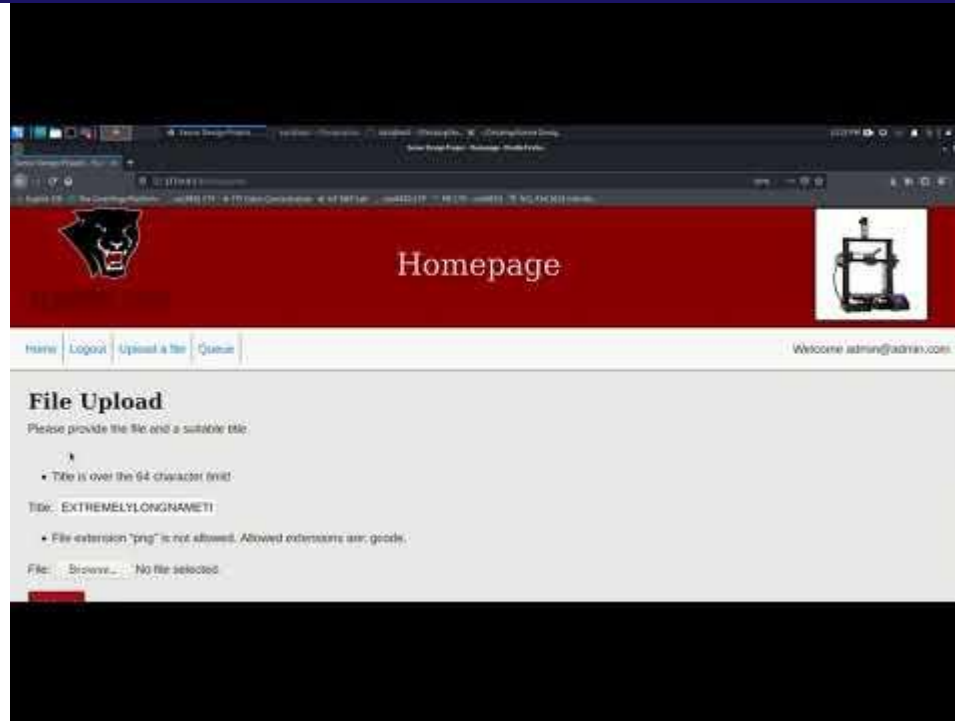
Faculty Sponsor
Dr. Sid Bhattacharyya

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
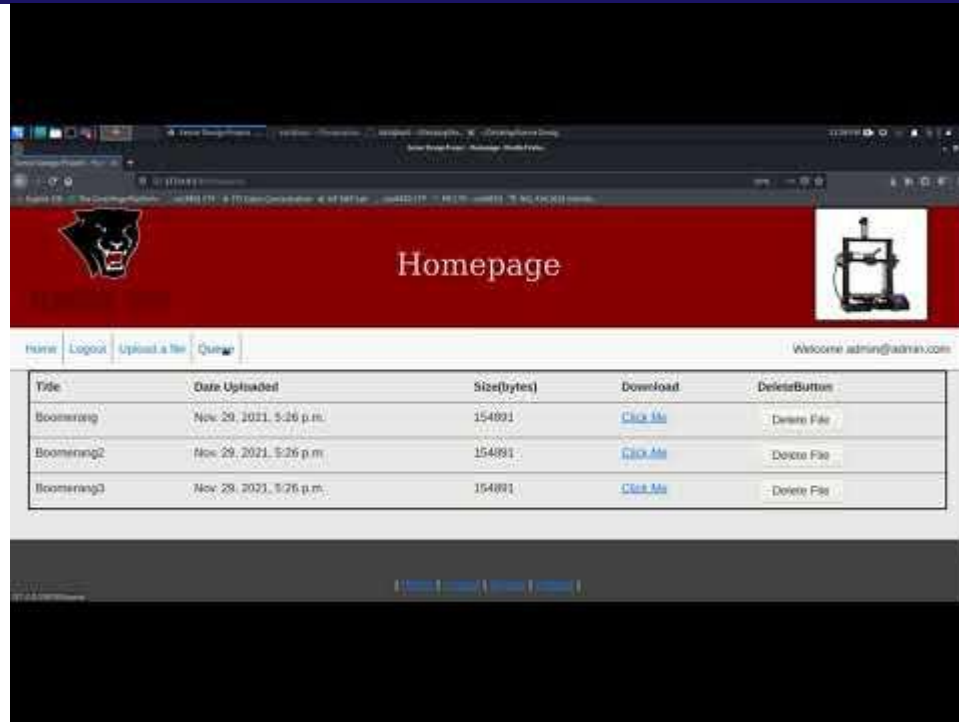7. Request a Raspberry Pie

Task	Completion %	Tiffanie	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

Queue System

Systems Diagram

Services/software Diagram
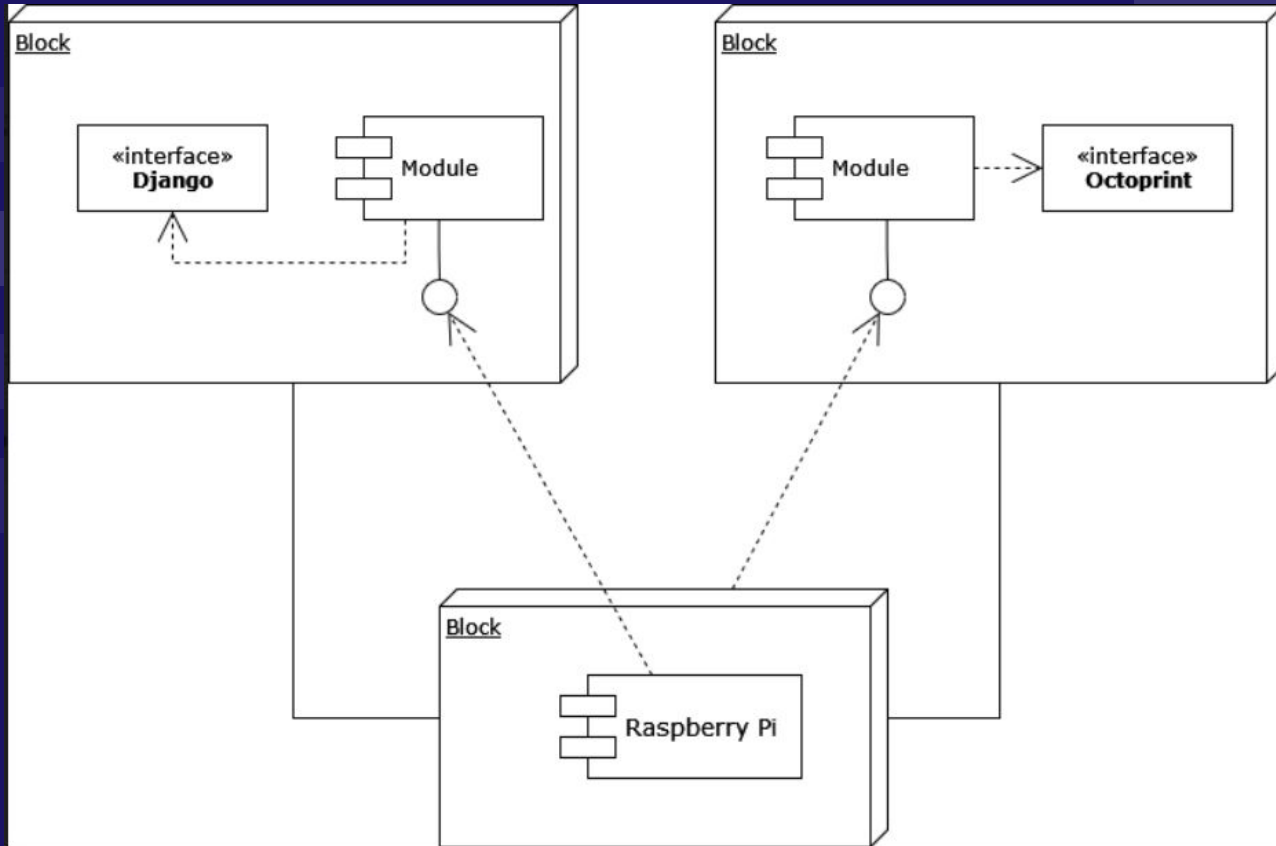
Software Deployment Diagram

Workflow Diagram:

Each tag represents a production release. → Tag: 1.0.0

Tag: 1.0.1

Tag: 1.1.0

Tag: 1.2.0

main
The main branch

Hotfix Commit

1.1.0-release
The release branch

Pull rebase, Git Commit -m "Message", Git Push

example feature
a new feature branch

Pull rebase, Git Commit -m "Message", Git Push

example sub-feature
a sub-feature to support a new

Pull rebase, Git Commit -m "Message", Git Push
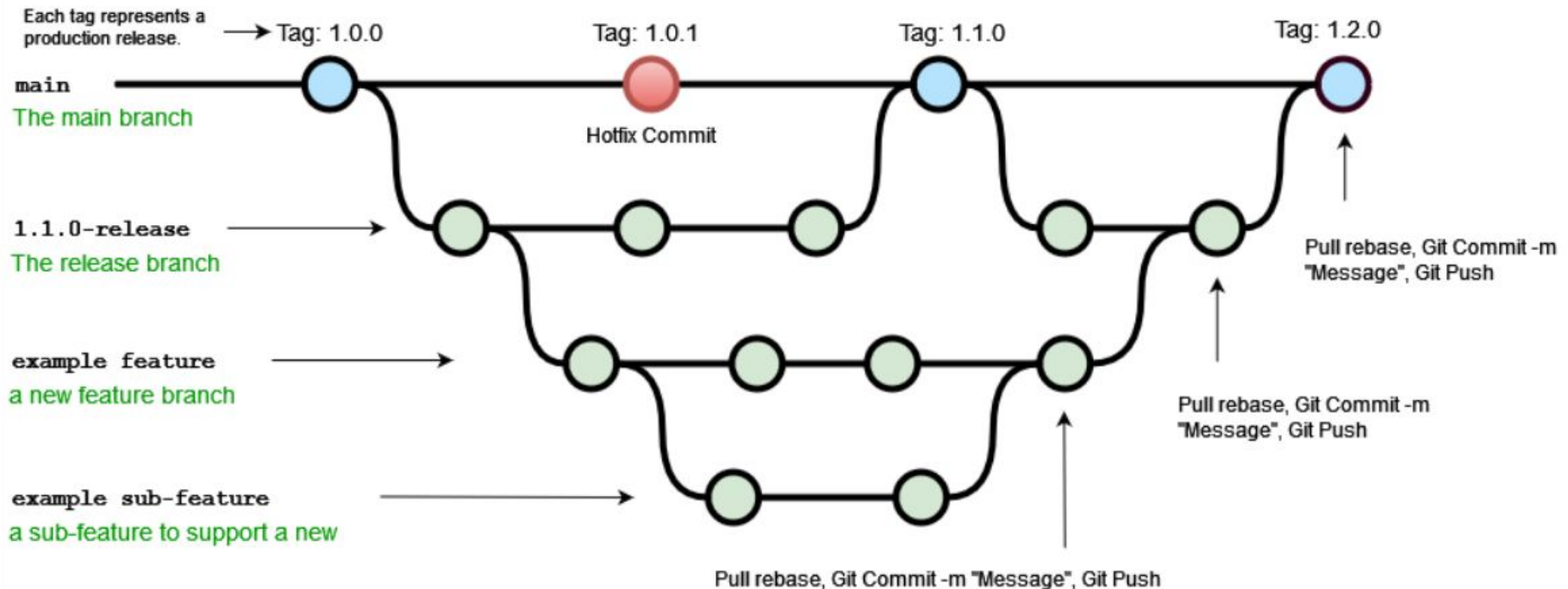
Milestone 4

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!