

sddec20-02: Laptop Lending Status System

Week 2 Report

February 3 - February 16

Team MembersZoe Sanders — *Software*Farouk Al Obaidi — *Software*Camden Thomas — *Hardware*John Wagner — *Hardware*Aaron Thune — *Hardware*Ryan Ray — *Software***Summary of Progress this Report**

This reporting period the hardware side of our team focused on conducting further research on micro-controllers and LEDs team members also ordered prototyping parts, and prototyped an LED driver. The software team reviewed the client-provided API, continued Python research and began creating a proxy server and created a prototype API-interfacing client.

Pending Issues

- Proxy server is not working as of yet
- Positioning of LEDs and Microcontrollers in the Device display setup is still an issue
- Software connecting with Raspberry Pi is yet to be prototyped.

Plans for Upcoming Reporting Period

- Finish proxy server and connect it to API-interfacing client so as to provide a more secure connection
- Finalize choice of microcontroller
- Begin exploring Software connection to Raspberry pi.

Individual Contributions

Team Member	Contribution	Weekly Hours	Total Hours
Zoe Sanders	Attended both team meetings and meeting with advisor. Developed proxy server prototype for connecting Client to LibCal API. Code can be found in branch zs-python-proxy-server under the server folder on Gitlab. Compiled this bi weekly report	6	12
Farouk Al Obaidi	Participated in team meeting and advisor meeting. Additionally, I read the LibCall API documentation. Researched about python's http requests libraries. Then, I wrote code	6.5	13

	that authenticates the client, obtains the access token and makes an example http request to the API. The code is pushed to git (API_Example.py). Next step is to make sure we have a proxy server for the LibCal API.		
Camden Thomas	During the last two weeks I conducted research on RGB LED power consumption, and also researched potential power supply options we can use to power Raspberry Pi zero's as well as our LED matrices. I also participated in team meetings both weeks as well as the meeting with our advisor. For the next week, I plan to do more research into potential power supply options after meeting with our clients.	6	12
John Wagner	During the last two weeks I looked into possible circuit designs for our project. Later, I also looked into possible alternatives to the Raspberry Pi, like Arduino or Beagle Bone. I skimmed through some books on Raspberry Pis and projects with Raspberry Pis. I also attended all the group meetings.	6	12
Aaron Thune	Contribution: - Ordered parts for prototyping - Raspberry Pi Zero W, RGB LEDs, shift register ICs, and surface mount LED driver ICs. - Prototyped LED driver circuit using shift register and transistors. - Soldered GPIO pins and set up OS on the Pi. - Research on setting up programming environment for Python on the Pi	6	12
Ryan Ray	Wrote a script to automate weekly reports Looked at possible python server libraries Looked at the api docs Looked over Arduino apis	6	12

Gitlab Activity Summary

