

sddec20-02: Laptop Lending Status System

Week 5 Report

March 16th - April 12th

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

The software team has finished the first iteration of their modules and merged their modules together. The hardware team has completed, one soon to be two, iterations of their case. One of our members has also set up a small electronics lab in his apartment and is experimenting with software PWM.

Pending Issues

- Refactor/Cleanup the mappings database api
- Health checks for raspberry pis
- Performance improvements for libcal api
- Display the state of each pi on the admin interface
- Make the CAD model for the lid, and attachment mechanism

Plans for Upcoming Reporting Period

- Prepare a demo for our next client meeting (4/16)
- Work on pending issues

Individual Contributions

Team Member	Contribution	Weekly Hours	Total Hours
Zoe Sanders	<ul style="list-style-type: none"> ● Finished pi management software. ● Created tests for pi management software. ● Completed documentation of pi management. ● Created a small wiki page to document the API for updating LEDs through pi management software. ● Worked on Design Doc v2. ● Changed code in SubPi class to support master hostname and port parameters. ● L3 ● Contingency plan 	~5s	21

	<ul style="list-style-type: none"> ● Client meeting ● Team meeting (3/30) ● Team meeting (4/6) 		
Farouk Al Obaidi	<ul style="list-style-type: none"> ● Attended team meeting ● Integrate Libcal API and RestAPI with the database ● More integration and testing of Libcal API and RestAPI with the database. ● Refactored LibcaAPI code ● Worked on Design Doc v2 ● Wrote git Wiki for RestAPI ● L3 ● Client meeting ● Team meeting (3/30) ● Team meeting (4/6) 	9.5	20.5
Camden Thomas	<ul style="list-style-type: none"> ● Stylized website ● Created needed pages ● L3 ● Client meeting ● Team meeting (3/30) ● Team meeting (4/6) ● Started working on implementing Farouk's documented endpoints. 	3.375	$6.5+3+1+3=13.5$
John Wagner	<ul style="list-style-type: none"> ● Participated in meetings ● Finished rough prototype case ● Worked on Design Doc v2 ● Did research in Raspberry Pi Projects by Dr. Andrew Robinson ● L3 ● Client meeting ● Team meeting (3/30) ● Team meeting (4/6) ● Added dimensions to the design sheet of the case, for the hangers. ● worked on weekly and bi-weekly report 	5	$6.5+5.5+1+4=17$
Aaron Thune	<ul style="list-style-type: none"> ● Further experimentation with SN74HC595N through-hole shift registers for driving LEDs ● Experiments with controlling driver circuit through RPi GPIO ● Planning library for driving binary shift registers with software PWM ● L3 ● Client meeting ● Team meeting (3/30) 	2.5	$7+3=10$

Ryan Ray	<ul style="list-style-type: none"> ● Moved developing.md to wiki ● Worked on design doc v2 ● Organized meeting with client (next week) ● Attended team meeting ● Modified mapping module code to work with libcal api logic ● Started working on a multihost development environment to simulate the vm and raspis. <ul style="list-style-type: none"> ○ Got the system working in a multi host environment (not reproducible) ○ Working on a script/vm that the team can use ○ Might move to docker compose to simplify ● Added some initialization code (read command line args, config files, etc.) ● Small tweaks/fixes to existing code to get it working in a multi host environment ● L3 ● Client meeting ● Team meeting (3/30) ● Team meeting (4/6) ● Created Dockerfile for master ● Added support for pulling config from env vars ● Setup development environment for the team so we can develop in a production like environment ● Worked on a system test (for ci) <ul style="list-style-type: none"> ○ Fork an master and slave node ○ Simulate data being pulled from libcal ○ Check that changes propagate all the way down to the slave node and that it updated its led ● Work on biweekly status report 	5.25	7+4+1+9=21
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Gitlab Activity Summary

Nothing to report.



