

sdmay19-13: Small Equipment Checkout System

Week 4 Report

September 29 - October 5

Client & Advisor:

Leland Harker

Team MembersYimin Wang — *Hardware team (Chief Manager)*Fengnan Yang — *Hardware team (Hardware Reporter and Meeting Manager)*Jiaxin Li — *Hardware team (Treasurer)*Caining Wang — *Software team (Software Reporter)*Bei Zhao — *Software team (Secretary)*

Summary of Progress this Report

After about two weeks reading and testing the previous group's work, our group almost understood what the previous team has finished and what are the pending issues in the project. On the other hand, we discussed previous group project pending issues with our client and he shared his thought about the issues with us. What's more, he wanted us to improve the system such as adding a detecting part to check the box door is closed or not. Hence, our group made a new plan and set several milestones for the rest of several weeks until the end of this semester. Basically, the hardware group separated into two sections this week. One part kept focusing on PCB learning and another section started to do some research on the internet to find a good type of sensor that we can use to detect the door opening or closing. As for the software group, they began to work on the version problem in the frontend project of the previous team web application. Also, they started to learn how to create tables, how to define them, how to access data from the database.

Pending Issues

- 1) Learn how to control on-wire register.
 - 2) Learn how to use and control Raspberry Pi
 - 3) Figure out why the previous group choosing DS2406P on their design project.
 - 4) Figure out why the LED light always on, which is not we want on the one-wire system.
 - 5) Rebuild the system to solve the issue that the voltage for the lock is always at high status.
 - 6) Try to remove auto-open function on raspberry pi OS.
 - 7) Decide what type of sensor should be used to detect the door opening/closing.
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Plans for Upcoming Reporting Period

- 1) Bei Zhao: Figure out a method to make the operating system of Raspberry PI working
- 2) Caining Wang: Continue adding function into the android application.
- 3) Jiaxin Li, Fengnan Yang: Figure out how to design the circuit to turn on the LED during checking process.
- 4) Yimin Wang: Find the most suitable way to detect if the door is closed after use. And design the circuit to trigger the alarm when the door is left open.

Individual Contributions

Team Member	Contribution	Weekly Hours	Total Hours
Fengnan Yang	<ol style="list-style-type: none"> 1. Kept learning practice using MultiSim/Ultiboard to build a PCB layout and soldering it with circuit components and test it. 2. Read prior senior group's PCB file and analyzing how each circuit components working 	6.5	25
Jiaxin Li	<ol style="list-style-type: none"> 1. Did some research for connecting the new sensor which is for door closing and the slave device. 2. Gave new manufacture number for slave device and sent the request to buy it. 	6.5	24.5
Yimin Wang	<ol style="list-style-type: none"> 1. Worked on how to design the circuit for controlling the locker and LED inside the box. 2. Did some research on sensors that can be used to detect door closing/opening. 	6.5	25
Caining Wang	<ol style="list-style-type: none"> 1. Learned SQLite in Android, learned how to create tables, how to define them, how to access data from the database. 2. Learned how to use arrayadapter to transfer the data to a list view. 3. Did assignments for class with my teammates. 	6	24.5
Bei Zhao	<ol style="list-style-type: none"> 1. Finished the power machine training with Leland Harker. 2. Continued working on the version problem in the frontend project of previous team implementation. 3. Began to work on making the operating system desktop of the Raspberry PI show up. 4. Finished the first version of the project plan with other team members. 5. Began to work on the powerpoint of the second Lightning Talk Presentation and write my portion of weekly status report 2. 	7	25

Gitlab Activity Summary

Nothing to report.
