

EE/CprE/SE 492 - sddec18-09

Hidden Guardian

Week 3 Report 1

9/28/18 - 10/5/18

Faculty Advisor: Professor Phillip Jones

Team Members:

Jennifer Frank - Team Lead/Mobile Application Development

Jacob Stilwell - Mobile Application Development

Matthew Pedretti - Hardware Engineer

Keng-Yik Ho - Hardware Engineer

Thomas Kirby - Database and Backend Development

Weekly Summary:

The past two weeks we were able to fix our database issue and create a connection between our mobile application and our SQL database. We also started work on the main page front end and discussed different decision approaches. On the hardware side, we worked on schematics for the wireless speaker, created design plans with our comprehensive hardware list so that could be approved and purchased the hardware.

Past Two Week Accomplishments:

Tom: Working with Jacob to get the App and database fully connected. also discussed with Jen on how to proceed with the File transfer/google Speech API integration

Jacob: Jacob worked on database connection.

Jenn: I have been working on the front end of the main page on our mobile application

- Created a button to go straight to the main page from login (temporary fix for the meantime when the database wasn't not functioning)
- Created the new page, new "view", became familiar with how to do basic page edits and widgets on Android studio
- Started sketching and research different designs/ways we can display the data on the main page

I also met with Thomas and passed off the work I had done on speech to text API so that he can start integrating that with the database via python scripts. Finally, I started to work on our second PIRM presentation and updating our schedule/timeline to more accurately represent our progress and our future plan.

Matthew: I have been working on the schematic for the wireless speaker. I have never worked with li-ion batteries before so I have had to do some research into the various safety

considerations in designing a circuit that uses one. Because li-ion batteries are quite a bit more volatile than other types of batteries, they require several kinds of circuit protection to keep the current and voltage within acceptable ranges. I have completed all of the battery charging and protection circuitry except for the discharge current protection, and I have also completed the powerpath switching circuitry to allow the microUSB to power the circuit while charging the battery.

Keng Yik: Keng Yik worked on hardware part list and proof of design.

Pending Issues:

1. We have a goal for the software side to demo the full lifecycle of audio file to conversion to database to mobile app by our meeting on Thursday, but that is a ambitious goal based on our time constriction and dependency that our independent work will interconnect easily.
2. Still have not tested the time lag from receiving audio transmissions to getting updates on the phone, this may be a pending issue.
3. Our schedule has some room for “unforeseen issues”, but if we run into these it will take away from our time to test, iterate through different designs and overall improve the speed/quality of our product

Individual Contributions:

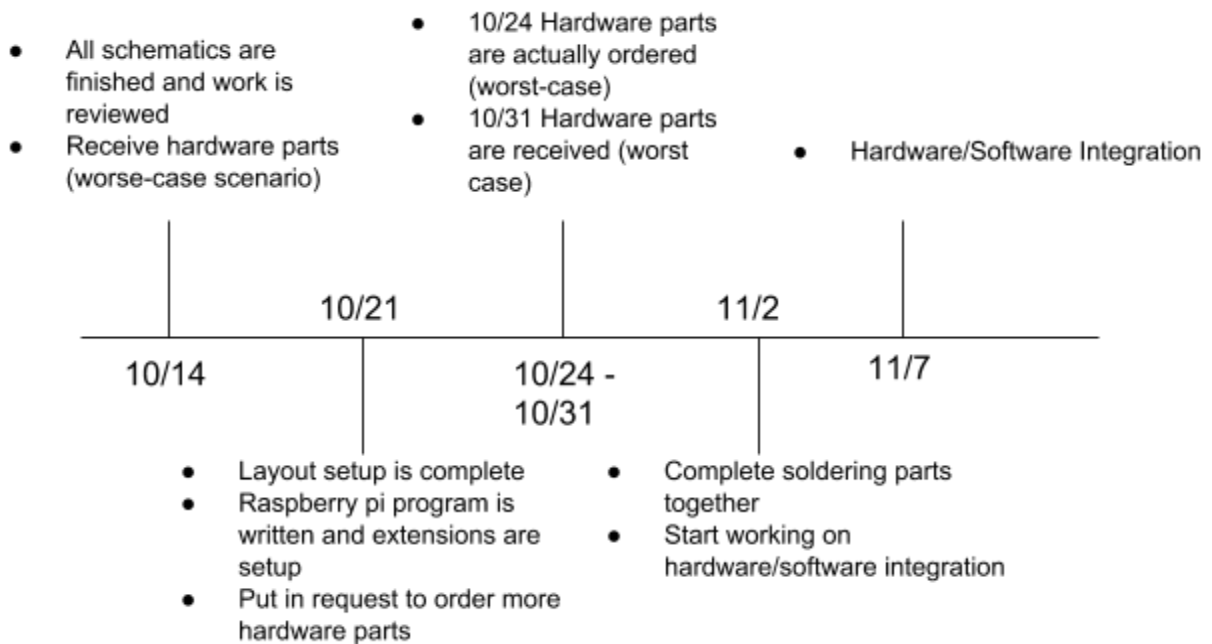
Name	Contribution	Biweekly hours	Total hours
Jennifer Frank	Worked on mobile application front end, presentation and updating documentation	8	29
Jacob Stilwell			10
Matthew Pedretti	Working on speaker schematic	8	17
Keng-Yik Ho	Searching the suitable parts for the i/o Raspberry Pi Zero	5	10
Thomas Kirby			9

Plans for the upcoming week:

Member	Task	Deadline	Notes
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Jacob	Finish login and create account page and once that is finished assist Jenn in main page front end.	10/11 (and ongoing)	
Jenn	Work on main page mobile application development (have a more comprehensive design completed and simple connection to database functioning)	10/11	
Jenn	Help Thomas with speech to text python connection functionality	10/11 (and ongoing)	
Thomas	Create python scripts that connect the Raspberry pi to the google api on the server and then to the database	10/11	
Keng-Yik & Matthew	Finish speaker schematics so that work can begin on the layout	10/14	
Thomas & Jenn	Have confidence rating functionality working	10/18	
Jacob	Lay down the basic groundwork for the "specific data" page for each keyword triggered entry	10/18	
Keng-Yik & Matthew	Complete Layout setup (Matthew) and start to set up extension/raspberry pi program (Keng-Yik). Assist each other in both tasks.	10/21	
Jenn	Work on help page, hover text for certain widgets, and other small front end details to make the application more user friendly	Started by 10/22	

Hardware Timeline for 11/6 prototype:



Software Timeline for 11/6 prototype:

