

## EE/CprE/SE 492 - sddec18-09

### Hidden Guardian

### Week 8 Report 6

11/05/18 - 11/19/18

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

**FOR REFERENCE ONLY (this is what we should have completed, will delete before submission):**

Member	Task	Deadline	Notes
Jenn	Make the specific gaming entry page more detailed	11/9	
Jenn	Add delete gaming entry option	11/9	
Jenn	Automatically delete gaming entry options for dates that exceed one week	11/9	
Jenn	Create info button functionality for Jacob's more detailed gaming entry page	11/9 - 11/13	
Jenn/Jacob	Add text color context to messages for confidence ratings	11/9 - 11/13	This was pushed back because confidence ratings are not being sent into the database yet.

Jenn	Adjust the code so that there is a new message table being created for every new user	11/19	This is to help with scope
Jenn	Make the app more user friendly	11/19	
Jacob	Create the more specific gaming entry page (displays full one minute context text and swipe left/swipe right displays surrounding minute long context).	11/9	
Jacob	Audio File for the minute text context is displayed at the top of the "more specific gaming entry" page	11/9	
Jacob	Focus on the "add a hardware" feature and how this will affect front end	11/19	
Matthew/Keng Yik	Assign gaming session id/message id to audio files that are sent to server	11/8 before meeting	
Matthew/Keng Yik	Send hardware code	11/8	In a production setting the hardware code would exist as both a sticker somewhere on the device, and internally saved in the Pi
Matthew	Begin setting up the template for the final poster and final report	11/11	
Matthew/Keng-Yik	When parts come in	11/16	

	work on attaching components and button functionality		
Thomas	Push backend audio-> speech to text -> database code to repository	11/5	This needs to be done ASAP.
Thomas	Get confidence ratings entered into the database	11/6	
Thomas	Test connection for the raspberry pi to the database	11/8 before our meeting	
Thomas/Jenn	Adjust the database to accurately reflect what we need (handle potentially larger scope)	11/8 before meeting	
Matthew/Keng-Yik/Thomas	Have gaming session id and message id assigned and sent to the database	11/8 by end of meeting	
Thomas	Work on assigning date and time stamps when passing in audio data	11/9	
Thomas	Work on a solution to making .wav files send faster	11/19	
Everyone	Spend at least 2-3 hours working on Final Poster / Final Report / Final Presentation Demo	11/19	

### Weekly Summary:

We have updated searching for our keyword algorithm, and have the gaming entry page working. We have the pi getting the hardware id from a .txt script and appending that along with

a generated GUID session ID and an incremented message ID to the title so that the server will eventually be able to parse that information. We have hidden our password on the main activity page, have come up with a solution for implementing time stamps, and decided on a final format of our database structure. Towards the end of this week, we received our speaker parts with plans to assemble over break.

## Past Two Week Accomplishments:

**Tom:**

**Jacob:**

Creation and development of specific gaming moment page  
Testing to fix issue of crashing app past main page

**Jenn:**

- Specific Gaming Page
  - Jacob and Matthew helped me find my solution for the lag behind getting to this page, so I freed up memory on my laptop and didn't have issues
  - Created listview for specific gaming page, created methods for getting the timestamp from the database (once it exists)
  
- Added a function to replace the password text with asterisks as it is being typed in for security reasons.
- Tested keyword functionality and fixed it, as it was not handling cases where keywords were not triggered or there was a word within a word
- Set up work session meetings with both software and hardware and met with team to get past obstacles
  - set up code to send Jacob over variables to his page so that he can manipulate them in displaying the text
  - Worked with Matthew, Thomas and Keng-Yik to find a way to send over variables in the .wav file to the server so that it can grab the hardware id, session id, and message id and eventually set those in the database
- Started to investigate/write the code for a long press opening up a context menu for deleting a gaming session entry
- Rewrote our schedule for what needs to be completed over Thanksgiving break and soon after that to stay on track

**Matthew:**

**Keng Yik:**

- Worked on sending .wav files to the server with the hardware, session and message id
- Worked on the safe shut down of the raspberry pi when battery is low.

## Pending Issues:

- We need to confirm that the word-enabled confidence ratings works with the FLAC compressed .wav files (it originally had an issue with the 2-way .wav file sound clip we were using)
- We have fallen behind on our schedule and need to ramp up our work so that we can complete our end product in time

## Individual Contributions:

Name	Contribution	Biweekly hours	Total hours
Jennifer Frank	Finished the specific gaming page, started working on the delete function of the gaming page, hid password, worked with other team members to help find a solution to our tasks	23	82
Jacob Stilwell	Worked on fishing app issue, creating and testing specific message page	7	36
Matthew Pedretti			31
Keng-Yik Ho	Worked on the safe shutdown of the raspberry pi	7	29
Thomas Kirby			28

## Plans for the upcoming week:

Due before we return from Thanksgiving break:

**Keng-Yik** - send new audio wav file to Thomas (with new compression)

**Thomas** - test new wav file and make sure word enabled confidence ratings work

**Thomas** - parse confidence ratings and update database with them so Jacob can use them in our mobile application

**Thomas** - write and email the python script that connects the pi and database to keng-yik so he can test it

**Thomas** - parse the .wav file and assign the hardware id, session id, message id, message to the appropriate variables and update the database.

**Thomas** - use python script to get date and also update the database with the date.

**Thomas** - use `os.path.getmtime(**wave file we send in**)` to get the .wav last modification time. Then write a method that subtracts 10 seconds from that time so we can calculate the start and end time stamp. Make an if case for the final .wav file where it looks at the "n-1" end time, takes that value adds one second and makes that the start time. Finally update this timestamp string to the database (needs its own new column in the message table). Ask Jenn or Matthew if you have questions/need help implementing this.

**Thomas** - make a UNC usable file path and store it on the database so that Jacob can access it and play it.

**Keng-Yik** - assemble controller attachment

**Keng-Yik** - get a definitive answer on battery power life (current draw or put in two double a batteries and see how long it lasts)

**Keng-Yik/Matthew** - think about failure issues with hardware and make sure that we have a solution to that (show how we can test these issues)

**Matthew** - Speaker assembly

**Jenn** - long click/context menu delete list activity and delete list activities that are 7 days old

**Jenn** - login/logout functionality

**Jenn** - add input for hardware code and database manipulation to the register page

**Jenn** - make it functional for multiple hardware parts (new screen after you login that lets you select which hardware account you want to view, potentially a dropdown menu that lets you switch account on other pages)

**Jenn/Jacob** - write/documenting test cases

**Jacob** - `gaming_session_entry` page where it displays the message, scrolls left and right for previous and next message and has an image icon at the top of the page that is clickable and plays the short audio clip

**Jacob** - update the chronological order of both listactivities (mainpage and gaming session page)

**Jacob** - once finished, help Jenn with other front end

Due after we return from Thanksgiving break:

**Thomas/Jenn/Jacob** - Work on notifications

**Thomas/Jenn/Jacob** - Fix and test other use cases/ corner cases

**Team** - Test end to end

**Team** - Work of final report, poster, presentation