First Journal (Week 09/06 to 09/12 Journal)

Class Summary:

In the Class from week 4, on 09/10, we were briefed on what was to be expected on a final project idea before the groups went on to present their different project ideas for opinions from the teacher or from other students.

General Notes:

For the last couple of days, we have spent time analyzing the different project ideas which we would want to go ahead with. We have had some discussions with Dr Stallard and have been put on the right track to picking out a good project idea which we could carry out for a group of our size, and we have landed on the idea of For the next week, I am meeting up with Coach Allen along with my group members to discuss a project idea we have and how his resources could help us in achieving our goals, as well as doing our own research pertaining to the project idea, which we could use to figure out the different components to building the idea, helping us understand the idea more and getting to know what is needed, providing content in our collective effort to write up a project proposal.

Summary of Contribution:

-Research towards completing project proposal write-up

-Discussion with Dr Stallard and group members on potential project ideas to pick up on
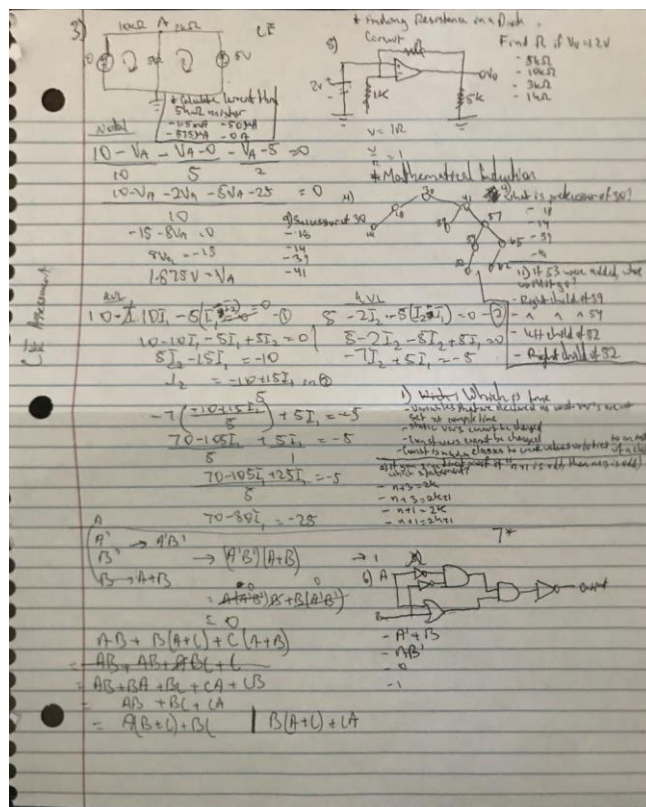
Second Weekly Journal(Week 09/13 – 09/19)

Class Summary

The entire class session time was used in completing our Skills Assessment practice exam, where each discipline completed their skills assessment in either Electrical, Computer engineering or in computer science. I completed my skills assessment with the Computer Engineering exam.

General Notes:

The week began with myself and my team having a meeting with Coach Allen to discuss some of our ideas and how the use of the LoRaWAN could help us implement our ideas. He gave us some opinions which we used to help understand how our idea could be completed.

Most of the week had been dedicated to preparing for the Skills Assessment exam, for which I used YouTube videos to help me remember some of the concepts from each topic that I had to go over. Below is the rough work I used in helping me answer the questions on the exam:

<u>Summary of Contribution:</u>

-Meeting with Coach Allen

-Preparation for Skills Assessment practice exam

Third Weekly Journal (Week 09/20 – 09/26)

Class Summary

In our class meeting with Dr Stallard, we discussed what the requirements phase of our projects would need to be like. The project flow diagram was also explained, showing us each stage, our project would go through and what would need to be completed by then. Some components of what the project planning paper needs to contain were also explained. The class concluded with some expectations for the midterm presentation which would start in our next class.

General Notes:

For this week, the major issue was finalizing a project idea to write a project planning paper about. Our team worked on being certain on our project idea, with meeting Dr Aravinthan who gave us some opinions on how we could improve the hardware aspect of our idea. I did some research on our project idea to understand what exactly needs to be done and what I could do to build the idea. Later on in the week we decided to change our project idea because we felt it might be a bit too complicated to develop. I did some new research based on the new project idea to create a keyboard which would aid in touch-typing, where the keyboard would sense the position of a person's fingers and displays that on the screen, which eliminates the need for the person to keep looking down to the keyboard and back up to the screen whenever they type. My team and I worked extensively on the project planning paper to get it completed so we could focus on preparations for the midterm presentation which begins in the next class.

Summary of Contributions:

-Meeting with Dr Aravinthan

-Research on new Project idea

-Meeting with group members to complete the project planning paper

<u>Fourth Weekly Journal (Week 09/27 – 10/03)</u>

<u>Class Summary</u>

There was no class, first round of Midterm Project presentations had begun

<u>General Notes:</u>

For this week, the time was dedicated to preparing for our midterm presentation which was to be done in the next week. I spent my time beginning the research into the software requirements and costs of our project, which needed the Arduino IDE and the Visual Studios application which would be needed to develop code about capturing users finger positions on the keyboard and displaying the keyboard on the screen with the use of an app respectively. Also had a meet up with my team where we discussed who would focus primarily on a particular section of our project to talk about during the presentation.

<u>Summary of Contributions:</u>

-Began research for software requirements and costs for the midterm project slides and report

-Met with team to discuss findings about software requirements and costs

Fifth Weekly Journal (Week 10/04 – 10/10)

Class Summary

There was no class, second round of midterm presentations had begun. My team presented our project on the second round of presentations.

General Notes:

For this week, time was spent on finalizing research on the software requirements and costs of the needs for our projects, with the use of the Arduino IDE and Visual Studio. I Discussed my final findings with my team members and added these points to our midterm presentation slides which we presented during the class time and later submitted on the blackboard page. In the latter parts of the weak time was spent in preparation for the skills assessment exam which was to happen in the next week.

Summary of Contributions:

-Finalized research on software requirements and costs

-Met with team members to discuss our approach to the midterm presentation

-Began preparation for the skills assessment exam

Sixth Weekly Journal (Week 10/11 – 10/17)

Class Summary

There was no class, the time period was spent completing the Skills Assessment exam

General Notes

Majority of this week was spent in preparing for the skills assessment exam which took place during the class time. The team and I took time to meet with Dr Stallard to discuss ideas about the focus of the audience that our project should have. After the skills assessment exam, time was spent meeting with team members to discuss our next plans in progressing our project and gathering materials required

Summary of Contributions:

-Finalized preparations for skills assessment exam

-Met with Dr Stallard to discuss scope/audience for our project

-Met with team members to discuss materials required and begin purchasing some of the materials.

Seventh Weekly Journal (Week 10/18 – 10/24)

Class Summary

For this week there was no planned class

General Notes

Started some research on how Arduino collects data from its external boards to be used to develop code by watching some videos and reading some material to help my understanding. Discussed further materials to be purchased with my team members. Helped to complete the software specifications of the teams' technical product specifications, where I filled in the software Arduino product specifications.

Summary of Contribution

-Started research on data collection from external boards and how its used in the Arduino IDE

-Helped to complete Technical product specifications document

Eighth Weekly Journal (Week 10/25 – 10/31)

Class Summary

For this weeks' class we looked at trade spaced and work packages. Work packages are about the planning documents, including the work planning, resources, work, materials which are used in preparing for completing an assignment. Trade spaces are the thinking stages or processes an engineer goes through in planning to use a method to solve an issue.

General Notes

Completed my research on methods used to collect data from external boards and use them to help develop and execute code within the Arduino IDE (Using jumper wires and capacitive sensors to connect to the computer with the USB connection). I have also downloaded the Arduino IDE software and played around with some of the tools to familiarize myself with the IDE. Met with my teammates to discuss our approach for the product reflection document. Also finalized the requirements for planning the code which would be done with the Arduino IDE and used that to help complete the architectural integration block diagram.

Summary of Contribution

-Completed research on data collection methods from external boards

-Downloaded Arduino IDE and played around with its tools

-Met with team members to discuss approach for the product reflection

-Completed block diagram for architectural integration

Ninth Weekly Journal (Week 11/1/21 – 11/7/21)

Class Summary

No formal class session, time was spent on researching into Arduino codes and development

General Notes

Within this week we began working on the technical aspects of our project towards preparing for a prototype to be presented later this semester. Met with my group members to discuss what was going to be needed to make the prototype, familiarized ourselves with the material we had and our steps in making the prototype. In addition, from researching and with information shared with my group members, I have understood how data is read into the Arduino code from external boards and coded using pre-defined libraries for specific hardware which could be edited to work with the requirements that we would need to execute the code. Finally, I interviewed two people and used notes obtained from the answers I received to help build the group project reflection paper

Summary of Contribution

-Completed research on how data is moved from external boards to Arduino code and used for code development

-Meeting with group members to initiate prototype building.

-Interviewed Mr Fujian Yan and Mr John Jones

Tenth Weekly Journal (11/8/21 – 11/14/21)

Class Summary

For this class session, Dr Stallard gave the class a walkthrough on what the Fall product showcase would entail. He went over what needed to be accomplished before and on the day. An orientation video to introduce our projects, a technical presentation slide, preparation for questions and answers and a prototype. He explained the logistics for the day, where we would need to come in early to set up and that we would need to register a time slot for grading.

General Notes

For this week I completed some research on the method of moving data from received from the Arduino code into visual studios, where we would create the code needed to make our app. This is done using namespaces which can use the port from the Arduino code and call the properties of the code using namespaces inside visual studios in C++/C Language. In addition, I met up with my group members for our second in person meeting to continue the development of our prototype's hardware, where we worked on soldering our mpr121(capacitive touch sensor) outlets so they could be static when placed on the circuit board.

Summary of Contribution

-Meeting with group members to continue development of prototype and soldering.

-Completed research on method of data movement to transition from Arduino code to Visual Studios.