EE/CprE/SE 491 WEEKLY REPORT #1
09/15/2019 – 09/29/2019
Group number: sdmay20-24
Project title: Wearable Cardiac Monitor
Client &/Advisor: Cheng Huang

Team Members/Role:
Andrew O'Brien - Software
Peyton Sher - Software
Ruiyu Sun - Hardware
Scott Beard - Hardware
Samantha Kimball - Communications
Vincent Lazzaro - Communications

Weekly Summary:
The overall objective of our group this week was starting to research our topics we had broken down as a group to start to visualize how our project will look. We split into a hardware side, software side, and a communication side as these were the biggest areas we felt would be useful for the project and they also aligned with our comfort levels from a material standpoint. Our goal was to have some parts we wanted to order next week. At this point we are still brainstorming how we want to complete this project but the overall goal of the final outcome hasn't changed much.

Past Week Accomplishments:
Andrew O'Brien: Started researching how to collect a bluetooth signal with an Android Device and use that signal inside an application.
Peyton Sher: Research into arduino as well as what the most effective way to develop the app would be. Lightning talk.
Ruiyu Sun: Researching on related components and circuit design. Lightning talk.
Scott Beard: Researching circuit components that can read an ECG
Samantha Kimball: Worked on lightning talk and planned for future deadlines
Vincent Lazzaro:

- Research on modules for arduino that can be used to send a bluetooth signal to communicate with a smartphone.
- Worked on our lightning talk.
- Planning for future deadlines for where we should be at.

Pending issues: (If applicable: Were there any unexpected complications? Please elaborate.)
Andrew O'Brien: I also looked at some low power systems but didn't find what I was looking for really.
Peyton Sher: low power with wireless. More of an end goal would be to have less wires.
Ruiyu Sun: Wearing issues. Operation environment affects design.

Scott Beard: Parts ordering, can first iteration be done on breadboard?, PCB drawing tools available
Samantha Kimball: Attaching it to the body in a different location will change how strong the signal will be transmitted, attaching to the chest is probably best bet though
Vincent Lazzaro: Figuring out what bluetooth module would best fit our design for communicating to a smartphone.

Individual contributions: (Creating this section is optional, but it is Required to include the "Hours Worked for the Week" and their "Total Cumulative Hours" for the project for each member somewhere relevant in your report. Your individual weekly hours should be at a minimum of 6-8 hours for this course. So please manage your time well. Also, ensure that individual contributions support your claim to the weekly hours. Be honest with the reports.)

Name	Contribution	Weekly Hours	Cumulative Hours
Andrew O'Brien	Research/ Planning	10	10
Peyton Sher	Research/Planning	7	7
Ruiyu Sun	Research/Planning	7	7
Scott Beard	Research and planning	7	7
Samantha Kimball	Research and planning	7	7
Vincent Lazzaro	Research and planning	8	8

Comments and extended discussion: (Optional)
Feel free to discuss non-technical issues related to your project.

Plans for the upcoming week:(Please describe duties for the upcoming week for each member. What is(are) the task(s)?, Who will contribute to it? Be as concise as possible.)
Andrew O'Brien: Look into data management within Android to ensure that our data is being stored for later use (either on the cloud or on the device).
Peyton Sher: Mess around with arduino, especially if we get one in, because that will be a better example of the one that will be included in the project. Set up some baseline code for the project and get it pushed to the git.

Ruiyu Sun: Work with Scott to find out a possible circuit design that meet requirements. Order corresponding components.
Scott Beard: Work with Ruiyu to have a block diagram of circuit segments that will feed into Arduino, create first iteration schematic and order necessary parts
Samantha Kimball: Work with Vincent to create a block diagram and schematic of the bluetooth segment of our design and order those necessary parts.
Vincent Lazzaro: Work with Sam to create a block diagram and schematic of the bluetooth segment of our design and ordering necessary parts.