

EE/CprE/SE 492 WEEKLY REPORT 6

11/08/2021-11/22/2021

Group number: 18

Project title: Batteryless Game Device

Client/Advisor: Henry Duwe

Team Members/Role:

Shivam Vashi- Software Lead

John Brose - Power Systems Engineer

Daniel Lamar - Test Engineer

Franklin Bates - Microcontroller Engineer

Jake Larimore - Integration Engineer

**o Weekly Summary (Short summary about what the group did for the week. This should be about a paragraph in length. These are just a few questions to help you get started. What was the overall objective for the week? In general, what tasks were completed? Were there any changes made to the project?)**

The past week we made several key developments as we approached the end of the semester. We began designing the final PCB, successfully uploaded our gameplay UI states to our e-ink display, successfully implemented CPTL on the microcontroller, and successfully tested a fully integrated prototype. As we progress towards the end of the year we will continue to optimize our design and begin preparing for the final poster/presentation/design document.

**o Past week accomplishments (Please describe/summarize as to what was done, by whom, when and, collectively as a group. This should be about a paragraph or two in length. Bulleted points are acceptable as well. Please keep only your technical details related to your project. Figures, schematics, flow diagrams, pseudocode, and project related results are acceptable, but please ensure that they are legible (clear enough to read) and to provide an explanation. If researching a topic, please add a few details about what was learned and how it is relevant to the project. If two or more people worked on a single task, be sure to distinguish how each member contributed to the task. Specific details relating to the assistance provided to other members may be included here. Do not include classwork, such as individual reflection assignments, and group meetings as part of your duties.)**

Shivam Vashi: Refactoring the code, and setting up the screen transitions.

Franklin Bates:

Jake Larimore: Assisted in debugging of Final PCB. Tested final PCB with hand crank, all buttons, and basic gameplay

John Brose: Finished schematic and PCB, soldered up, tested PCBs and debugged and got them working.

Daniel Lamar: Design the casing for the final product to create a handheld device that contains and protects every component.

**o Pending issues (If applicable: Were there any unexpected complications? Please elaborate.)**

Shivam: Testing is awkward on an integrated device as the tests have to be loaded onto the board and there is no testing environment built into code composer studio.

Franklin: Clocks were turned off for low power modes so we are unable to detect exact voltage from hand crank but that is just a minor feature

Jake Larimore: We were unable to implement multiplayer functionality as our client had hoped.

Daniel Lamar: There are limitations with 3D printing our design that make it difficult to design a final model. We are waiting on the new PCB to be designed and delivered so I cannot design my model around that yet.

John Brose: Complete more tests for the hardware.

**o 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	Contributions	Hours Worked this Week	Hours Cumulative
Shivam		8	48
Jake Larimore		22	50
Daniel Lamar	Designed the 3D casing, tested a range of supercapacitors with the power IC	8	31
John Brose		40	60
Franklin Bates		40	86

**o Comments and extended discussion (Optional)**

**Feel free to discuss non-technical issues related to your project.**

**o 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.)**

Shivam Vashi: Finalize code and check tests

Franklin Bates: Finish design doc, panel presentation, and poster

Jake Larimore: Finish design doc, panel presentation, and poster

John Brose: Finish design doc, panel presentation, and poster

Danie Lamar: Finalize the product assembly with the group, finalize poster and begin practicing the presentation.

**o Summary of weekly advisor meeting (If applicable/optional)**

**(Provide a concise summary on the contents and progress made during the advisor meeting.)**