Team 24

Project Title: Laser Arcade Machine

Date: 10/3/2021

Members:

Joseph Kenkel - Signal Communication

Ashley Robertson - General Hardware

Jonah Stoffer - General Hardware

Mark Kavars - Microcontroller

Tyler Beveridge - Full Stack Developer

Morgan Luecht - Front-end Developer

Zack Larson - Back-end Developer

What we've accomplished in the past week/what we've been researching

Joseph Kenkel - Helped with research on IR emitters and photodiodes/ photoresistor to measure the incoming signal. Also researched how lazer tag mechanisms.

Ashley Robertson - Designing battery protection circuitry for the shooter, working on general shooter design, beginning research on IR emitters and lenses

Jonah Stoffer - Started researching flexible PCBs to consider the applications within our project. Discussed constraints and requirements for the project.

Mark Kavars - Narrowing down what microcontroller, type of light for the laser(IR or laser), and setting the product should be best suited for.

Tyler Beveridge - Researching Raspberry Pi back-end server capabilities, and you know a presentation, this weekly report, and an extra recorded presentation.

Morgan Luecht - Researching more about react applications, and making plans for layouts of the application.

Zack Larson - Researching common arcade game stats and what data is all collected from them. Prepped for in-class presentation.

What we're planning to do in the coming week

Joseph Kenkel - Research how to effectively send signals from each target to the central processing unit. This will have to be a two way communication that is also small enough to hide on the target. I will also help finalize the IR and detector sensor.

Ashley Robertson - Deep dive into IR emitters and lenses and get a final part specced out to begin design around. This will let us start figuring out a receiver for the IR emitter for the target side of things

Jonah Stoffer - Continue researching flexible PCBs. Further research laser options and make final decisions.

Mark Kavars - Making a final decision on specifics so we can begin design

Tyler Beveridge - Try ETG for obtaining software side hardware requirements/Locate vendors

Morgan Luecht - Design layout of application for the front end

Zack Larson - Develop database schema for what is all going to be collected for data within the application

Issues or concerns we had in the previous week

Joseph Kenkel - Choosing between IR and visible light. Did we make the right decision.

Ashley Robertson - The silicon shortage, I think in the near future we need to start preparing for multiple designs because odds are many key parts that we need will become out of stock by the time we get designs finished

Jonah Stoffer - Not really. I just think that there are a few decisions that need to be made.

Mark Kavars - We have been indecisive on what type of light to use for the gun

Tyler Beveridge - Don’t really know what anyone else has been working on.

Morgan Luecht - Concerned slightly about being able to make a decision for the laser and gun itself.

Zack Larson - No real concerns, should be starting to design the full layout of the application soon