EE / CprE 492 sdmay23-26

Mini-Arcade Cabinet

Client : Brad Yenger
Advisor : Mathew Wymore
3-24-23 to 4-7-23

Team members:

Brad Yenger (EE)
- soldering experience, 3D CAD design, carpentry skills, along with project experience
Liam Tureaud (EE)
-Soldering experience, carpentry, PCB design, electrical work
Alexander Glass (SE)
-Capable coding in Java, HTML, JavaScript, willingness to learn a new skill during the course of this project
David Helmick(SE)
-Worked with many different computer programming languages in many different aspects (simple games, UIs, websites, embedded systems, databases, etc.). Taken both CprE and SE courses so I have lots of knowledge about computers from a hardware and software perspective.
Jeffrey Marsh(SE)
-pretty talented programmer also well versed in video game emulation
Mark Gores(SE)
-proficient in multiple coding languages. Good understanding of operating systems. Good understanding of computer engineering.

Past two weeks accomplishments:

Liam Tureaud -tested LED array (400 leds). Colum driver circuit ready, working on row driver.

Bradley Yenger - restarted on/off circuit. Soldered the LED array (400 leds). Made progress on the box. (added mounts for led matrix, mount for monitor, added speaker mount, mounted the speaker and volume control for user, and added USB ports to front of box for controllers and usb thumb sticks)

Mark Gores, Alexander Glass, Jeffery Marsh ,David Helmick - The whole software team has come together to combine and test codes. Controller (both arcade style and xbox) work

flawlessly with the UI and games. UI is running smoothly while not chrome tabs are open (with around 20 tabs the pi did slow down). The UI control for brightness and volume is being tested. Debugged a problem where the UI would not open games (this was due to a Java version difference, where cap sensitive code was a main problem). Continue work on UI display for the games.

Pending Issues:

Bradleys ON/OFF circuit failed to work after different debug ideas from testing. Backup arduino nano code is being prepared and will be implemented by next update. The cabinet is ready to be finished and monitor mounted, but the LED matrix and drivers need to be finished and installed before we can finish the cabinet.

Name	Hours worked these weeks	Total hours
Liam Tureaud	7	40
Brad Yenger	8	42
Mark Gores	6	42
Alexander Glass	5	39
Jeffery Marsh	6	40
David Helmick	6	41

Next plan of action:

Liam Tureaud - Finish LED matrix and logic by next week.

Bradley Yenger - Have the ON/OFF circuit and logic ready by next week. Next week, install both the LED matrix and ON/OFF circuits into the box, then install the speaker and mount the monitor.

Mark Gore, Alexander Glass, Jeffery Marsh, David Helmick - Test UI (volume and brightness control, look to improve the smoothness of elements on the UI, continue to test for bugs when opening the game, test and see for optimization options, and look to download some other games, burger time is our only one so far that has been used to test controls, audio, visuals, and frame rate of games)