Layton Knight

CSC 2463 Project Outline

Video Link: https://youtu.be/b2wM\_DBG3GQ

When I first started my project, I wanted to have a simple brick game where I interacted with a touch screen in order move a slider left and right, as buttons are one direction and one speed. I started by laying out my set up and getting it to communicate over serial. After a lot of trial and error, I implemented a much easier self contained unit that used the top pixels (180 x180) to display on the touch screen. I used an Arduino Mega 2560 and a small 1.7 inch tft touchscreen.

The outline of this project was simple until my touch screen just wont communicate over serial. I tried a different board I had, R3 , and still could not get a signal to communicate over serial to my computer. I went through a lot of troubleshooting but ultimately went with just enclosing my self contained unit. The project uses an array to build a matrix of blocks and randomly generate the colors with hex values. I used Adafruit\_gfx library built within Arduino to communicate graphics to P5. I then used a Touchscreen library also built in Arduino. I was going to take pictures to upload however I lost my project shortly after presenting it. I will attach images of what I used. I enclosed them in some hand cut cardboard and the screen can really only get inserted one way, but I lined up the reset pin to the reset pin on the board.  
A picture containing electronics

Description automatically generatedGraphical user interface

Description automatically generated

Future Development:

If I had to continue work on this project, I would see if I could find a way to get the serial import working so that way I can have a touchscreen slider, and see if I can implement this into my computer. For example if I had a gaming setup, maybe have the work similar to an el Gato Stream deck, where I can program a button that either opens another program or I have it set to be controls for escape from tarkov similar to hot keys. I think having a simple brick break program is nice, but I would progress this progress by letting it be a touch screen of buttons and hot keys.