KU Pinball Wizards

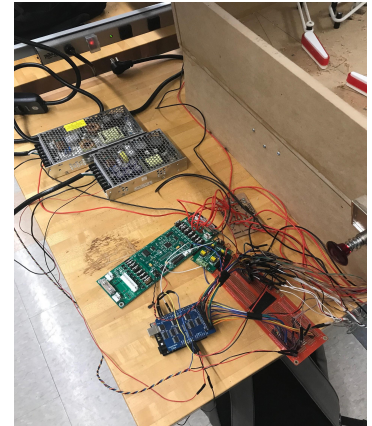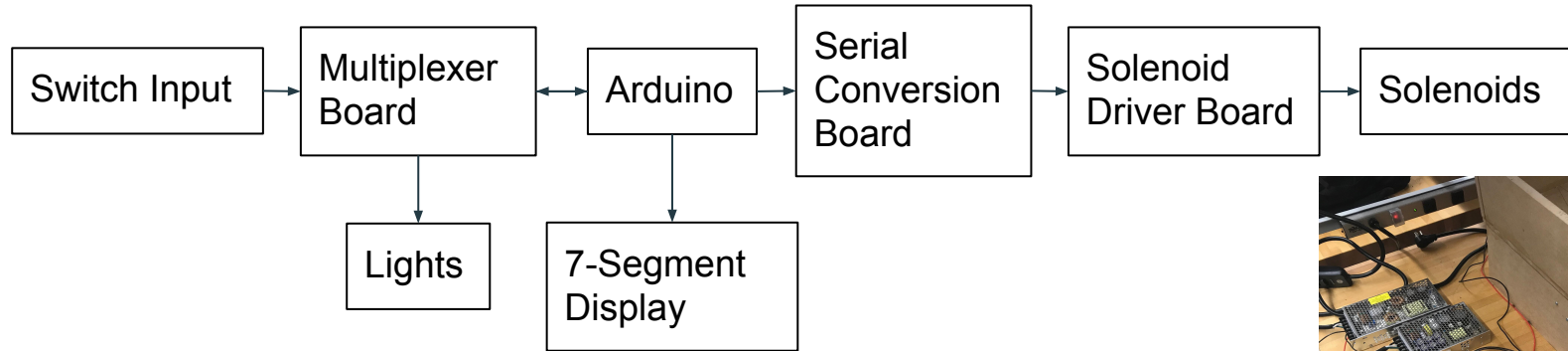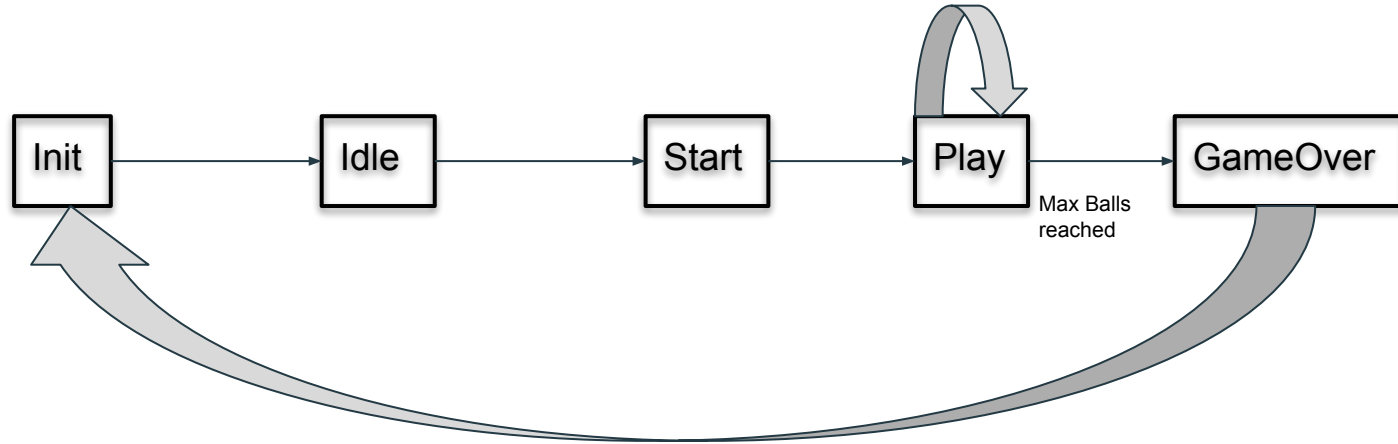Alex Griffin, Chris Porras, Brad Gibbons

Project Overview

The objective of this project was to:

- Create an affordable pinball machine that is controlled by an arduino
- Write game code that is reconfigurable by the user to add replayability to a classic game

Hardware

Switch Input → Multiplexer Board → Arduino → Serial Conversion Board → Solenoid Driver Board → Solenoids

Multiplexer Board → Lights

Arduino → 7-Segment Display

Software

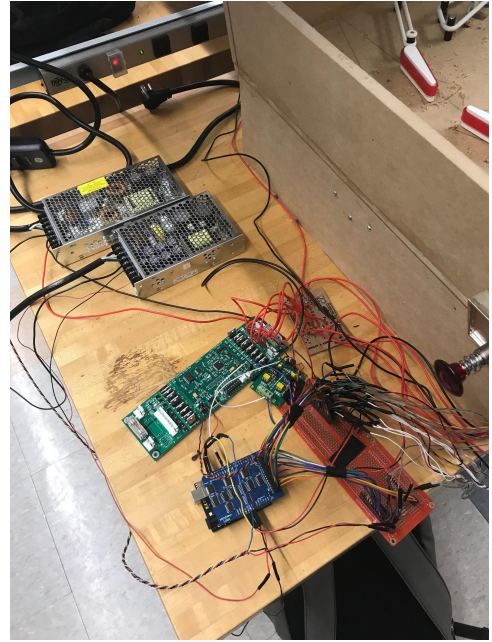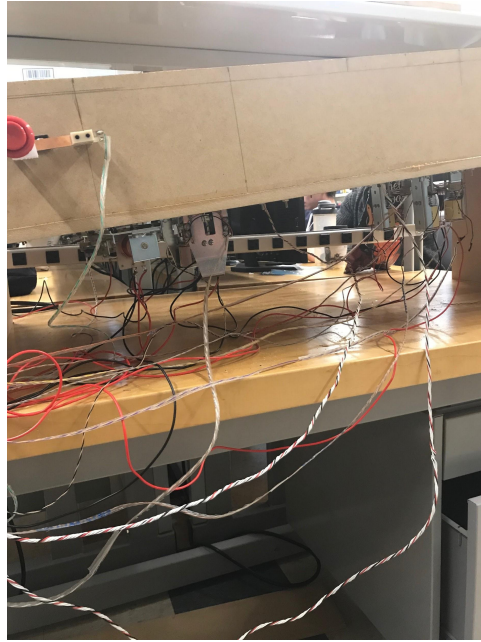Init → Idle → Start → Play → GameOver

Max Balls reached

- All written in an arduino file
- Simple FSM diagrammed above to control game states
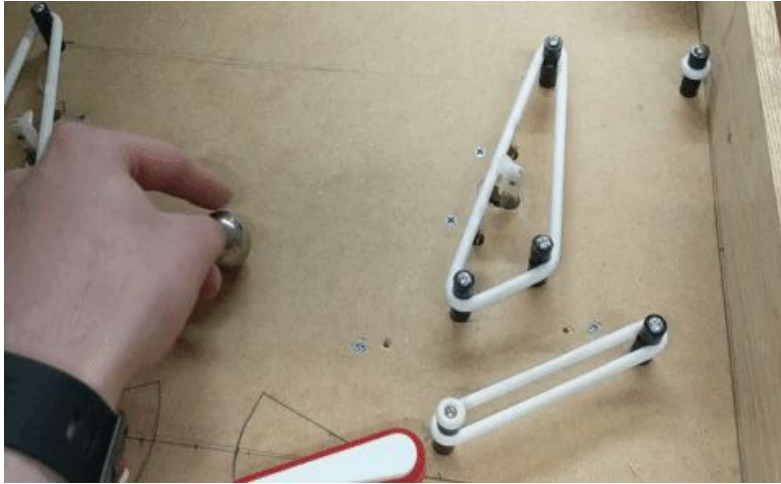- Reconfigurability handled in the INIT phase

What we have accomplished

Lots of Wires…

The machine in action…

The machine in action…

Challenges

- Getting Driver Board to work initially with the arduino
- Wood-working/drilling was time consuming
- Installing parts and calibrating so that solenoids fire properly
- Wire management

Future Additions/Changes

- Multiple game modes
- Save multiple players scores
    - Have high score display
- Create CAD model of playfield and cut using CNC machine for more precise installation of components and better playfield design

Thank You!

Questions?