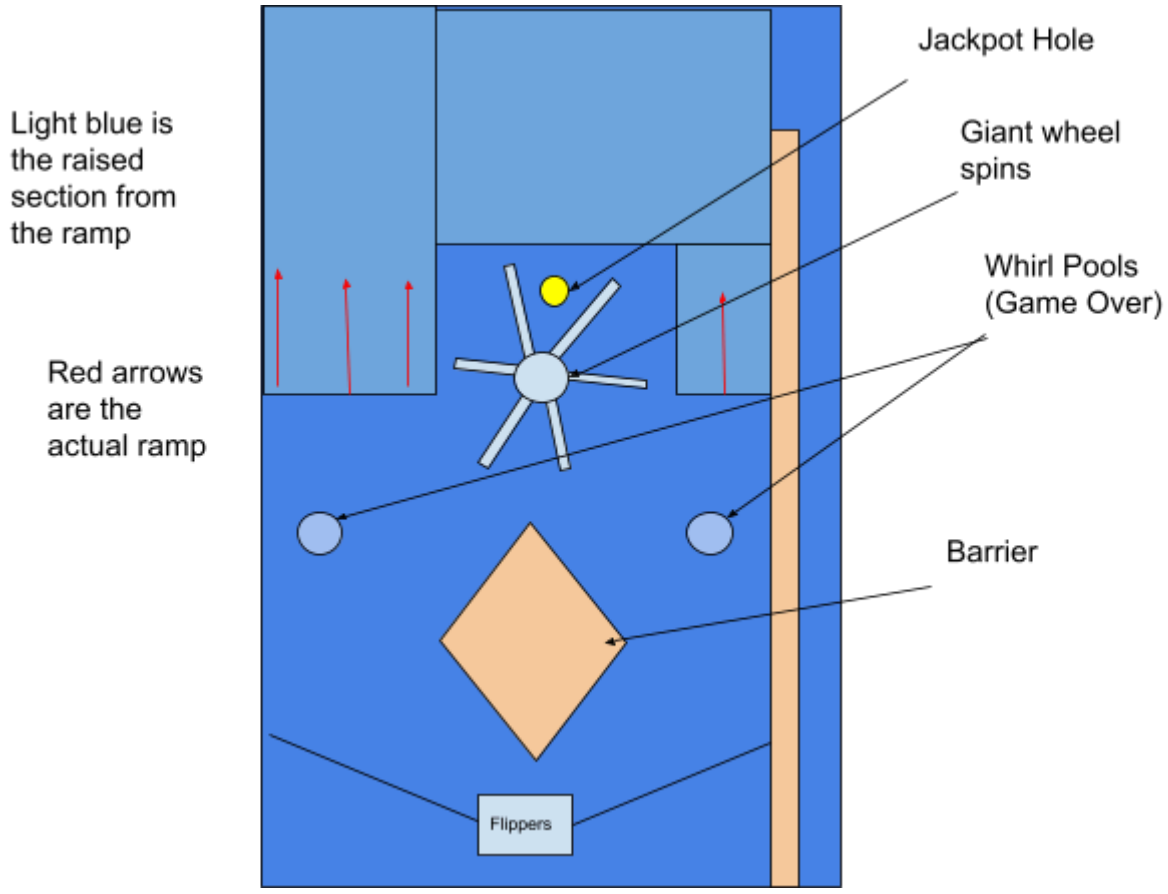
ECE 484 - Pinball Proposal

Display- The display mainly consists of bringing in all of the different sensors to determine point values or when the game is over or not. This part mainly consists of communication between Arduinos using either SPI, UART, Wifi or bluetooth (using wireless hats.)
https://github.com/radabacc/ECE484_IndividualFinal

Launcher - Using an ultrasonic sensor (or some kind of detection device) to detect when the ball rolls past the sensor to then launch it back into the playing field automatically. Some sort of signal from the playing field turning off the automatic launcher when something happens or when the game is over. Going to follow the video provided to implement a solenoid to launch the marble.
https://github.com/runaroundsam/ECE484IndividualProj

Playfield - Beach theme. Giant center wheel that spins with paddles on it. Powered by a continuous servo motor. Little ramp that goes up on both sides of the giant wheel, therefore the whole backside is elevated.

Jackpot holes up on the high side. However, there are games all over the whole meant to resemble whirlpools on the sides. Basic first thoughts diagram is shown:



https://github.com/ABendi101/Pinball-Play-Field

Paddles - Rounded triangle shaped paddles, one on the left, one on the right. Measure out the distance in between so the ball can actually fall through the center. Keep the paddles relative to the theme. Will have a button that allows for the paddles to go up/down and will have this wired directly above the paddles on the outside of the machine. We will have to program how fast/hard the paddles will hit the balls. We do not want it to be too soft or too hard, I will have to find a good medium range for this to work as desired. I will use solenoids to get the paddles to function properly. I read on this website how to properly implement the solenoids to the paddles.
https://github.com/apathybc/Project484