Derek Pyatt

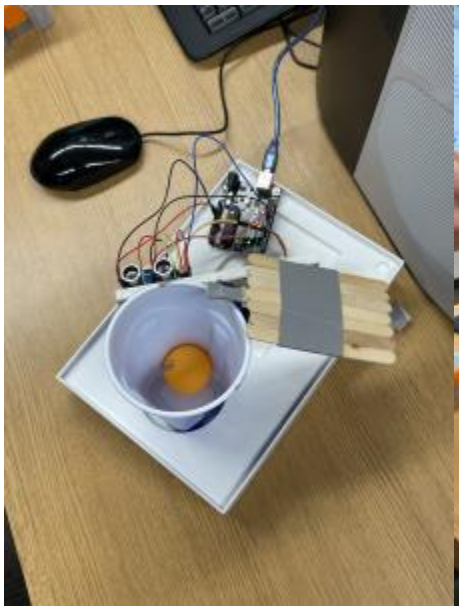
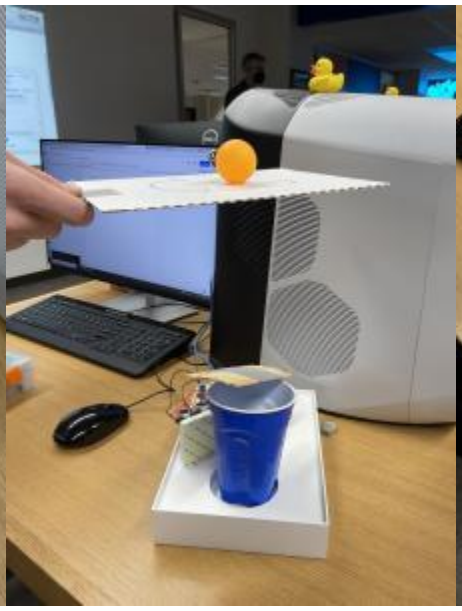
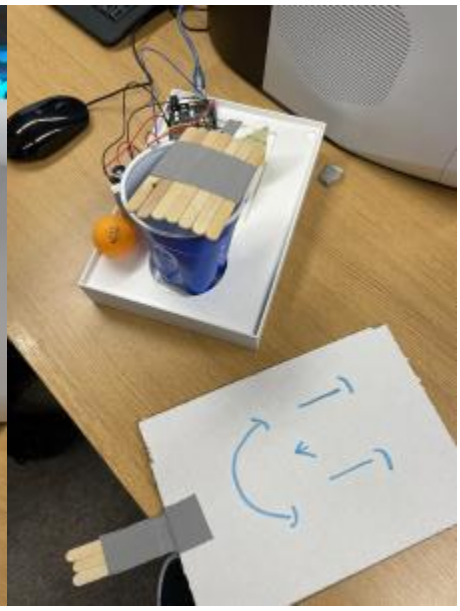
Ted Apel

GIMM 280

1 November 2021

Assignment 13 - Servo Drop
Description:

Servo Drop is played with a paddle that has a ping pong ball set on top. The ball is balanced on top of the paddle and while the paddle is held over the barrier is blocking the cup. Once the paddle is removed the barrier moves out of the way. The goal is to launch the ball into the air and land it into the cup.

Technical Description:

The way that the sensor is mapped to the servo is through the duration variable which was put into the map function. The duration variable has a value of around 1,000 when the paddle is above it and this keeps the cup closed. Once the cup is removed the duration variable reaches to around 10,000 and this opens the cup creating an opening for the ball to fall inside.

Derek Pyatt

Ted Apel

GIMM 280

1 November 2021

Arduino Code:

```
#include <Servo.h>

Servo myServo;

int potVal;
int angle;

int trigPin = 11;
int echoPin = 12;
long duration, cm, inches;

void setup() {
  Serial.begin (9600);
  myServo.attach(9);

  pinMode(trigPin, OUTPUT);
  pinMode(echoPin, INPUT);
}

void loop() {

   angle = map(duration, 1000, 10000, 0, 179);
   myServo.write(angle);

  digitalWrite(trigPin, LOW);
  delayMicroseconds(5);
  digitalWrite(trigPin, HIGH);
  delayMicroseconds(10);
  digitalWrite(trigPin, LOW);

  pinMode(echoPin, INPUT);
  duration = pulseIn(echoPin, HIGH);

  Serial.print(duration);
  Serial.print(" - Duration, ");

  Serial.print(angle);
  Serial.println(" - Angle");

}
```

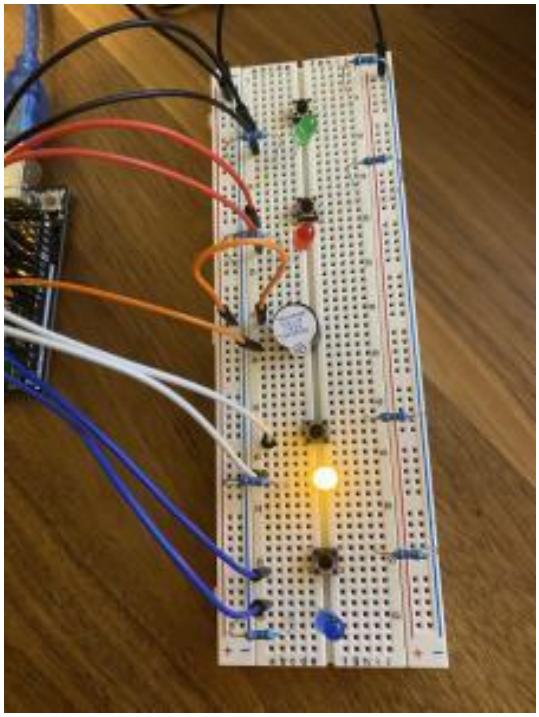
Derek Pyatt

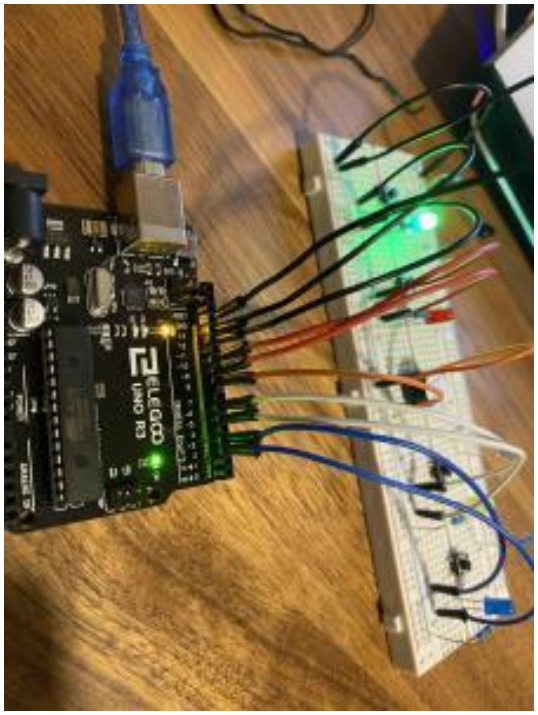
Ted Apel

GIMM 280

1 November 2021

Final Project





This week for my final project I completed the sautering training for the maker lab and I was also able to make a Simon-Says game working with my kit.