/\* The Gesture Sensor controls a servo and a singular LED.

The Gesture Sensor module provides simple motion-based gesture recognition and object tracking.

Make sure to orient the Sensor in the correct orientation (i.e. the cable extends to the left and the two mounting holes are oriented towards ceiling and floor. The small camera at the centerof the Sensor is in portrait-orientation with its opening on the right).

In gesture mode it can recognize 9 hand moving gestures:

move up

move down

move left [USED IN THIS CODE: turns LED on and rotates servo -120 degrees]

move right [USED IN THIS CODE: turns LED off and rotates servo +120 degrees]

circle clockwise

circle anti-clockwise (counter-clockwise / widdershins)

forwards / towards

backwards / away

wave

The device also counts the quantity of hand waves.

\*/

#include <Wire.h> // This library that I2C communication.

#include "paj7620.h" // This is the library for the Gesture Sensor.

#include <Servo.h>

#define GES\_REACTION\_TIME 500

#define GES\_ENTRY\_TIME 800

#define GES\_QUIT\_TIME 1000

uint8\_t gesture\_data, gesture\_error;

Servo servo\_1;

#define servo\_pin 3 // Note: The Gesture Sensor is connected to either one of the two I2C pins.

#define LED\_pin 2

void setup() {

 Serial.begin(9600);

 paj7620Init();

 servo\_1.attach(servo\_pin);

 servo\_1.write(0); // Set the initial servo position to 0 degrees

 pinMode(LED\_pin, OUTPUT);

}

void loop() {

 gesture\_data = 0;

 gesture\_error = paj7620ReadReg(0x43, 1, &gesture\_data);

 if (!gesture\_error) {

 switch (gesture\_data) {

 case GES\_LEFT\_FLAG:

 digitalWrite(LED\_pin, HIGH); // Turn LED on

 servo\_1.write(120); // Rotate servo to 120 degrees

 break;

 case GES\_RIGHT\_FLAG:

 digitalWrite(LED\_pin, LOW); // Turn LED off

 servo\_1.write(0); // Return servo to 0 degrees

 break;

 default:

 break;

 }

 }

 delay(100);

}