#include <Servo.h>

// constants won't change

const int MOTION\_SENSOR\_PIN = 7; // Arduino pin connected to motion sensor's pin

const int SERVO\_PIN = 9; // Arduino pin connected to servo motor's pin

Servo servo; // create servo object to control a servo

// variables will change:

int angle = 0; // the current angle of servo motor

int lastMotionState; // the previous state of motion sensor

int currentMotionState; // the current state of motion sensor

void setup() {

Serial.begin(9600); // initialize serial

pinMode(MOTION\_SENSOR\_PIN, INPUT); // set arduino pin to input mode

servo.attach(SERVO\_PIN); // attaches the servo on pin 9 to the servo object

servo.write(angle);

currentMotionState = digitalRead(MOTION\_SENSOR\_PIN);

}

void loop() {

lastMotionState = currentMotionState; // save the last state

currentMotionState = digitalRead(MOTION\_SENSOR\_PIN); // read new state

if (currentMotionState == LOW && lastMotionState == HIGH) { // pin state change: LOW -> HIGH

Serial.println("Motion detected!");

servo.write(90);

}

else

if (currentMotionState == HIGH && lastMotionState == LOW) { // pin state change: HIGH -> LOW

Serial.println("Motion stopped!");

servo.write(0);

}

}