**SMART LIGHT**

int irSensorPin = 2; // Pin for the IR sensor

int ledPin = 13; // Pin for the LED

void setup() {

pinMode(irSensorPin, INPUT);

pinMode(ledPin, OUTPUT);

digitalWrite(ledPin, LOW); // Ensure the LED is initially off

Serial.begin(9600);

}

void loop() {

int sensorValue = digitalRead(irSensorPin);

if (sensorValue == HIGH) {

digitalWrite(ledPin, HIGH); // Turn on the LED when motion is detected

Serial.println("Motion Detected");

} else {

digitalWrite(ledPin, LOW); // Turn off the LED when no motion is detected

Serial.println("No Motion Detected");

}

delay(1000); // Optional delay to reduce sensor sensitivity

}