// Define pin numbers

const int irSensorPin = 2; // Pin connected to the IR sensor output

const int buzzerPin = 8; // Pin connected to the buzzer

const int redLedPin = 9; // Pin connected to the red LED

const int greenLedPin = 10; // Pin connected to the green LED

void setup() {

// Initialize pins

pinMode(irSensorPin, INPUT);

pinMode(buzzerPin, OUTPUT);

pinMode(redLedPin, OUTPUT);

pinMode(greenLedPin, OUTPUT);

// Start with the green LED on to indicate the system is armed

digitalWrite(greenLedPin, HIGH);

digitalWrite(redLedPin, LOW);

digitalWrite(buzzerPin, LOW);

}

void loop() {

int sensorValue = digitalRead(irSensorPin);

if (sensorValue == LOW) {

// If the IR sensor detects an object (e.g., an intruder), trigger the alarm

digitalWrite(redLedPin, HIGH);

digitalWrite(buzzerPin, HIGH);

digitalWrite(greenLedPin, LOW);

} else {

// If the IR sensor does not detect anything, turn off the alarm

digitalWrite(redLedPin, LOW);

digitalWrite(buzzerPin, LOW);

digitalWrite(greenLedPin, HIGH);

}

}