int in1 = 9; // Data Pin of Relay

int sensor = 8; // PIR Sensor Pin

unsigned long t=0;

unsigned long t2=0;

void setup() {

Serial.begin(9600);

pinMode(in1, OUTPUT);

pinMode(sensor, INPUT);

pinMode(led, OUTPUT);

digitalWrite(in1,HIGH);

}

void loop()

{

if(digitalRead(sensor)==HIGH) // If motion detected

{

Serial.println("Sensor ON.... ");

t=millis(); // Variable to manage the time periods after which the next motion is to be detected.

digitalWrite(in1,HIGH); // Turn the relay ON

while(millis()<(t+3000)) // Check the motion for three econds

{

Serial.print("W1...... ");

digitalWrite(in1,HIGH);

if((millis()>(t+100))&&(digitalRead(sensor)==HIGH)) // Loop to check the motion after every 0.1s

{

Serial.print(" =========== ");

t=millis(); // if motion detected the while loop will be executed again as the time t is updated here.

}

Serial.println("Checking if on after 0.1s...... ");

}

Serial.println("ENDIF");

}

else{ // If no motion is detected

Serial.println("Sensor OFF.... ");

t2=millis();

while(millis()<(t2+3000)) // Loop to check whether there is any further movement

{

digitalWrite(in1,LOW);

if((millis()>(t2+1500))&&(digitalRead(sensor)==LOW)) // Check the Sensor readings after every 1.5s

{

t2=millis(); // Update t2 variable if no motion detected.(thus the while loop goes on.

}

}

}

}