

```
int pirPin = 2;  // PIR sensor output pin connected to digital pin 2
int ledPin = 13; // Built-in LED pin (you can also use an external LED)
```

```
void setup() {
  pinMode(pirPin, INPUT); // Set PIR sensor pin as input
  pinMode(ledPin, OUTPUT); // Set LED pin as output
  Serial.begin(9600);    // Start serial communication
}
```

```
void loop() {
  int sensorValue = digitalRead(pirPin); // Read PIR sensor output

  if (sensorValue == HIGH) {
    // Motion detected
    digitalWrite(ledPin, HIGH); // Turn on LED
    Serial.println("Motion detected");
  } else {
    // No motion detected
    digitalWrite(ledPin, LOW); // Turn off LED
    Serial.println("No motion");
  }

  delay(500); // Delay for 500ms before reading again
}
```

