

```
// Write an Arduino/Raspberry pi program for interfacing with PIR Sensor
```

```
// PIR Sensor interfacing with Arduino
```

```
int pirPin = 2; // PIR sensor output pin
```

```
int ledPin = 13; // LED pin
```

```
void setup() {
```

```
  pinMode(pirPin, INPUT); // Set PIR pin as input
```

```
  pinMode(ledPin, OUTPUT); // Set LED pin as output
```

```
  Serial.begin(9600); //Initialize serial communication for debugging
```

```
}
```

```
void loop() {
```

```
  int motionState = digitalRead(pirPin); // Read PIR sensor state
```

```
  if (motionState == HIGH) {
```

```
    digitalWrite(ledPin, HIGH); // Turn on LED
```

```
    Serial.println("Motion detected!");
```

```
    delay(1000); // Delay for one second
```

```
  } else {
```

```
    digitalWrite(ledPin, LOW); // Turn off LED
```

```
    Serial.println("No motion detected.");
```

```
  }
```

```
}
```