

Assignment No. 02

Source Code –

```
// Define pin numbers
```

```
const int pirPin = 2; // PIR sensor input pin
```

```
const int ledPin = 13; // LED output pin (built-in on many Arduino boards) void setup() {  
pinMode(pirPin, INPUT);    // Set PIR pin as input pinMode(ledPin, OUTPUT); // Set LED  
as output
```

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

```
}
```

```
void loop() {
```

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

```
if (pirState == HIGH) {          // If motion is detected digitalWrite(ledPin, HIGH);  
    // Turn on LED Serial.println("Motion detected!");
```

```
} else {
```

```
digitalWrite(ledPin, LOW); // Turn off LED Serial.println("No motion");
```

```
}
```

```
Delay(1000); // Wait for a second before rechecking
```

```
}
```

