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Enrollment number - 21162101012 & 21162101017
Branch - CBA   Batch - 71
IOT Practical 3

AIM : Interface PIR Motion Sensor with Arduino and blink LED

Materials used :
-   Arduino Uno
-   USB A to B cable
-   1 LED
-   1 PIR Motion Sensor

Code :

```c
int inputPin = 2;      // choose the input pin (for PIR sensor)
int ledPin = 13;       // choose the pin for the LED
int val = 0;           // variable for reading the pin status
unsigned long previousMillis = 0;  // will store last time
motion was checked
const long interval = 50;      // interval to check motion (1
second)

void setup() {
  pinMode(inputPin, INPUT);  // declare sensor as input
  pinMode(ledPin, OUTPUT);   // declare LED as output
  Serial.begin(9600);     // initialize serial communication
}

void loop() {
  unsigned long currentMillis = millis();

  if (currentMillis - previousMillis >= interval) {
    previousMillis = currentMillis;
```

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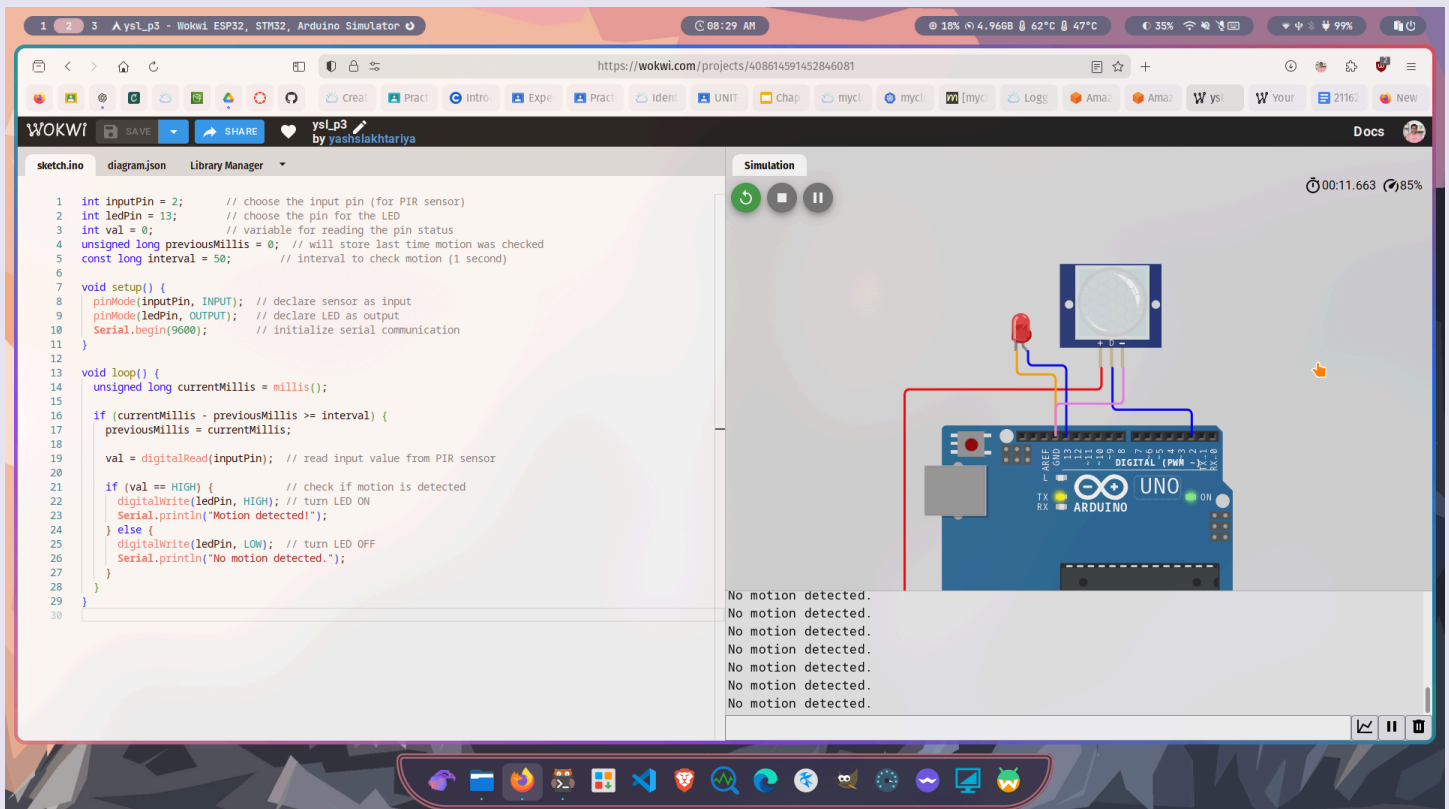**IOT Practical 3**

```
    val = digitalRead(inputPin);   // read input value from PIR
sensor

    if (val == HIGH) {             // check if motion is
detected
    digitalWrite(ledPin, HIGH); // turn LED ON
    Serial.println("Motion detected!");
    } else {
    digitalWrite(ledPin, LOW);   // turn LED OFF
    Serial.println("No motion detected.");
    }
  }
}
```

Virtual Output :

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```
1   int inputPin = 2;          // choose the input pin (for PIR sensor)
2   int ledPin = 13;           // choose the pin for the LED
3   int val = 0;               // variable for reading the pin status
4   unsigned long previousMillis = 0;  // will store last time motion was checked
5   const long interval = 50;        // interval to check motion (1 second)
6
7   void setup() {
8     pinMode(inputPin, INPUT);  // declare sensor as input
9     pinMode(ledPin, OUTPUT);   // declare LED as output
10    Serial.begin(9600);        // initialize serial communication
11  }
12
13  void loop() {
14    unsigned long currentMillis = millis();
15
16    if (currentMillis - previousMillis >= interval) {
17      previousMillis = currentMillis;
18
19      val = digitalRead(inputPin);  // read input value from PIR sensor
20
21      if (val == HIGH) {            // check if motion is detected
22        digitalWrite(ledPin, HIGH);  // turn LED ON
23        Serial.println("Motion detected!");
24      } else {
25        digitalWrite(ledPin, LOW);  // turn LED OFF
26        Serial.println("No motion detected.");
27      }
28    }
29  }
```

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Physical Output :

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