

Practical No.:02

"NAME:Aher Swami Sandip

ROLL NO.01

COURSE: AI&DS

CLASS: BE

SUB:Computer Laboratory-I (Machine Learning)"

Title: Write an Arduino program for interfacing with PIR sensor Experiment.

#Code:

```
// Define pin numbers

const int pirPin = 2;    // PIR sensor connected to digital pin 2

const int ledPin = 13;   // LED connected to digital pin 13


void setup() {

    // Initialize Serial communication

    Serial.begin(9600);


    // Set the PIR pin as input

    pinMode(pirPin, INPUT);


    // Set the LED pin as output

    pinMode(ledPin, OUTPUT);


    Serial.println("PIR Motion Sensor Test Initialized...");

}


void loop() {

    // Read the PIR sensor output

    int motionDetected = digitalRead(pirPin);


    if (motionDetected == HIGH) {

        // Turn on the LED

        digitalWrite(ledPin, HIGH);
```

```

// Send an alert message to the Serial Monitor

Serial.println("Motion detected! Alert triggered.");

} else {

// Turn off the LED

digitalWrite(ledPin, LOW);

}

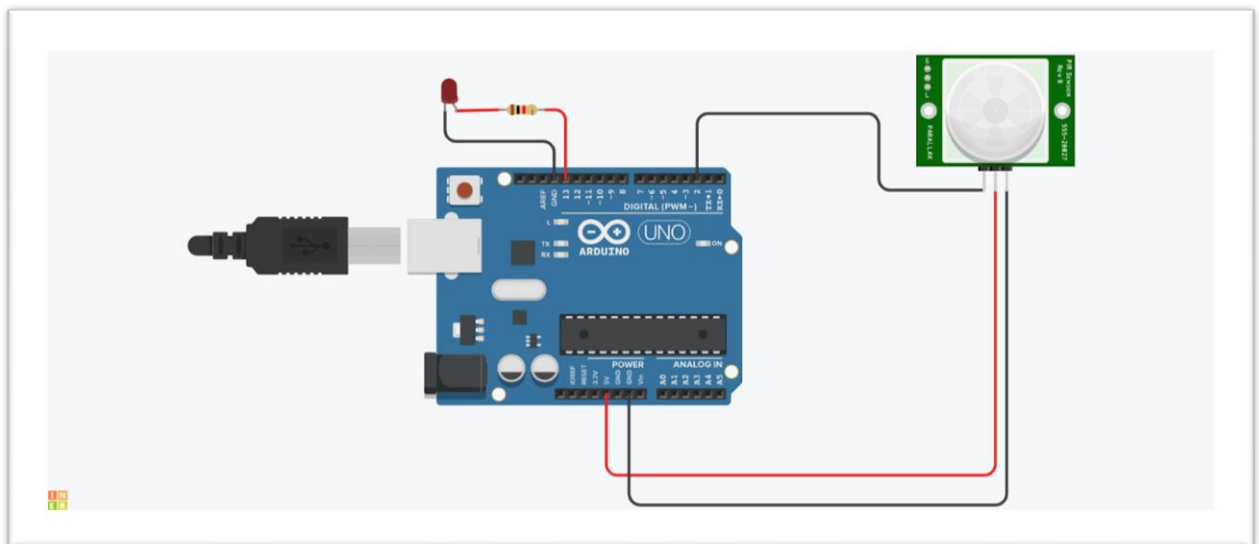
// Add a delay to avoid rapid toggling

delay(500);

}

```

#Circuit Diagram:



#Output:

PIR Motion Sensor Test Initialized...

Motion detected! Alert triggered.

Motion detected! Alert triggered.

Motion detected! Alert triggered.

Motion detected! Alert triggered.