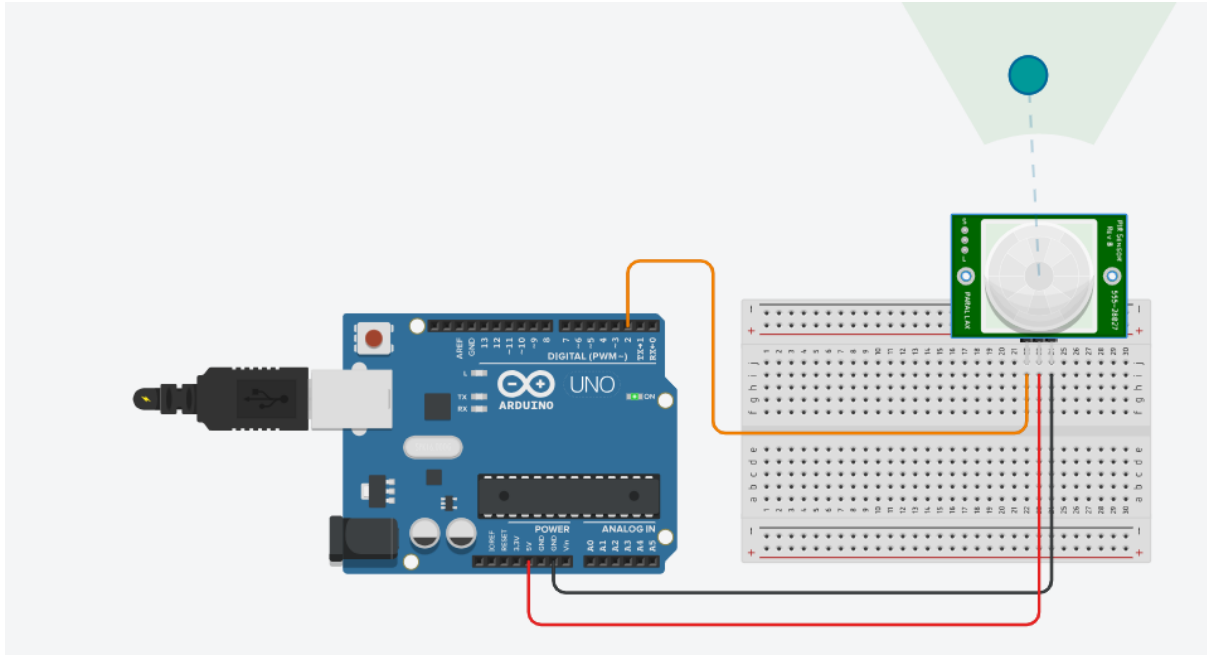# SIT315 Programming Paradigms

# Task M1_T1P

**Schematic Diagram:**



**Code:**

```
1  // Define PIR sensor pin and LED pin
2  const int pirSensorPin = 2;  // PIR Sensor Output connected to Digital Pin 2
3  const int ledPin = LED_BUILTIN; // Built-in LED
4
5  void setup() {
6      pinMode(pirSensorPin, INPUT);  // Set PIR sensor as input
7      pinMode(ledPin, OUTPUT);       // Set LED as output
8      Serial.begin(9600);           // Start serial communication
9  }
10
11 void loop() {
12     int motionState = digitalRead(pirSensorPin); // Read PIR sensor state
13
14     if (motionState == HIGH) {
15         digitalWrite(ledPin, HIGH);   // Turn LED on if motion is detected
16         Serial.println("Motion detected! LED ON");
17     } else {
18         digitalWrite(ledPin, LOW);    // Turn LED off if no motion
19         Serial.println("No motion. LED OFF");
20     }
21
22     delay(500);  // Delay for stability
23 }
24
```

**Serial Monitor:**

**Git hub Link:** https://github.com/anshul23-hub/Task-M1_T1P.git