TASK: M1.T1P
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GITHUB LINK: https://github.com/KimChhorn123/SIT315

Schematic diagram

System monitoring log


```
Serial Monitor                                              ▼

Motion Sensor Value: 0
LED OFF
Motion Sensor Value: 1
LED ON
Motion Sensor Value: 1
LED ON
```
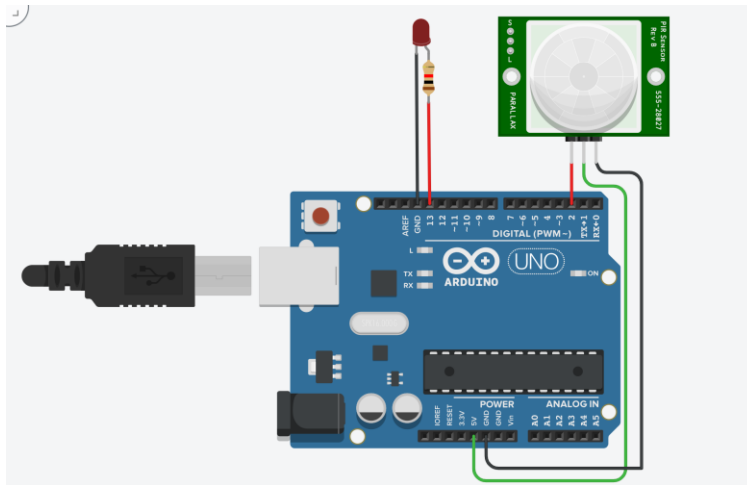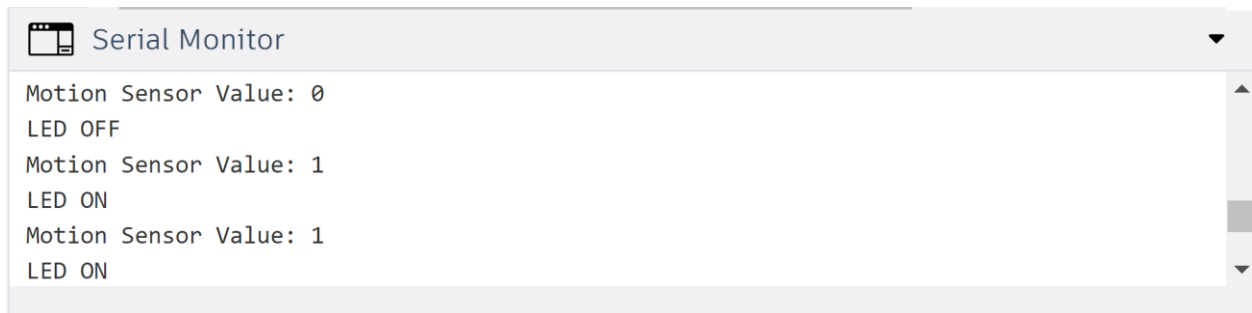
Code for Program

```
const int motionSensorPin = 2; // Pin for the HC-SR505 sensor

const int ledPin = 13;         // Built-in LED pin (or external LED connected to pin 13)

void setup() {

  Serial.begin(9600);          // Initialize the serial monitor

  pinMode(motionSensorPin, INPUT);

  pinMode(ledPin, OUTPUT);

}
void loop() {

  int sensorValue = digitalRead(motionSensorPin); // Read the motion sensor value

  Serial.print("Motion Sensor Value: "); // Print the sensor value to the Serial Monitor

  Serial.println(sensorValue);

  if (sensorValue == HIGH) {

    digitalWrite(ledPin, HIGH); // Turn the LED on if motion is detected

    Serial.println("LED ON");

  } else {

    digitalWrite(ledPin, LOW);  // Turn the LED off if no motion is detected

    Serial.println("LED OFF");

  }


  delay(500); // Add a small delay to avoid overwhelming the serial monitor

}
```