SIT315-Concurrent and Distributed Programming

Task1.T2P: Interrupt-driven Board

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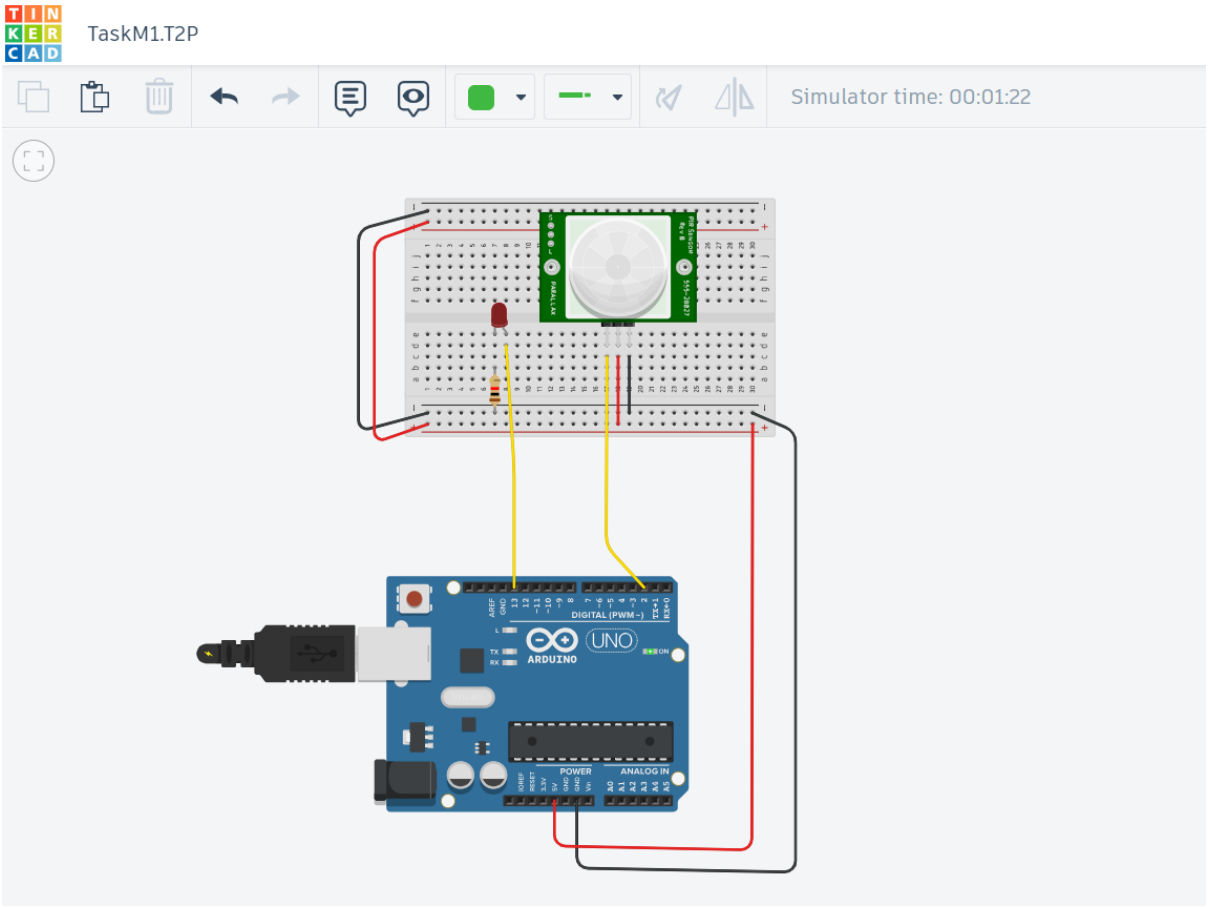
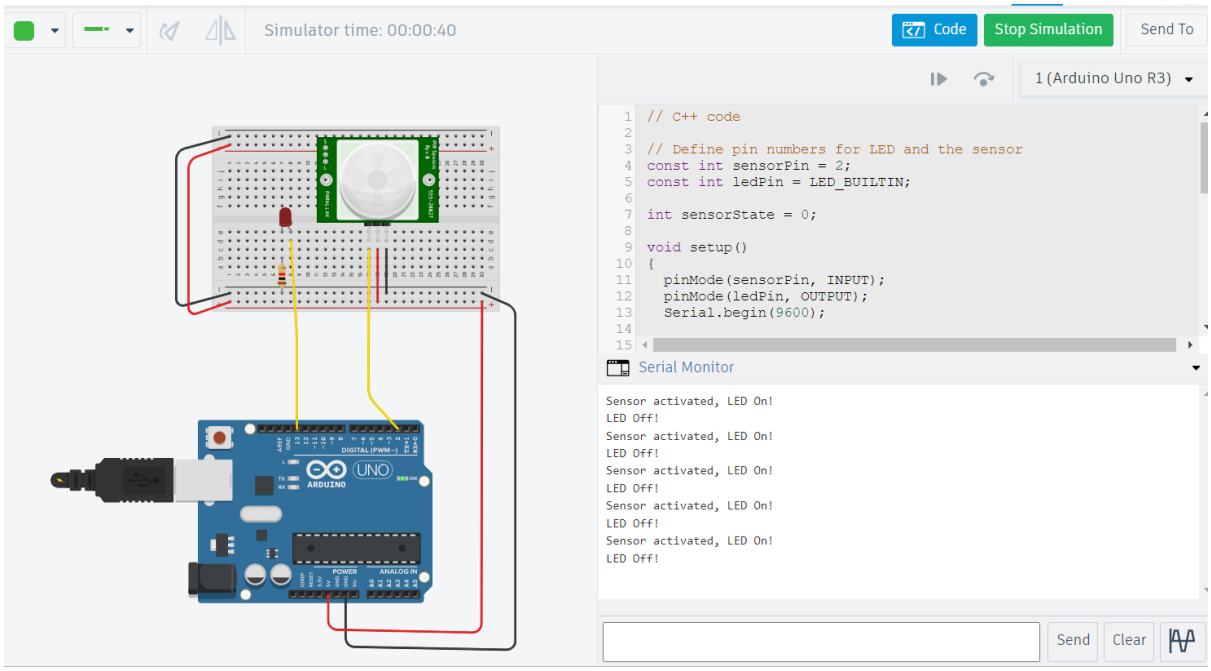
Diagram -Board on tinkercad



A screenshot of your system monitoring log



Source code of the program

```
// C++ code

// Define pin numbers for LED and the sensor
const int sensorPin = 2;
const int ledPin = LED_BUILTIN;

int sensorState = 0;

void setup()
{
  //Setting sensor pin 2 as an input
  pinMode(sensorPin, INPUT);

  //Setting LED pin as an output
  pinMode(ledPin, OUTPUT);
  Serial.begin(9600);

  // Attaching interrupt to pin 2, triggered on CHANGE
  attachInterrupt(digitalPinToInterrupt(2), sensorISR, CHANGE);
}
```

```
void loop()
{
  delay(10); // Delay to improve performance
}

void sensorISR()
{
  //reading the state of the sensor
  sensorState = digitalRead(sensorPin);

  //checking if the sensor pin is HIGH. if it is, set the LED on.
  if (sensorState == HIGH) {
    digitalWrite(ledPin, HIGH);
    Serial.println("Sensor activated, LED On!");
  } else {
    digitalWrite(ledPin, LOW);
    Serial.println("LED Off!");
  }
  delay(10); // Delay to increase the performance
}
```

GitHub Link

https://github.com/RandiGunasekara/SIT315.git

Demonstration video Link

https://youtu.be/8vix0vVwBDQ