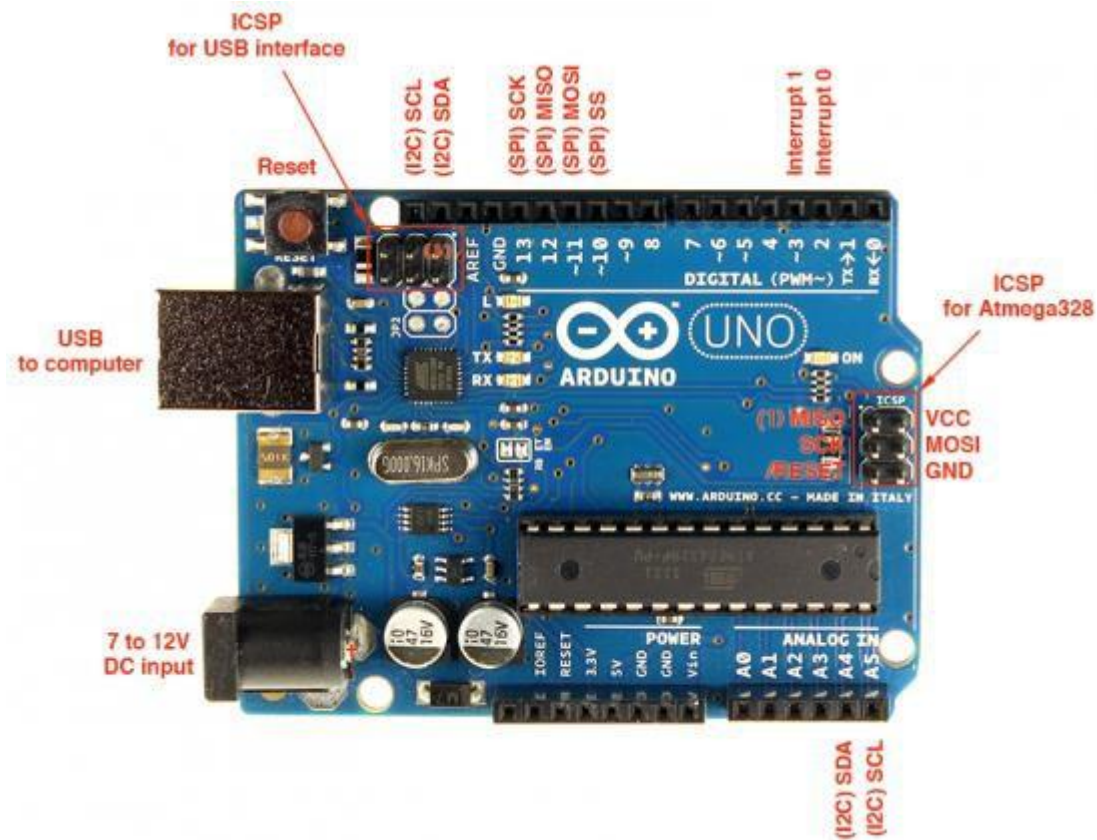


## PIN Diagram of Arduino UNO



### Procedure:-

First hook the 5V wire up from the Arduino to the positive rail on the breadboard. Next, hook the ground pin to the ground rail. Now, place the photoresistor onto the breadboard.

- Hook a wire from one end to the positive rail.
- On the other end have a wire go back to A0 (analog).
- Finally, on the other side of the wire add a 220-ohm resistor that goes to the ground rail. Place the 3 LEDs onto the breadboard. (Green, Yellow, Red)
- On each of the LEDs add a 100-ohm resistor and have this go to the ground rail.
- Now place a wire back to the Arduino for each of the LEDs. Red to pin 4, yellow to pin 3, and finally green to pin 2. Now we're ready to turn it on and deploy the code. If you have had any trouble, please refer to the diagram below.

### **Code:-**

```
int greenLedPin = 2;
int yellowLedPin = 3;
int redLedPin = 4;

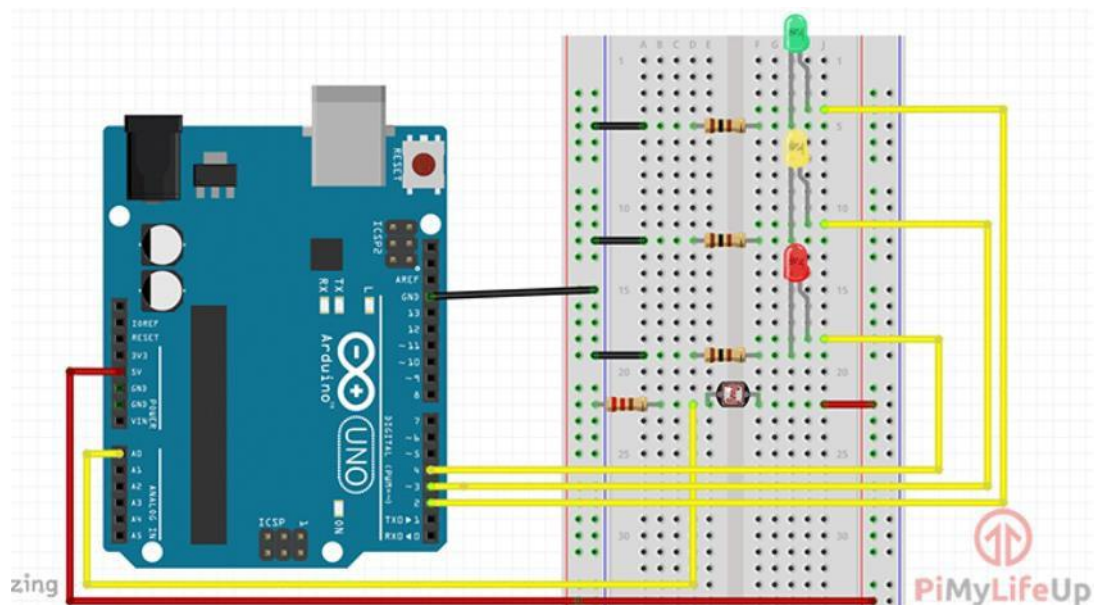
int lightSensorPin = A0;
int analogValue = 0; //Setting up the pin

void setup()
{
pinMode(greenLedPin, OUTPUT);
pinMode(yellowLedPin,OUTPUT);
pinMode(redLedPin,OUTPUT)
}

void loop(){
analogValue = analogRead(lightSensorPin);
if(analogValue < 50){ digitalWrite(redLedPin, HIGH); }
else if(analogValue >= 50 && analogValue
<=100){ digitalWrite(yellowLedPin, HIGH);
}

else{ digitalWrite(greenLedPin, HIGH); }
delay(200);
digitalWrite(greenLedPin, LOW);
digitalWrite(yellowLedPin, LOW);
digitalWrite(redLedPin, LOW); }
```

## Circuit Diagram :-



## Procedure:-

First hook the 5V wire up from the Arduino to the positive rail on the breadboard. Next, hook the ground pin to the ground rail. Now, place the photoresistor onto the breadboard.

- Hook a wire from one end to the positive rail.
- On the other end have a wire go back to A0 (analog).
- Finally, on the other side of the wire add a 220-ohm resistor that goes to the ground rail. Place the 3 LEDs onto the breadboard. (Green, Yellow, Red)
- On each of the LEDs add a 100-ohm resistor and have this go to the ground rail.
- Now place a wire back to the Arduino for each of the LEDs. Red to pin 4, yellow to pin 3, and finally green to pin 2. Now we're ready to turn it on and deploy the code. If you have had any trouble, please refer to the diagram below.

## Output:-

## For Green LED to get displayed

## Code Snapshot

```
green | Arduino 1.6.5
File Edit Sketch Tools Help

green

int greenLedPin = 2;      // Pin Green LED is connected to
int yellowLedPin = 3;    // Pin Yellow LED is connected to
int redLedPin = 4;        // Pin Red LED is connected to
int lightSensorPin = A0;  // PIN Light Sensor is connected to
int analogValue = 0;

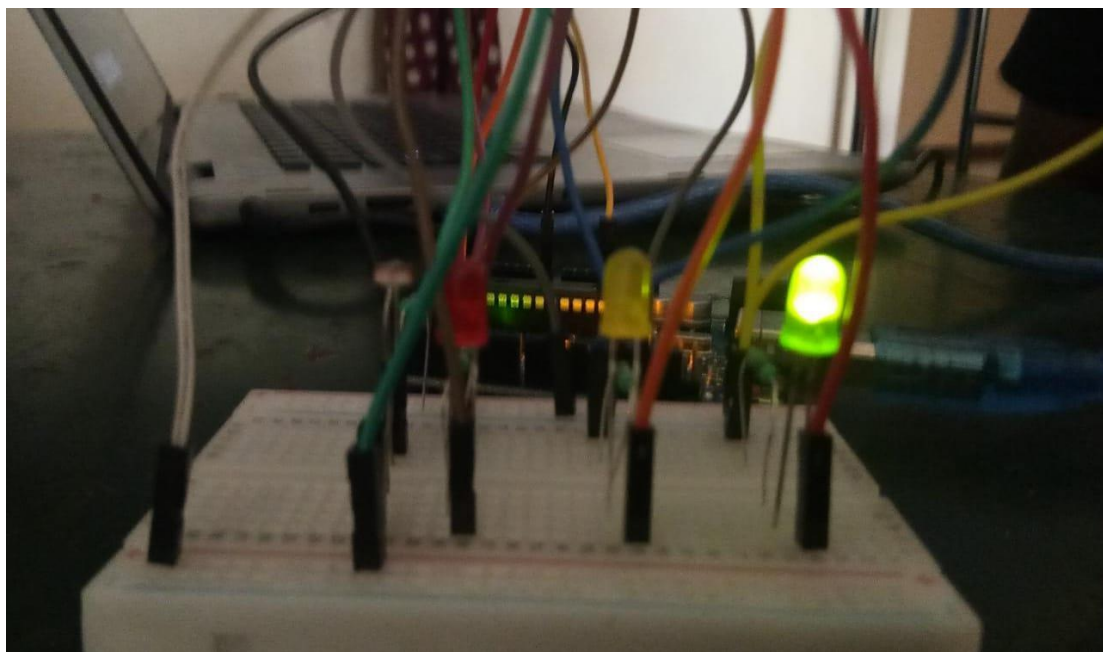
void setup() {
  //Set pins to outputs
  pinMode(greenLedPin, OUTPUT);
  pinMode(yellowLedPin, OUTPUT);
  pinMode(redLedPin, OUTPUT);
  Serial.begin(9600);
}

void loop() {
  analogValue = analogRead(lightSensorPin);
  Serial.println(lightSensorPin);
  {
    if(analogValue < 50){
      digitalWrite(redLedPin, HIGH);
    }
    else if(analogValue >= 50 as analogValue < 100){
      digitalWrite(yellowLedPin, HIGH);
    }
    else {
      digitalWrite(greenLedPin, HIGH);
    }
  }

  delay(2000);
  digitalWrite(greenLedPin, LOW);
  digitalWrite(yellowLedPin, LOW);
  digitalWrite(redLedPin, LOW);
}
}
```

Core Warning  
Global variables use 210 bytes (10%) of dynamic memory, leaving 1,438 bytes for local variables. Maximum is 2,048 bytes.

## Output



## For Yellow LED to get displayed

### Code snapshot

```
yellow | Arduino 1.6.5
File Edit Sketch Tools Help

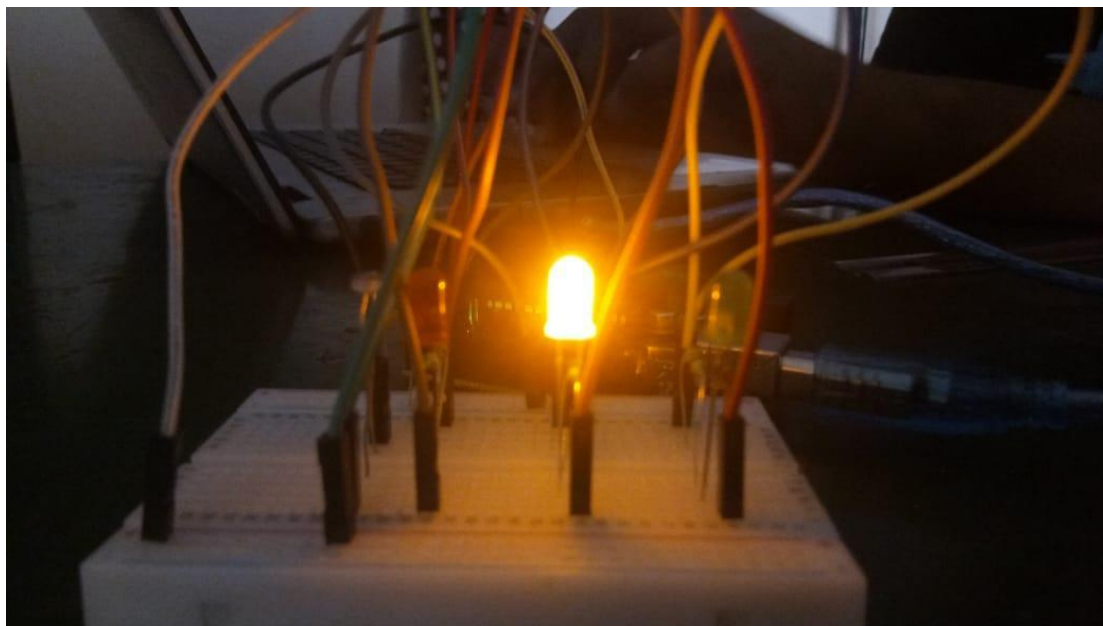
yellow
int greenLedPin = 2;    // Pin Green LED is connected to
int yellowLedPin = 3;   // Pin Yellow LED is connected to
int redLedPin = 4;      // Pin Red LED is connected to

int lightSensorPin = A0; // YH Light Sensor is connected to
int analogValue = 0;

void setup() {
  //Set pins to outputs
  pinMode(greenLedPin, OUTPUT);
  pinMode(yellowLedPin, OUTPUT);
  pinMode(redLedPin, OUTPUT);
  Serial.begin(9600);
}

void loop() {
  analogValue = analogRead(lightSensorPin);
  Serial.println(lightSensorPin);
  {
    if (analogValue < 50) {
      digitalWrite(greenLedPin, HIGH);
    }
    else if (analogValue >= 50 && analogValue < 100) {
      digitalWrite(yellowLedPin, HIGH);
    }
    else {
      digitalWrite(greenLedPin, LOW);
    }
    delay(1000);
    digitalWrite(greenLedPin, LOW);
    digitalWrite(yellowLedPin, HIGH);
    digitalWrite(redLedPin, HIGH);
  }
}
```

### Output



## For Red LED to get displayed

## Code snapshot

```
red | Arduino 1.6.5
File Edit Sketch Tools Help

// Pin Green LED is connected to
// Pin Yellow LED is connected to
// Pin Red LED is connected to
// FSR Light Sensor is connected to

const greenLedPin = 2;
const yellowLedPin = 3;
const redLedPin = 4;
const lightSensorPin = A0;
const analogValue = 0;

void setup() {
  //Set pins to outputs
  pinMode(greenLedPin, OUTPUT);
  pinMode(yellowLedPin, OUTPUT);
  pinMode(redLedPin, OUTPUT);
  Serial.begin(9600);
}

void loop() {
  analogValue = analogRead(lightSensorPin);
  Serial.println(lightSensorPin);
  {
    if (analogValue < 50) {
      digitalWrite(redLedPin, LOW);
    }
    else if (analogValue > 50 && analogValue < 100) {
      digitalWrite(yellowLedPin, LOW);
    }
    else {
      digitalWrite(greenLedPin, HIGH);
    }
  }
  delay(2000);
  digitalWrite(greenLedPin, LOW);
  digitalWrite(yellowLedPin, HIGH);
  digitalWrite(redLedPin, LOW);
}
}
```

## Output

