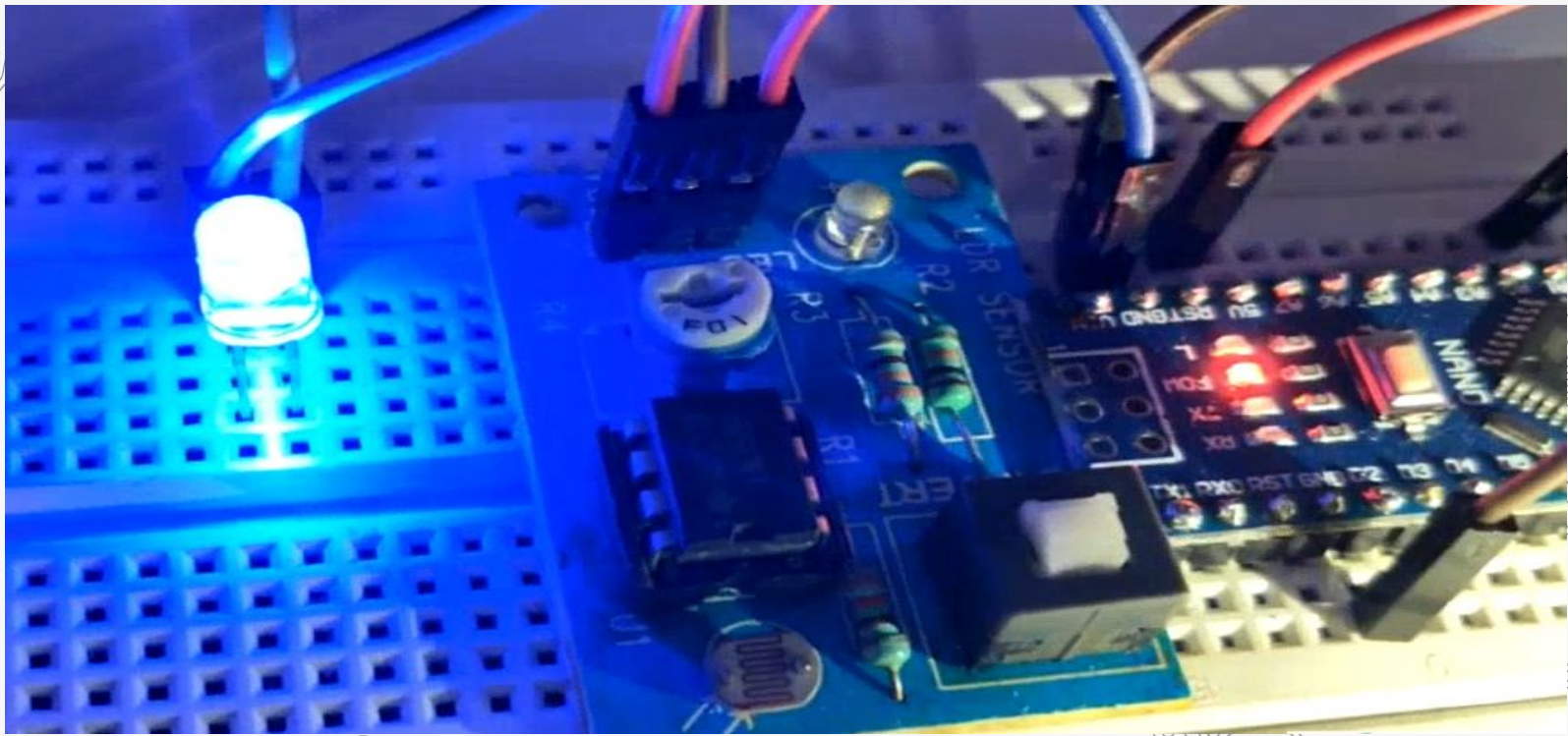
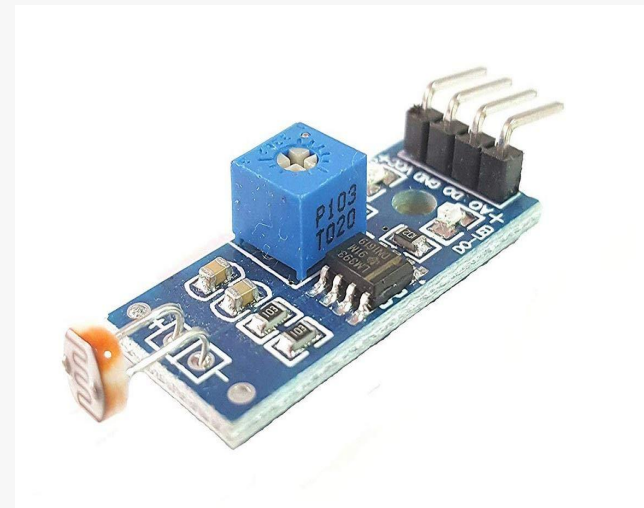


Interfacing of LDR Sensor



Light Dependent Resistor(LDR)

An **LDR** is a component that has a (variable) resistance that changes with the light intensity that falls upon it. This allows them to be used in light **sensing** circuits. A Light Dependent **Resistor (LDR)** or a photo **resistor** is a device whose resistivity is a **function** of the incident electromagnetic radiation. Hence, they are light sensitive devices. They are also called as photo conductors, photo conductive cells or simply photocells.



Working of LDR sensor

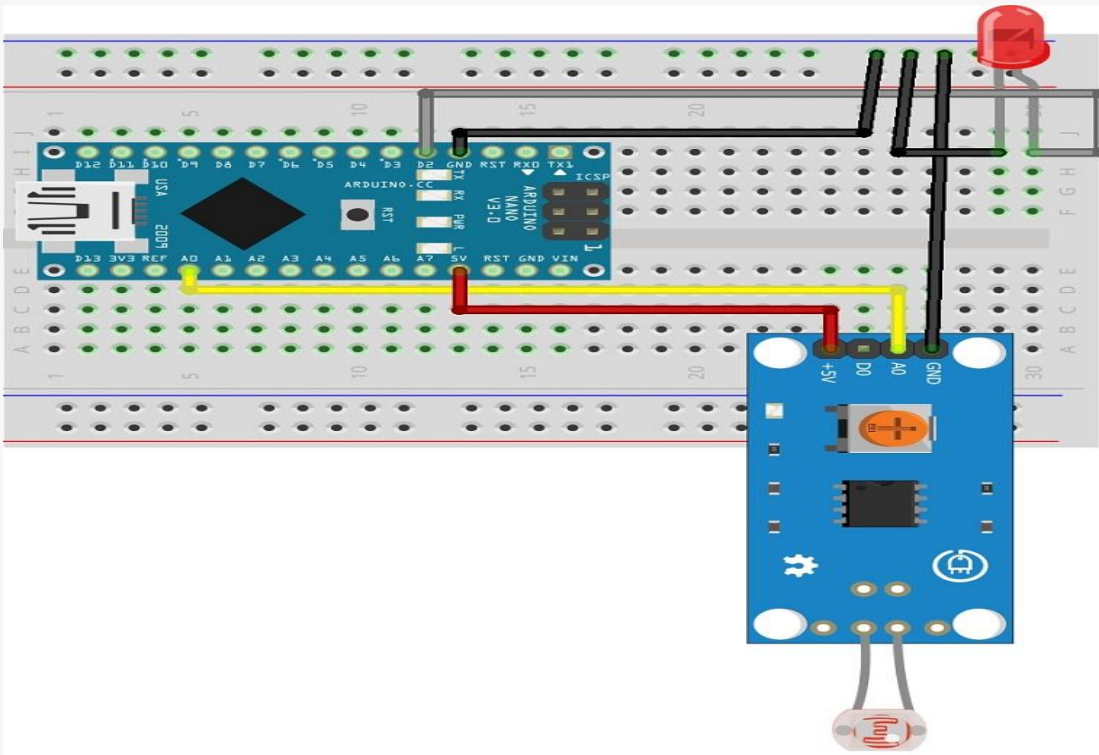
Reading a photo sensor with the Arduino Nano:

- We will use a LDR and a resistor together in series. An LDR is simply a device that changes resistance based on ambient light. The brighter the light, the lower the resistance, the dimmer the light, the higher the resistance.
- When there is no light, LDR will offer high resistance and less current flows through the resistor and voltage across resistor will be less near to GND.
- When light falls on LDR, its resistance decreases and current flow through it increases. Then voltage across the resistor increases and pin A0 gets a HIGH signal.

Components Required

- Arduino Nano
- LDR sensor module
- LED
- Breadboard
- Jumper wires

Connection Diagram



Connections

1. Connect OUT/A0 pin of LDR sensor with A0 of Arduino.
2. Connect Vcc of LDR sensor with +5V pin of Arduino.
3. Connect GND pin of LDR sensor with GND pin of Arduino.
4. Connect positive of LED with D2 pin of Arduino.
5. Connect negative of LED with ground of Arduino.



Code

Interfacing_of_DC_motor | Arduino 1.8.19

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Interfacing_of_DC_motor

```
// Community of Robots//
```

```
//Dc motor example code//
```

```
int motorpin1 = 3;           //define digital output pin no.
```

```
int motorpin2 = 2;           //define digital output pin no.
```

```
void setup () {
```

```
  pinMode(motorpin1,OUTPUT);  //set pin 3 as output
```

```
  pinMode(motorpin2,OUTPUT);  // set pin 4 as output
```

```
}
```

```
void loop () {
```

```
  digitalWrite(motorpin1,LOW);
```

```
  digitalWrite(motorpin2,HIGH);
```

```
  delay(3000);
```

```
  digitalWrite(motorpin1,HIGH);
```

```
  digitalWrite(motorpin2,LOW);
```

```
  delay(3000);
```

```
}
```

Interfacing_of_LDR_sensor_nano | Arduino 1.8.19

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Interfacing_of_LDR_sensor_nano

```
    analogWrite(bluePin, blueValue);
}

void loop() {
    // put your main code here, to run repeatedly:
    delay(1000);
    int ldrstatus=analogRead(A0);
    ldrstatus = map(ldrstatus, 0, 1000, 0, 100);
    //analogWrite(9, val);
    Serial.println(ldrstatus);
    delay(1000);
    if(ldrstatus<20)
    {
        setColor(0,255, 255); // red Color

    }
    else if(ldrstatus<50&& ldrstatus>20)
    {
        setColor(0, 255, 0); // yellow Color

    }
    else
    {
        setColor(255, 255,0); // greenColor

    }
}
```


Project Link: <https://youtu.be/goQl9q1WUg4>