
Sensors
SENSORS

Introduction to Analog Sensors :

- Analog Sensor senses a signal which is a continuous signal that represents a quantity.
- The analog quantities known to be continuous include speed, pressure, displacement, and temperature.
- For instance, you can use a thermometer to measure the temperature of a liquid. By obtaining continuous readings, the analog sensor will respond immediately to any changes in the temperature of the liquid as it heats up or cools down.

How does it work ?

- Analog Sensors measure external parameters like Distance, Weight, and Temperature and give an Analog voltage as an output. They produce a continuous output signal or voltage proportional to the measured quantity.

- The output voltage may be from the range of 0 to 5V.

Types of Analog Arduino Sensor

- Digital Temperature and the Humidity sensor.
- PIR (Passive Infrared) Motion Detection Sensor
- Water Sensor

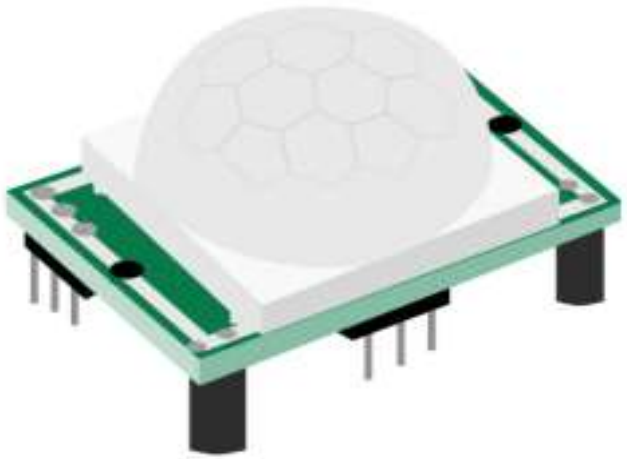
Digital Temperature and the Humidity sensor

- The DHT11 is a basic, low-cost digital temperature and humidity sensor. It uses a capacitive humidity sensor and a thermistor to measure the surrounding air. It spits a digital signal on the (

DHT22 pins	
1	VCC
2	DATA
3	NC
4	GND

PIR (Passive Infrared) Motion Detection Sensor

- Passive Infra-Red sensors can detect the movement of objects that radiate IR light (like human bodies). Therefore, using these sensors to detect human movement or occupancy in security systems is v



Water Sensor

- Water sensor brick is designed for water detection, which can be widely used in sensing rainfall, water level, and even liquid

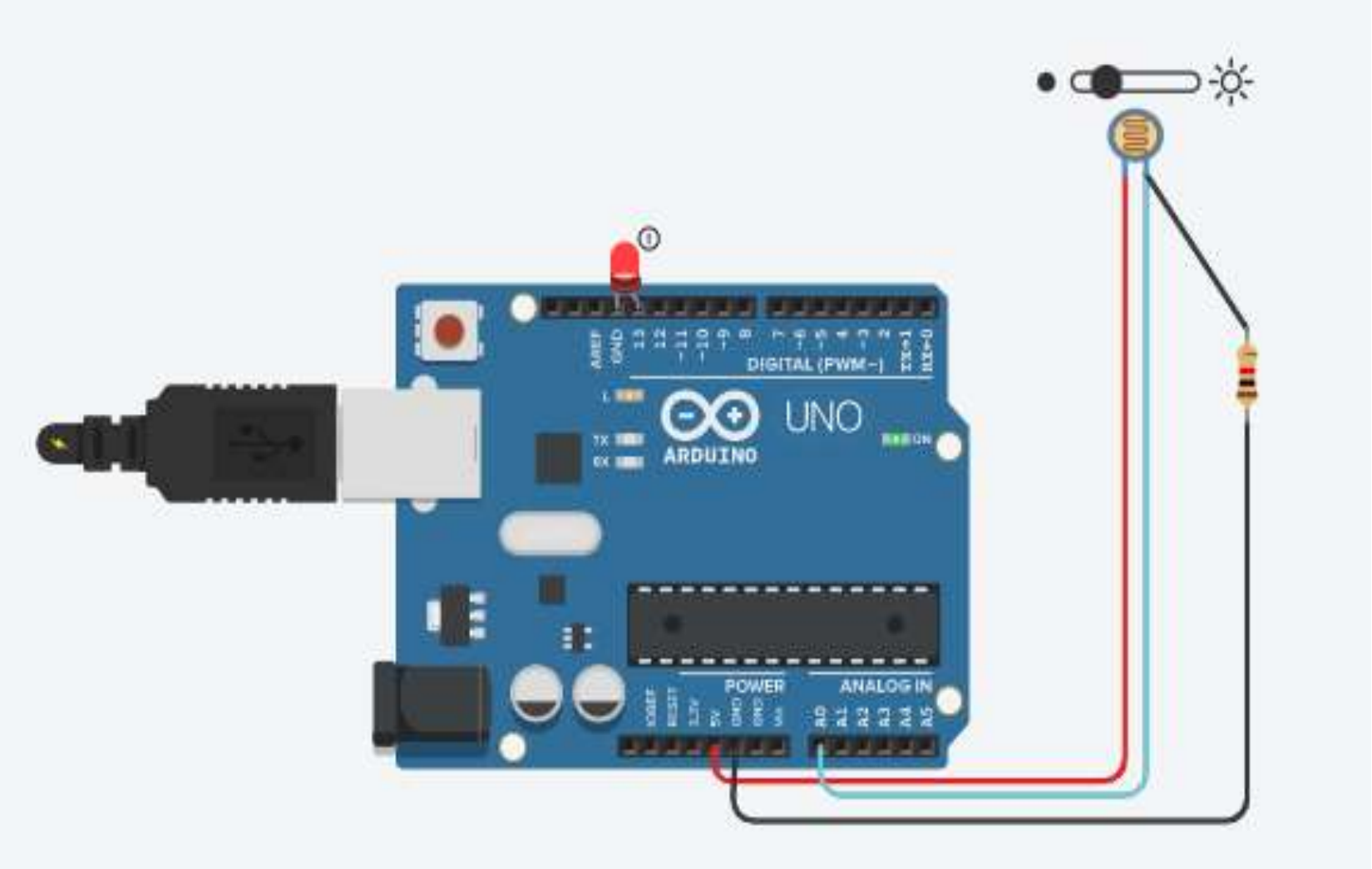
Activity time…!!!

Emergency Lighting System

- **Objective:** Whenever a room gets dark, a light bulb automatically turns ON and eliminates the darkness.

- **Components Required**
  - Arduino UNO
  - LDR-5 Mega ohm
  - LED-Red Colour
  - Jumping Wires
  - Resistor-1 Kilo ohm

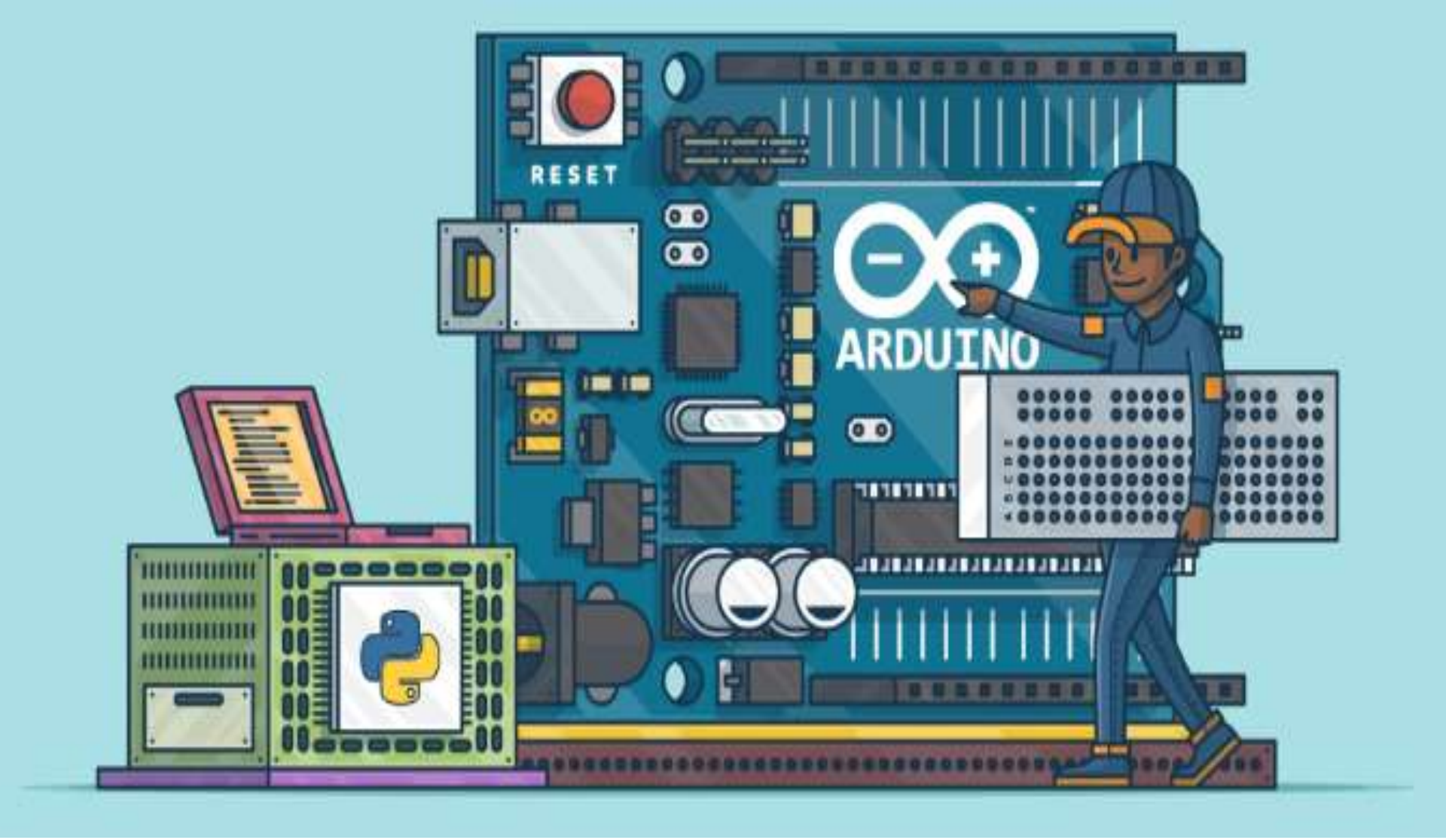
Tinker this !



Coding……..

```
const int LEDPin = 13;

const int LDRPin = A0;


void setup()

{

Serial.begin(9600);

pinMode(LEDPin,OUTPUT);

pinMode(LDRPin,INPUT);}
```

```
void loop()
{
int LDRStatus =
analogRead(LDRPin);
If (LDRStatus<=500)
  {
digitalWrite(LEDPin,HIGH);
Serial.print("Current Light
Intensity Value is -");
 Serial.println(LDRStatus);
  }
else
  {
digitalWrite(LEDPin,LOW);
Serial.print("Current Light
Intensity Value is -");
Serial.println(LDRStatus);
  }}
```



THANK YOU!