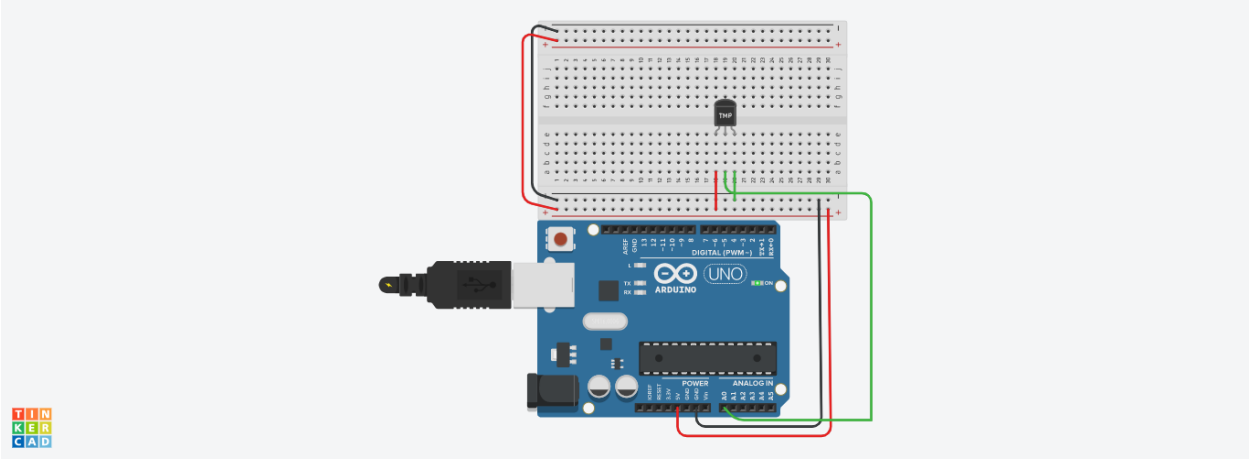
IOT ASSIGNMENT

- **NAME : Rahul Jaiswal**
- **CLASS ROLL NO : 20**
- **SECTION : "B"**
- **UNIVERSITY ROLL NO : 301403319081**
- **SEMESTER : 4th**
- **BRANCH : INFORMATION TECHNOLOGY**
- **SUBJECT : INTERNET OF THINGS**

EXPERIMENT-1

AIM : TEMPERTURE SENSOR USING ARINDO

CRICUIT DIAGRAM:



SOURCE CODE:

```
int sensorPin = 0;
```

```
void setup()
{
  Serial.begin(9600);
}
void loop()
{
 int reading = analogRead(sensorPin);
```

```
// measure the 5v with a meter for an accurate value
//In particular if your Arduino is USB powered
float voltage = reading * 4.68;
voltage /= 1024.0;
// now print out the temperature
float temperatureC = (voltage - 0.5) * 100;
Serial.print(temperatureC);
Serial.println(" degrees C");
delay(1000);
}
```

OUTPUT:-

```
1.64 degrees C
1.64 degrees C
1.64 degrees C
1.64 degrees C
1.64 degrees C
1.64 degrees C
```

EXPERIMENT-2

AIM : MOISTURE SENSOR USING ARDINO

CRICUIT DIAGRAM:

SOURCE CODE-

```
int sensor_pin = A0;

int output_value ;


void setup()
```

```
{
  Serial.begin(9600);
  Serial.println("Reading From the Sensor ...");
  delay(2000);
}
void loop()
{
  output_value= analogRead(sensor_pin);
  output_value = map(output_value,550,0,0,100);
  Serial.print("Mositure : ");
  Serial.print(output_value);
  Serial.println("%");
  delay(1000)
}
```

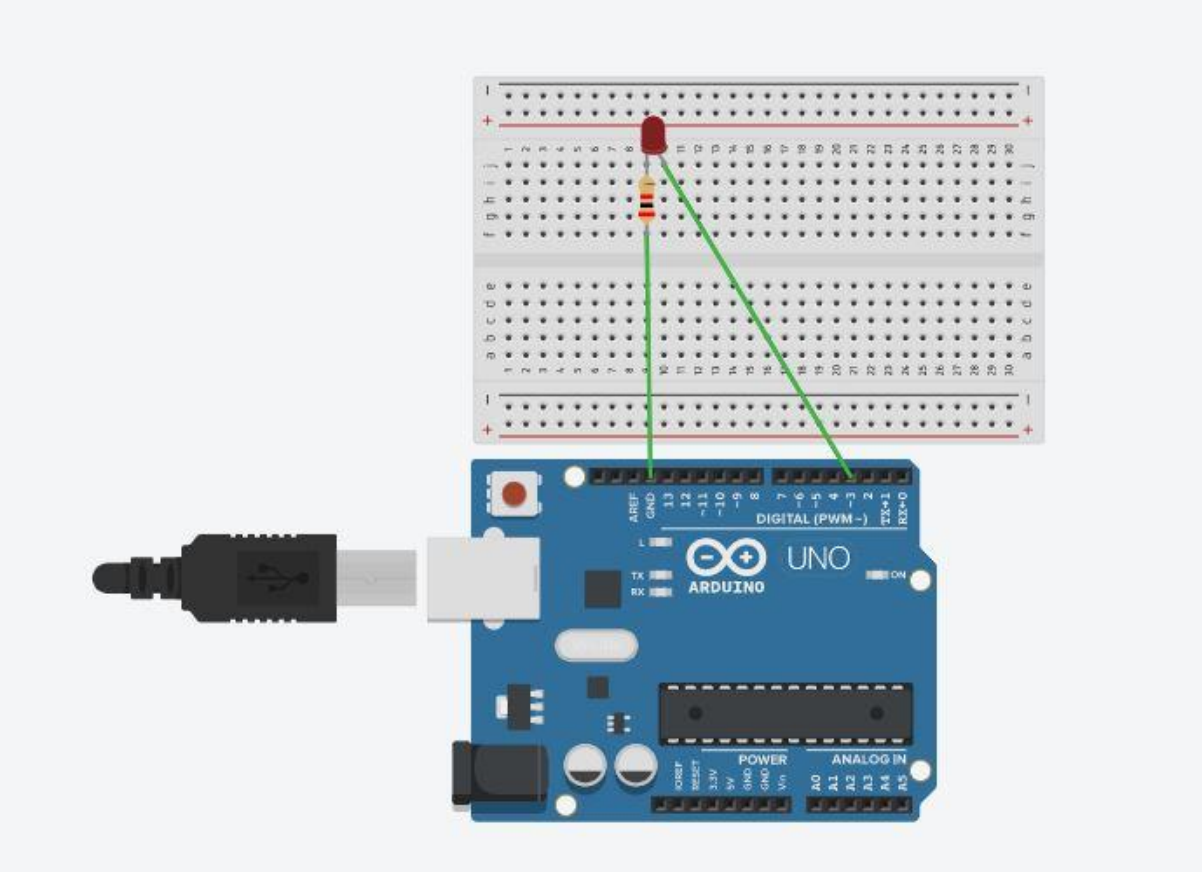
OUTPUT-

0-4.2V

EXPERIMENT-3

AIM : LED GLOW USING ARDINO

CRICUIT DIAGRAM:



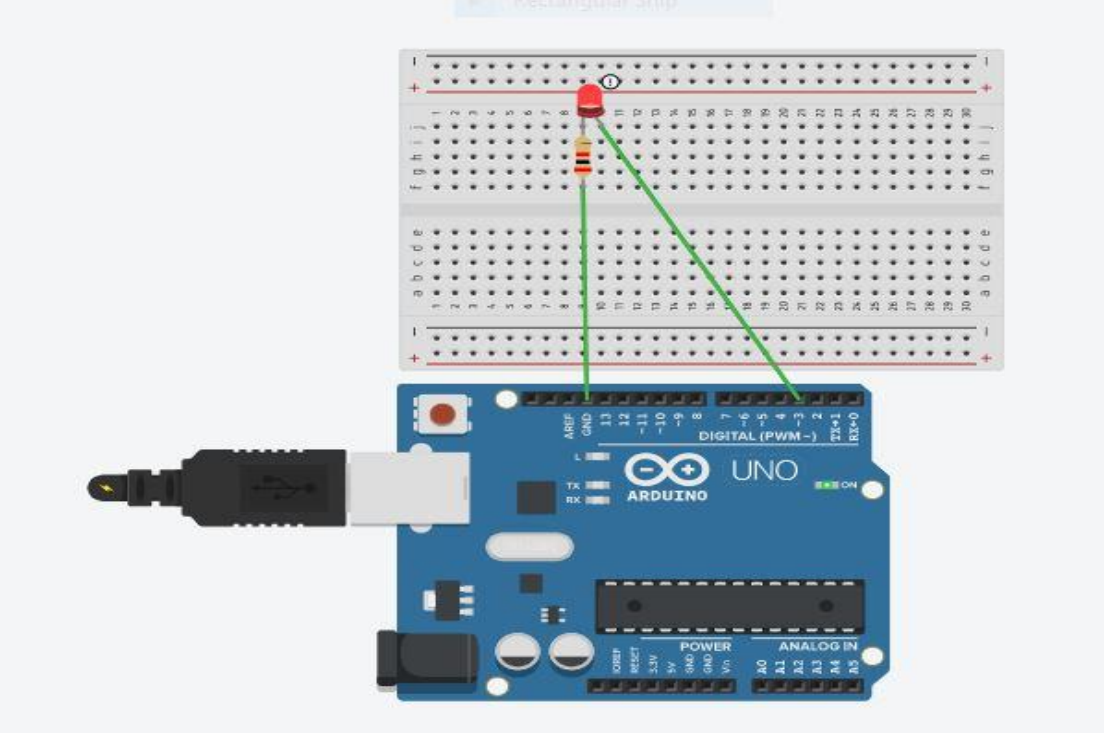
SOURCE CODE:

```
 int pin = 3;

void setup() {

pinMode(pin, OUTPUT);

}
```

```
void loop() {

digitalWrite(pin, HIGH);

delay(2000); // Wait for 2000 millisecond(s)

digitalWrite(pin, LOW);

delay(2000); // Wait for 2000 millisecond(s)

}
```

OUTPUT-

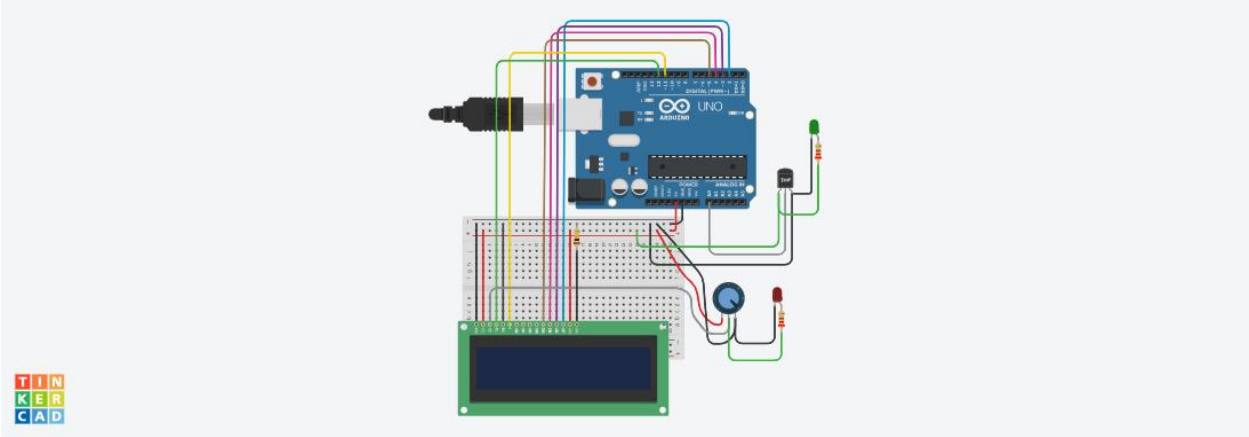
THE LED IS GLOWING



EXPERIMENT-4

AIM : HUMIDITY SENSOR USING ARDINO

CRICUIT DIAGRAM:-



SOURCE CODE-

```
int sensor = A0;

#include<LiquidCrystal.h>

LiquidCrystal lcd(12, 11, 5, 4, 3, 2);

//int sensor = A0; // Assigning analog pin A1 to variable 'sensor'

float tempc;  //variable to store temperature in degree Celsius

float vout;  //temporary variable to hold sensor reading

void setup()

{

pinMode(sensor,INPUT); // Configuring pin A1 as input

Serial.begin(9600);
```

```
lcd.begin(16,2);
  delay(500);
}
void loop()
{
vout=analogRead(A0);
float prehum=(vout/5);

vout=(vout*5.00)/1024.0;
tempc=(vout-0.5)*100; // Storing value in Degree Celsius

float humconst = (0.16/0.0062);
float humi = prehum - humconst;
float pretruehumconst = 0.00216*tempc;
float pretruehum = 1.0546 - pretruehumconst;
float truehum = humi/pretruehum;
//delay(1000);
lcd.setCursor(0,0);
lcd.print("Degree C = ");
lcd.print(tempc);
lcd.setCursor(0,1);
lcd.print("Humidity%= ");
lcd.print(truehum);
delay(1000); //Delay of 1 second for ease of viewing in serial monitor
}
```

OUTPUT-

HUMIDITY=4.79