NAME	**INAYAT ULLAH (BSCS-2019-52)** **BAKHT ULLAH (BSCS-2019-55**
FINAL TERM PROJECT	**USING DHT11 SENSOR AND NODEMCU SENDING DATA (TEMP,HUMIDITY) TO BLYNK APP**
INSTRUCTOR	**TAHIR MUSHTAQ**
DATE	**28 MAY 2022**

Introduction

Using an esp8266, this project displays the temperature and humidity from a DHT11 sensor on your smartphone or tablet. Every second, the NodeMCU takes temperature and humidity data from the DHT11 sensor and sends it to the Blynk app.

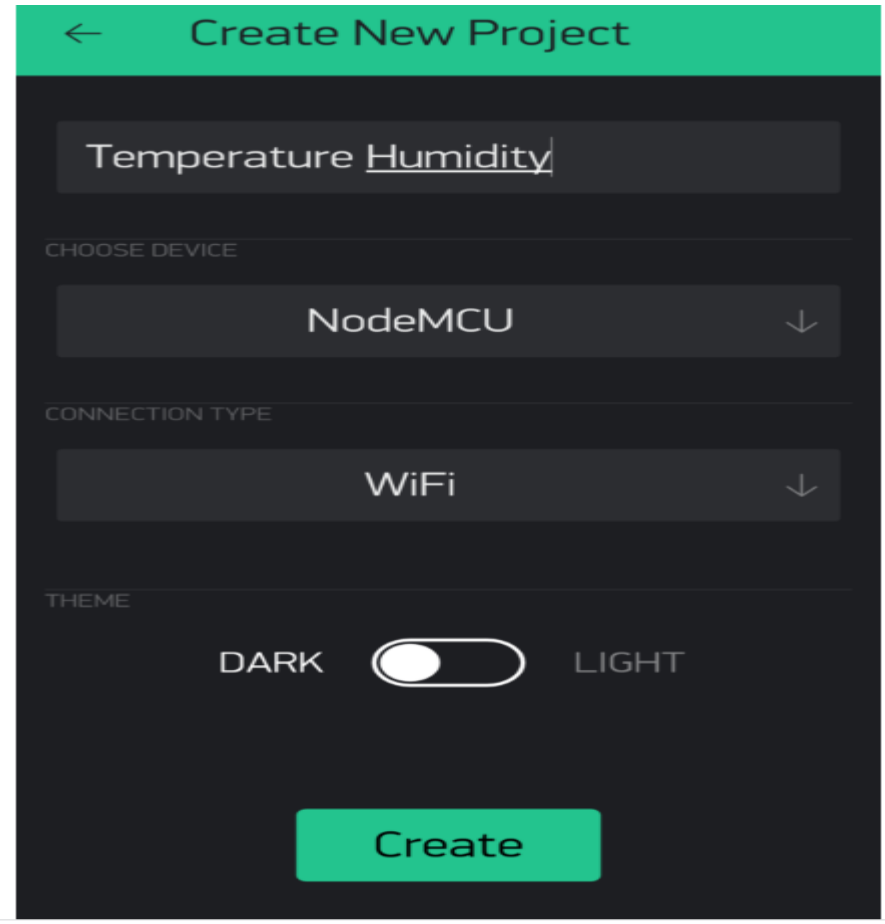
Hardware component

We use the Blynk Board and NodeMCU. Connect NodeMCU to PC or Laptop via USB cable after installing NodeMCU on Blynk board as seen in the image above.

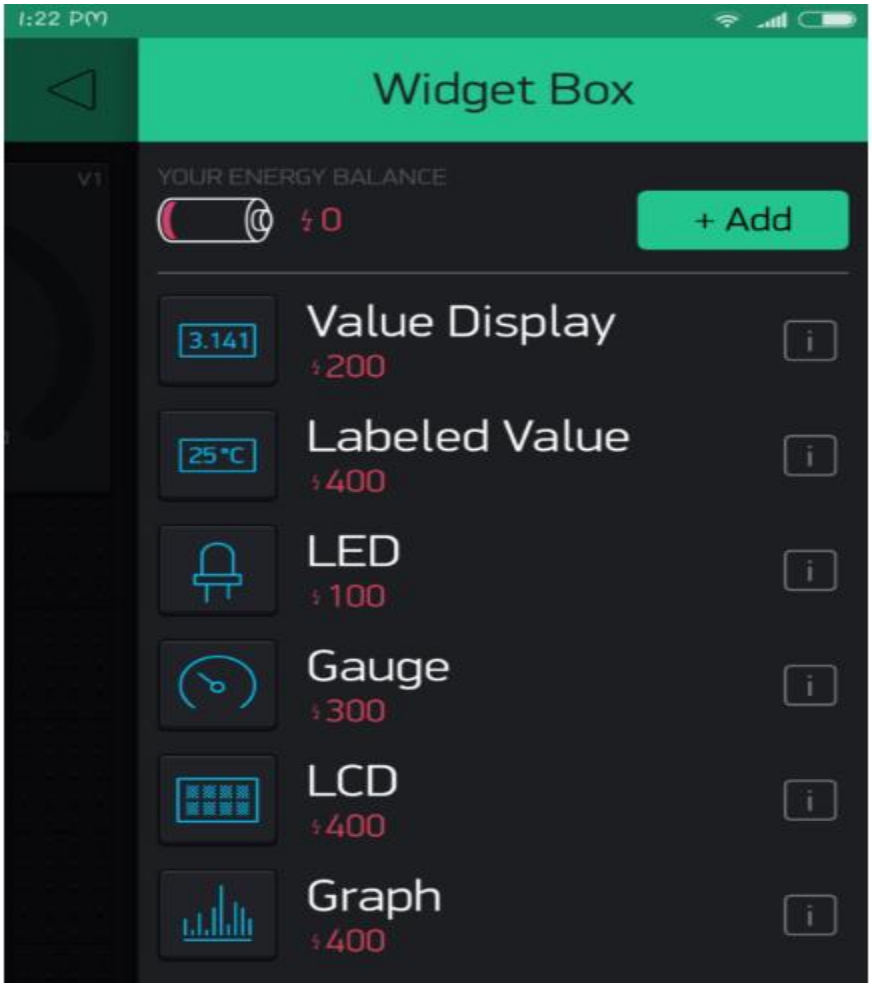
Blynk App

on blynk app you need to perform the following step

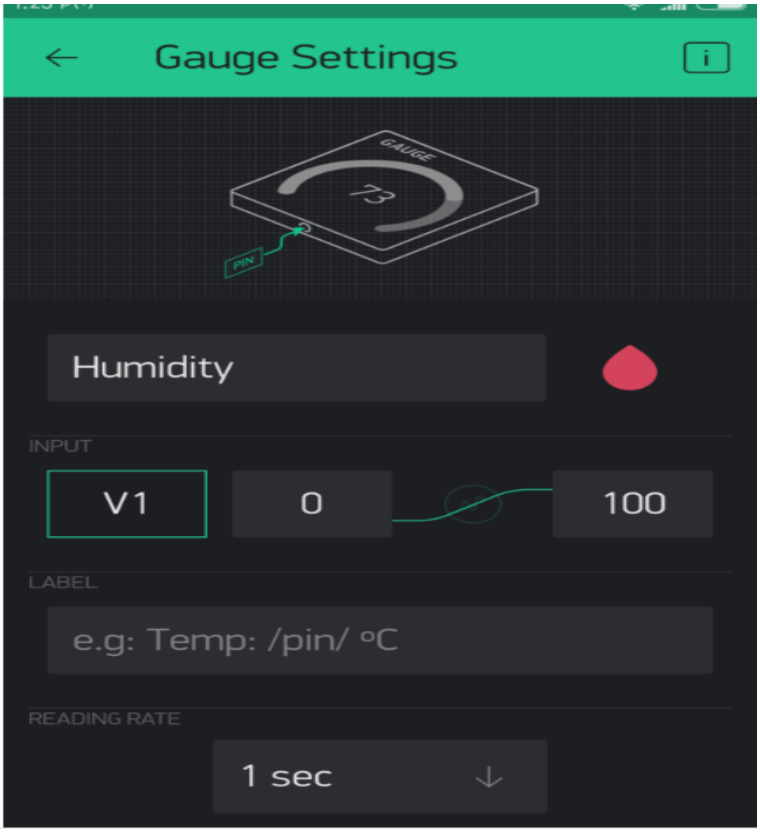
- In the BLYNK app, create a new project. Select NodeMCU from the drop down menu and name your project Temperature Humidity, or Weather station.

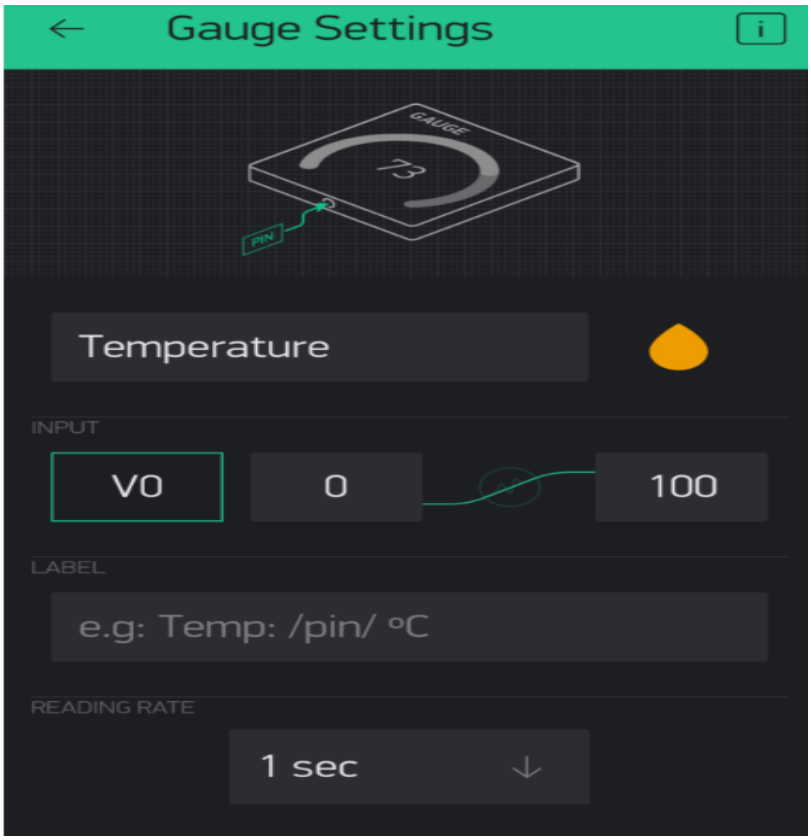


- Note down the AUTH token that will be delivered to your registered email. Add a 2 Gauges by tapping on the screen.



- Select the appropriate Virtual pins for temperature and humidity data by tapping on the Widget (V0 for temperature and V1 for humidity).


Gauge Settings
GAUGE
73
PIN
Humidity
INPUT
V1
0
100
LABEL
e.g: Temp: /pin/ °C
READING RATE
1 sec


Gauge Settings
GAUGE
73
PIN
Temperature
INPUT
V0
0
100
LABEL
e.g: Temp: /pin/ °C
READING RATE
1 sec

NodeMCU with the following code

Make sure to insert your authorization token into the auth [] variable before uploading. Also, be sure to use the Blynk.begin(auth, "ssid", "pass") function to load your Wi-Fi network settings.

```
// Robo India Tutorial

// Digital Output on LED

// Hardware: NodeMCU Blynk Board




#define BLYNK_PRINT Serial




#include <ESP8266WiFi.h>

#include <BlynkSimpleEsp8266.h>

#include "DHT.h"           // including the library of
DHT11 temperature and humidity sensor

#include <SimpleTimer.h>   //including the library of
SimpleTimer

#define DHTTYPE DHT11      // DHT 11
```

```
#define dht_dpin 14

DHT dht(dht_dpin, DHTTYPE);

SimpleTimer timer;

char auth[] = "Your Auth. Key";            // You should
get Auth Token in the Blynk App.

                                           // Go to the
Project Settings (nut icon).



char ssid[] = "Your Wifi Network name";    // Your WiFi
credentials.

char pass[] = "Password of your network";  // Set
password to "" for open networks.

float t;                                   // Declare the
variables

float h;
```

```
void setup()

{

    Serial.begin(9600);// Debug console

    Blynk.begin(auth, ssid, pass);

    dht.begin();

    timer.setInterval(2000, sendUptime);

}



void sendUptime()

{



  float h = dht.readHumidity();

  float t = dht.readTemperature();

  Serial.println("Humidity and temperature\n\n");
```

```
  Serial.print("Current humidity = ");

  Serial.print(h);

  Serial.print("%  ");

  Serial.print("temperature = ");

  Serial.print(t);

  Blynk.virtualWrite(V0, t);

  Blynk.virtualWrite(V1, h);



}



void loop()

{

  Blynk.run();

  timer.run();

}
```

Output:

Following the installation of the Arduino coding IDE. To see the output, press the play button on the blynk app.