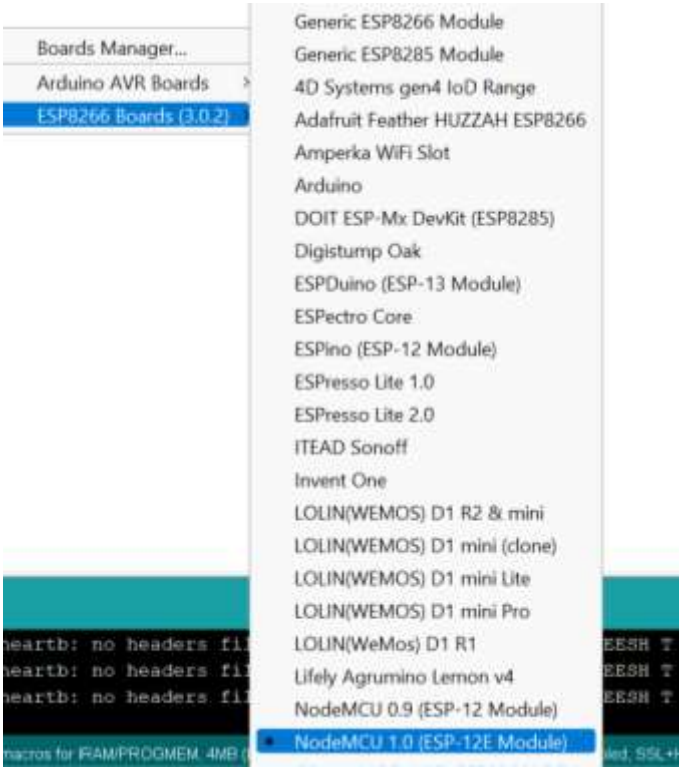
1 Device Control Using Blynk IoT and Node

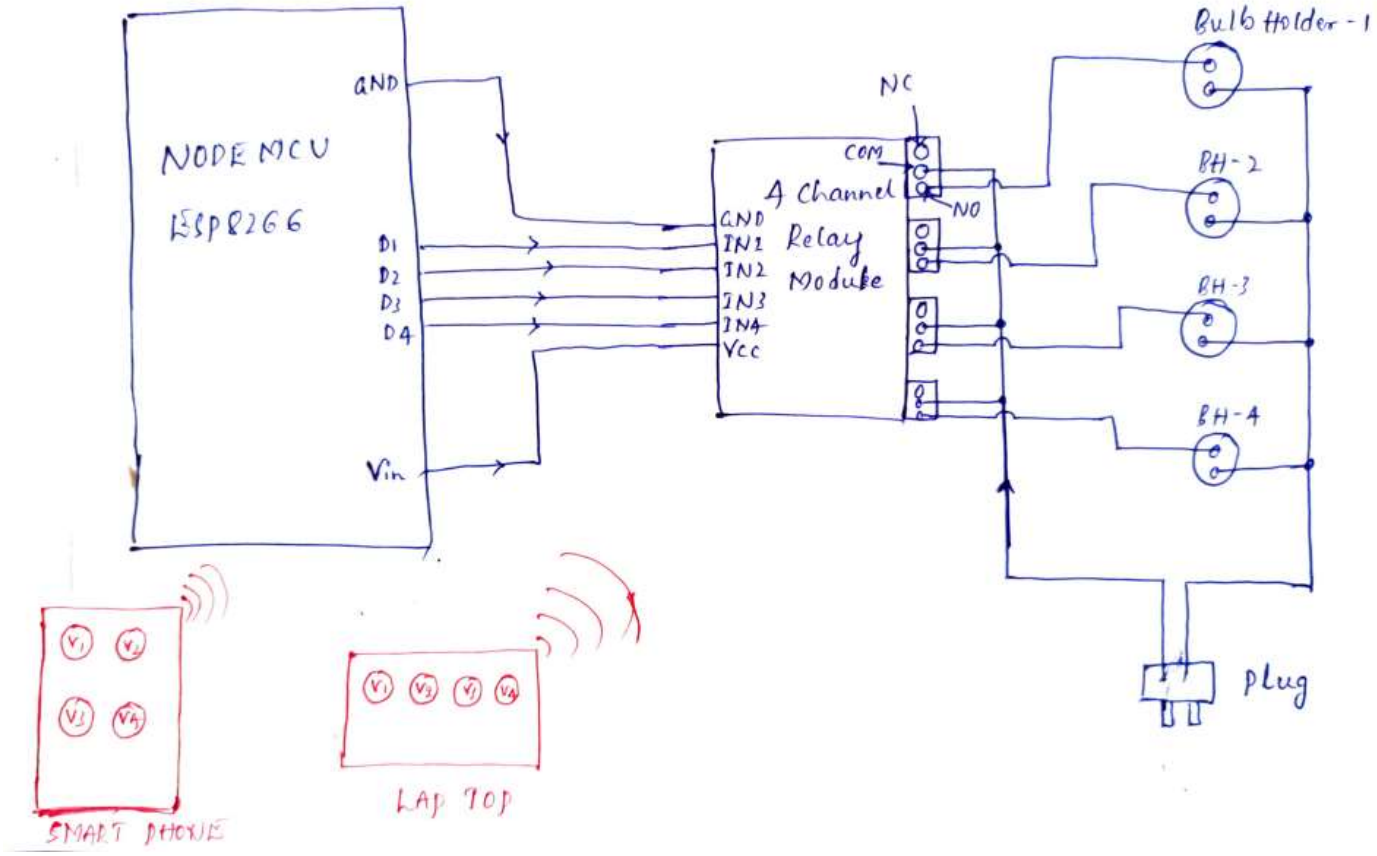
REQUIREMENTS:

A. **NODEMCU8266 + USB To Micro-USB**
B. **4 Channel Relay Module + Devices**
C. **Blynk IoT Web Server + Widgets-4 SWITCHES(V1,V2,V3&V4)**
D. **Blynk IoT App + Widgets**
E. **Jumpers**
F. **Arduino IDE**
G. **Library Manager :**

H. **Board Manager:**



BLOCK DIAGRAM:



CODE:

```
#define BLYNK_PRINT Serial
#define BLYNK_TEMPLATE_ID "TMPLrcn6_X38"
#define BLYNK_DEVICE_NAME "BTESP"
#define BLYNK_AUTH_TOKEN "TYU5k00UTq9PwldnU2ICXG-csyjGHKZs"

#include <ESP8266WiFi.h>
#include <BlynkSimpleEsp8266.h>

char auth[] = BLYNK_AUTH_TOKEN;
char ssid[] = "TVN";
char pass[] = "ndtv@1234";

int relay1=D1;
int relay2=D2;
int relay3=D5;
int relay4=D6;
```

```
BLYNK_WRITE(V1)
{
        int s1 = param.asInt();
        if (s1==0)
        {
                digitalWrite(relay1, 1);
                Serial.println("Device1 OFF");}
         else
        {
                digitalWrite(relay1, 0);
                Serial.println("Device1 ON");
        }
 }

BLYNK_WRITE(V2)
{
        int s2 = param.asInt();
        if (s2==0)
        {
                digitalWrite(relay2, 1);
                Serial.println("Device2 OFF");}
        else
        {
                digitalWrite(relay2, 0);
                Serial.println("Device2 ON");
        }
  }

BLYNK_WRITE(V3)
{
        int s3 = param.asInt();
        if (s3==0)
```

```
        {
                digitalWrite(relay3, 1);
                Serial.println("Device3 OFF");}
        else
        {
                digitalWrite(relay3, 0);
                Serial.println("Device3 ON");
        }
  }


BLYNK_WRITE(V4)
{
                int s4 = param.asInt();
        if (s4==0)
        {
                digitalWrite(relay4, 1);
                Serial.println("Device4 OFF");}
        else
        {
                digitalWrite(relay4, 0);
                Serial.println("Device4 ON");
        }
  }



void setup()
        {
                Serial.begin(9600);
                Blynk.begin(auth, ssid, pass);
```

```
        pinMode (relay1, OUTPUT);
        pinMode (relay2, OUTPUT);
        pinMode (relay3, OUTPUT);
        pinMode (relay4, OUTPUT);
        digitalWrite(relay1, 1);
        digitalWrite(relay2, 1);
        digitalWrite(relay3, 1);
        digitalWrite(relay4, 1);
    }


void loop()
    {
        Blynk.run();
    }
```

File Edit Sketch Tools Help

home_iot §

```
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#define BLYNK_TEMPLATE_ID "TMPLrcn6_X38"
#define BLYNK_DEVICE_NAME "BTESP"
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```
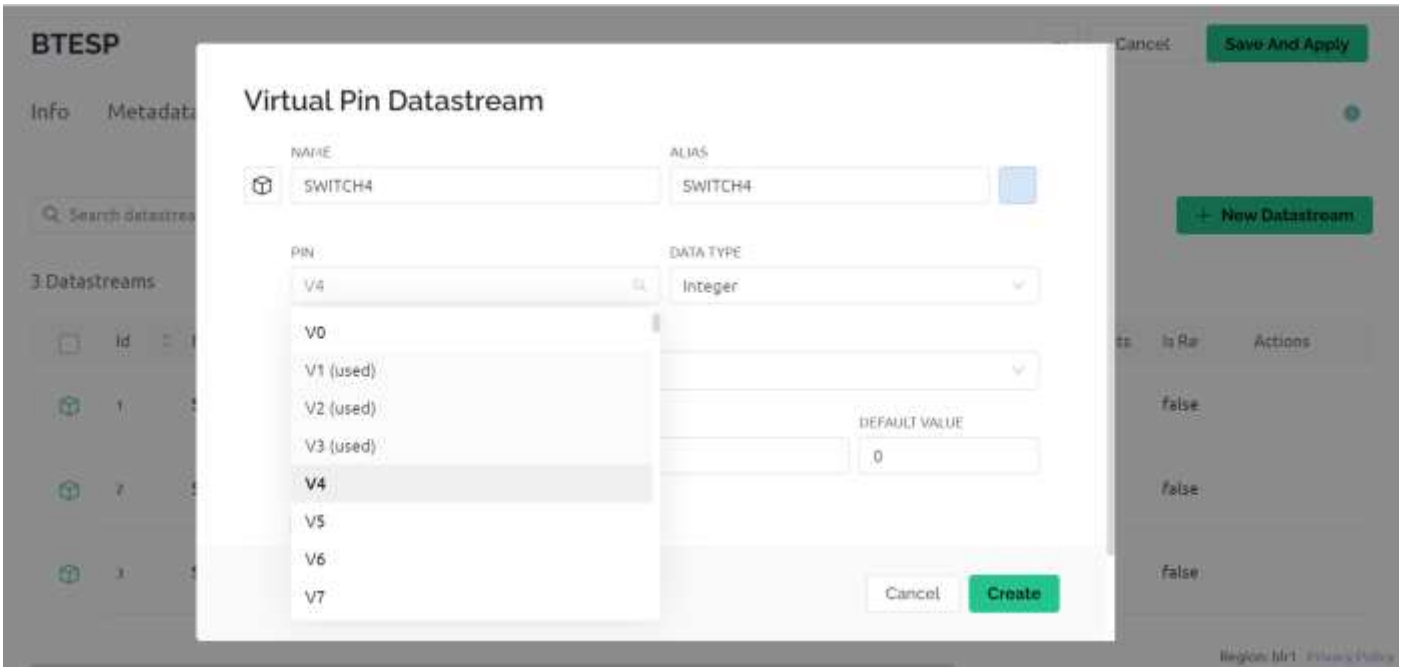

```
BLYNK_WRITE(V1)
{
    int s1 = param.asInt();
    if (s1==0)
      {
        digitalWrite(relay1, 1);
        Serial.println("Device1 OFF");
      }
    else
      {
        digitalWrite(relay1, 0);
        Serial.println("Device1 ON");
      }
}


 BLYNK_WRITE(V2)
 {
     int s2 = param.asInt();
     if (s2==0)
       {
         digitalWrite(relay2, 1);
         Serial.println("Device2 OFF");
       }
     else
       {
         digitalWrite(relay2, 0);
         Serial.println("Device2 ON");
       }
 }

BLYNK_WRITE(V3)
{
    int s3 = param.asInt();
    if (s3==0)
      {
        digitalWrite(relay3, 1);
        Serial.println("Device3 OFF");}
    else
      {
        digitalWrite(relay3, 0);
        Serial.println("Device3 ON");
      }
}

BLYNK_WRITE(V4)
{
    int s4 = param.asInt();
    if (s4==0)
    {
      digitalWrite(relay4, 1);
      Serial.println("Device4 OFF");
    }
    else
    {
      digitalWrite(relay4, 0);
      Serial.println("Device4 ON");
    }
}
```

```
void setup()
{
    Serial.begin(9600);
    Blynk.begin(auth, ssid, pass);
    pinMode (relay1, OUTPUT);
    pinMode (relay2, OUTPUT);
    pinMode (relay3, OUTPUT);
    pinMode (relay4, OUTPUT);
    digitalWrite(relay1, 1);
    digitalWrite(relay2, 1);
    digitalWrite(relay3, 1);
    digitalWrite(relay4, 1);
}


void loop()
{

  Blynk.run();

}
```



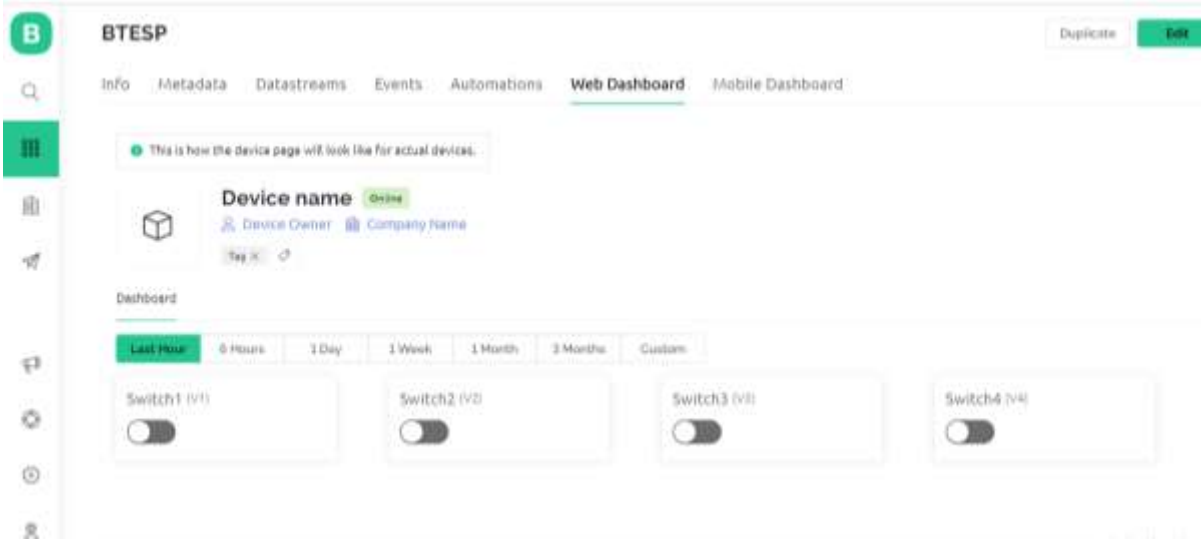
BTESP

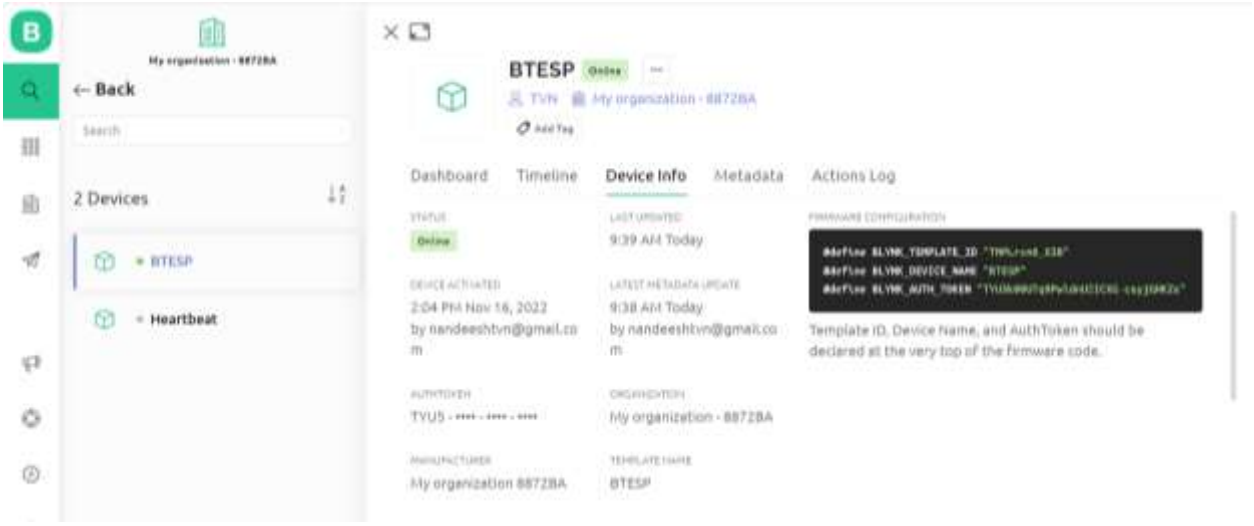
Duplicate Edit

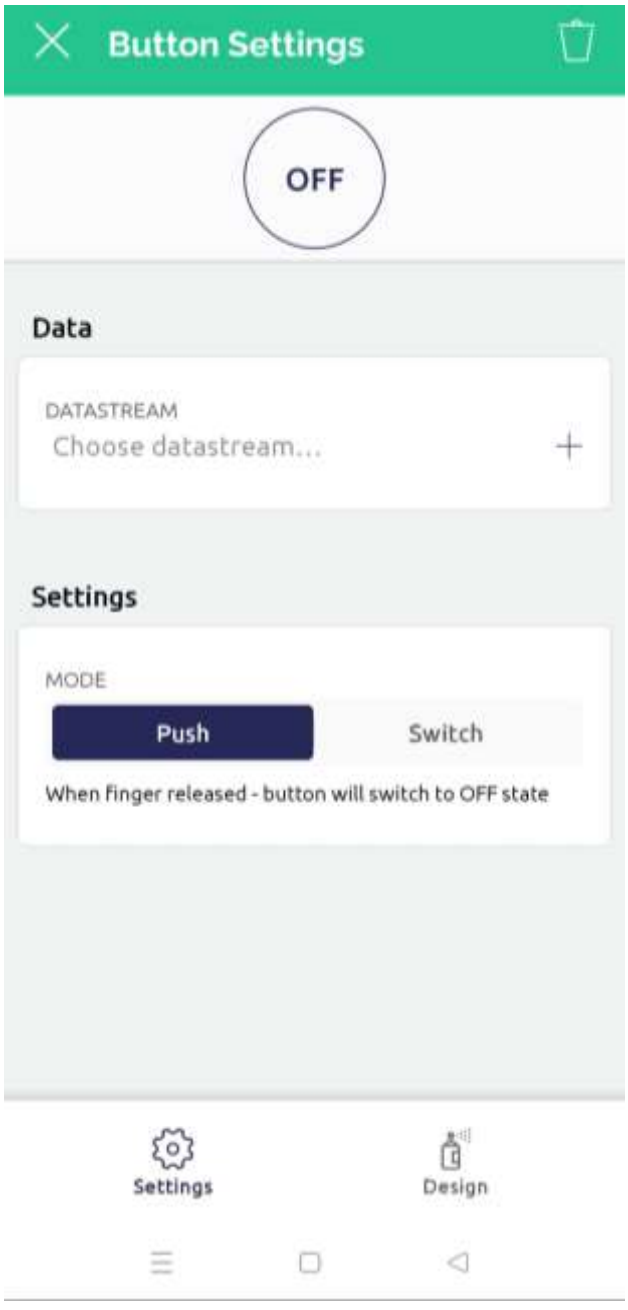
Info Metadata Datastreams Events Automations Web Dashboard Mobile Dashboard

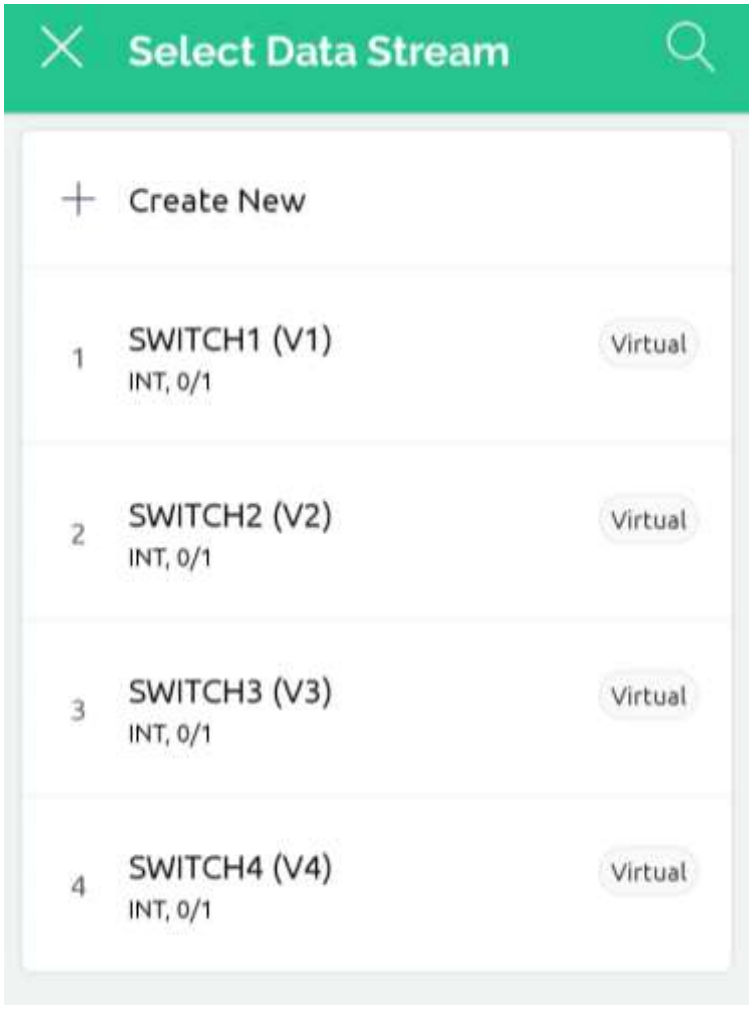
Search datastream

Id	Name	Alias	Color	Pin	Data Type	Units	Is Raw	Min	Max	Decimals
1	SWITCH1	SWITCH1		V1	Integer		false	0	1	–
2	SWITCH2	SWITCH2		V2	Integer		false	0	1	–
3	SWITCH3	SWITCH3		V3	Integer		false	0	1	–
4	SWITCH4	SWITCH4		V4	Integer		false	0	1	–

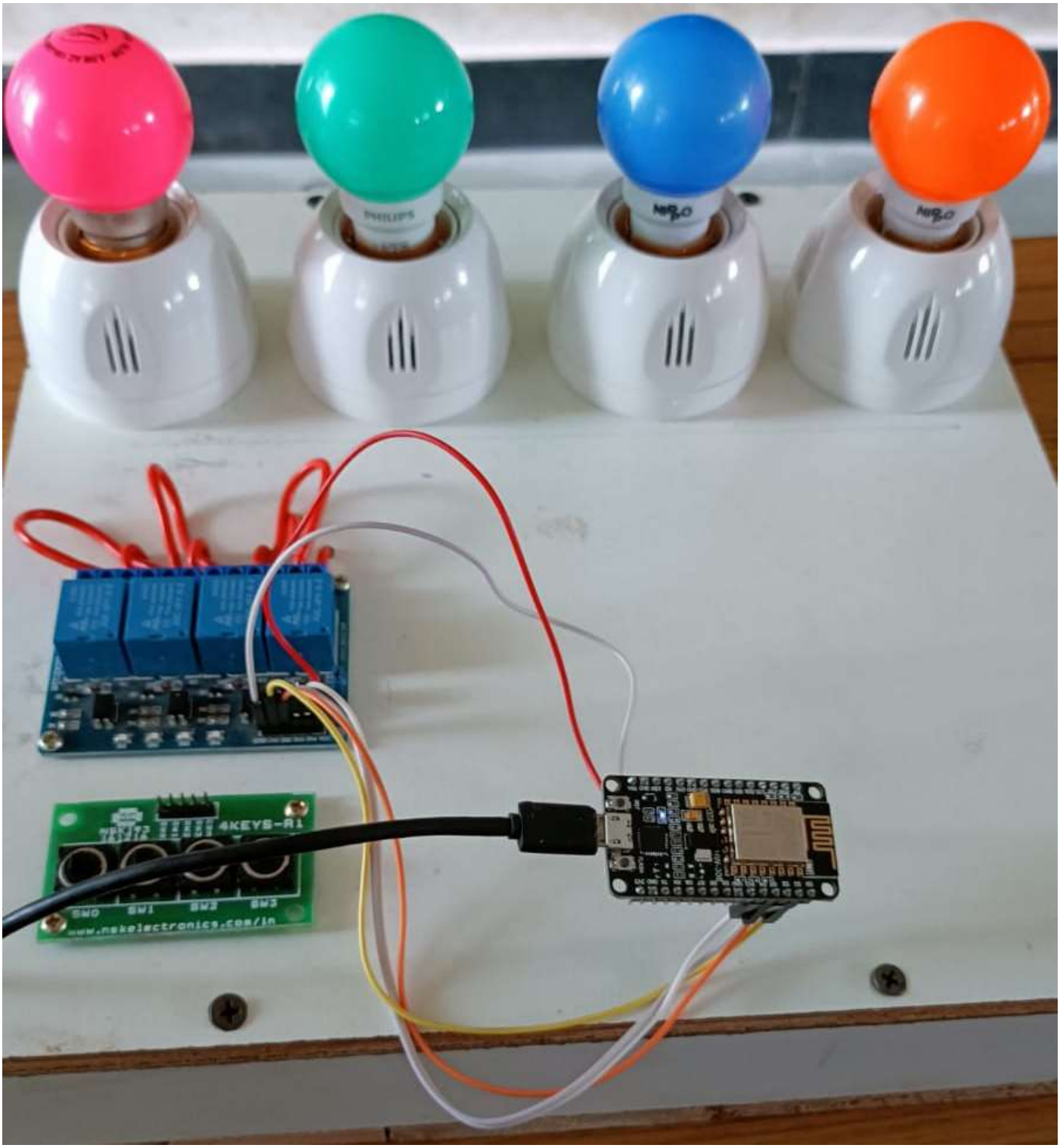



← Back
2 Devices
BTESP
Heartbeat
BTESP
Online
Dashboard
Timeline
Device Info
Metadata
Actions Log
9:39 AM Today
2:04 PM Nov 16, 2022
by nandeeshtvn@gmail.com
9:38 AM Today
by nandeeshtvn@gmail.com
My organization - 8872BA
My organization 8872BA
BTESP
Template ID, Device Name, and AuthToken should be declared at the very top of the firmware code.


Button Settings
OFF
Data
DATASTREAM
Choose datastream...
Settings
MODE
Push
Switch
When finger released - button will switch to OFF state
Settings
Design


Select Data Stream
Create New
1
SWITCH1 (V1)
INT, 0/1
Virtual
2
SWITCH2 (V2)
INT, 0/1
Virtual
3
SWITCH3 (V3)
INT, 0/1
Virtual
4
SWITCH4 (V4)
INT, 0/1
Virtual


BTESP
V1
V2
V3
V4


PHILIPS
4KEYS-A1
SW0
SW1
SW2
SW3
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