
The
MAKERS
INFORMATICA
SESIÓN VI
MAKERS

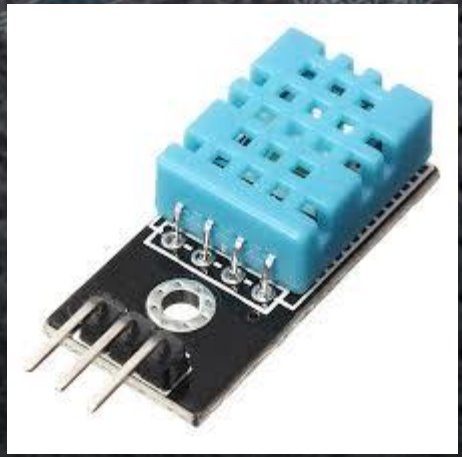
TEMAS DE AVANCE

- DHT11
- Blynk

DHT11

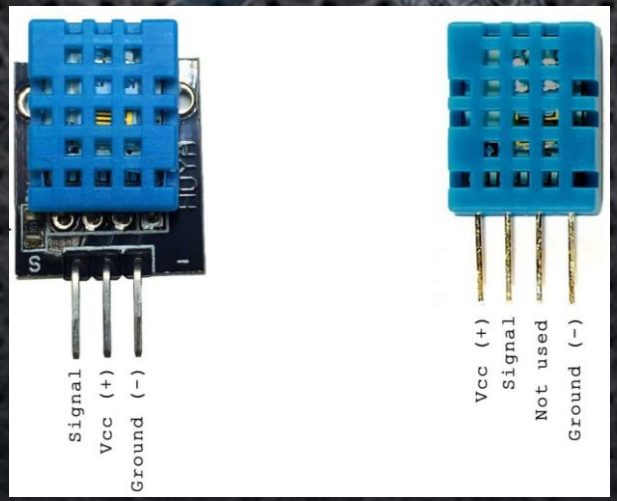
Es un sensor de humedad relativa y temperatura de bajo costo y de media precisión a un bajo precio.

Integra un sensor capacitivo de humedad y un termistor para medir el aire circundante.

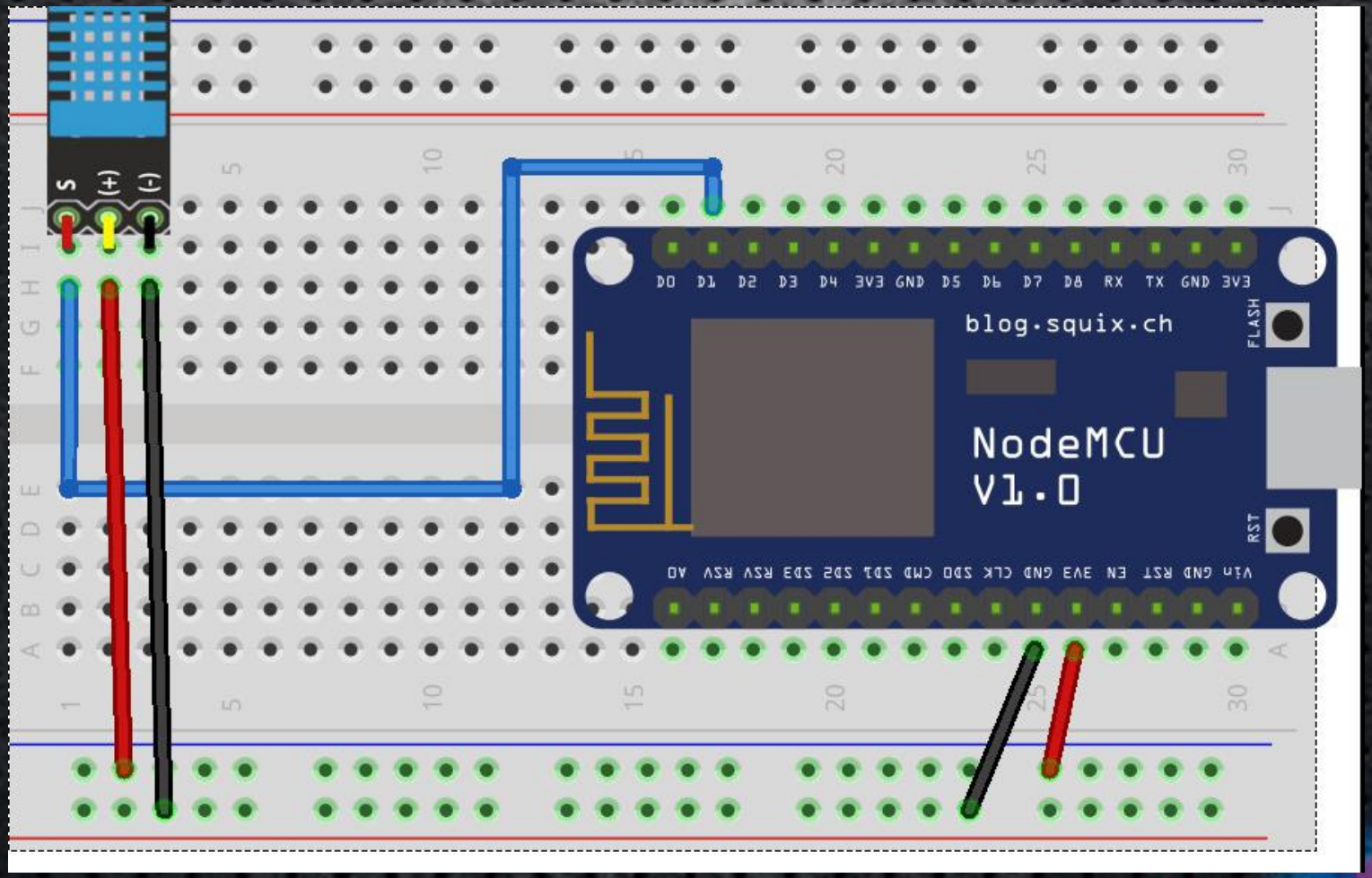


DHT11 CARACTERISTICAS

- Voltaje de operación : 3v – 5v DC.
- Rango de medición (Temperatura): 0 – 50ºC
- Precisión de medición de temperatura: ±2.0ºC
- Resolución temperatura: 0.1ºC
- Rango de medición de humedad: 20% - 90%
- Precisión de medición de humedad: 5%
- Resolución humedad 1%



ESQUEMA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NodeMCU
V1.0
RST

CÓDIGO

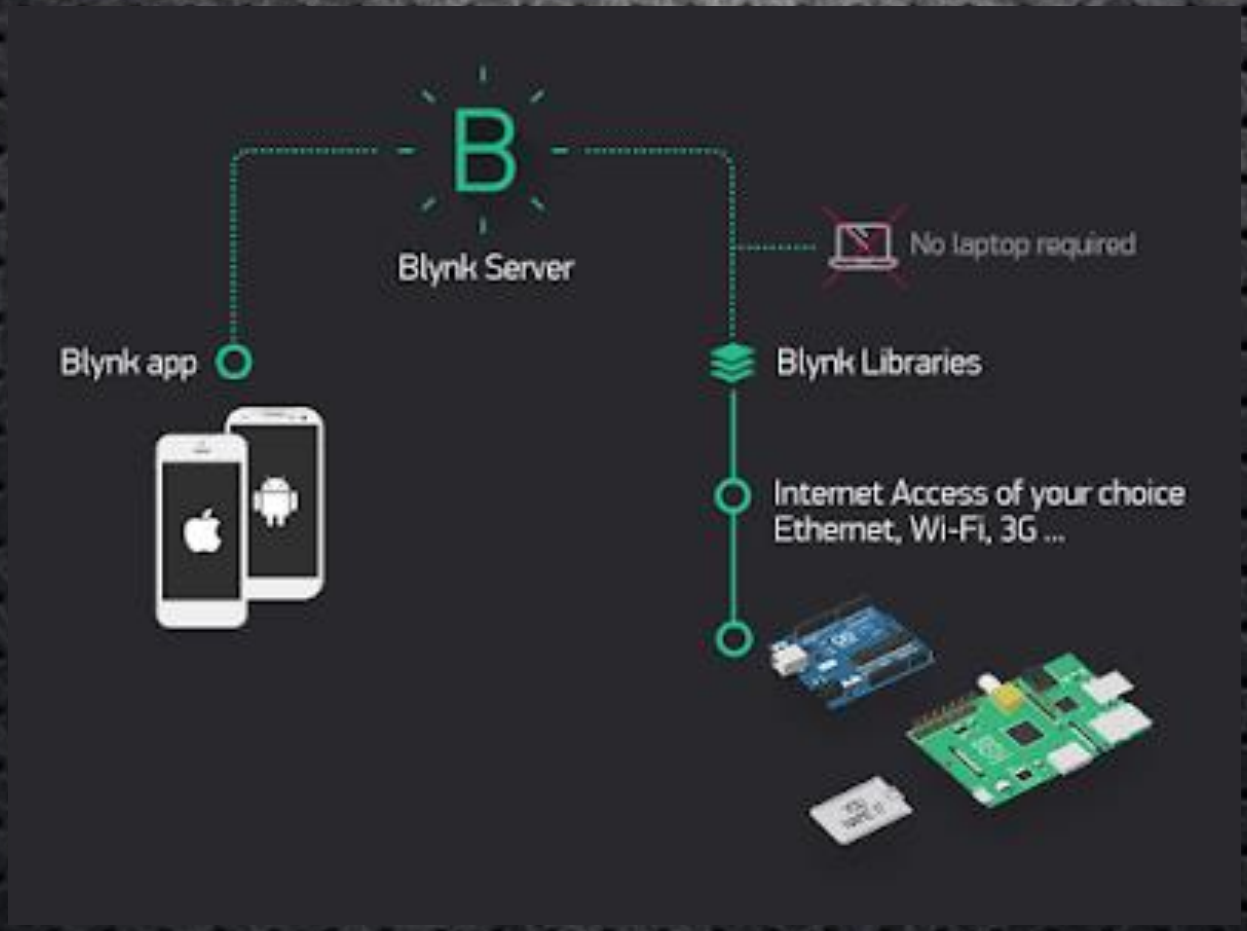
```
#include <ESP8266WiFi.h>

#include <DHT.h>
#define DHTPIN D1 //pin donde conectamos el sensor
#define DHTTYPE DHT11 // iniciamos el dht11
DHT dht(DHTPIN, DHTTYPE);

void setup() {
  Serial.begin(115200);
  dht.begin();
  delay(10);
}

void loop() {
  float t=dht.readTemperature(); //Lectura de temperatura
  float h=dht.readHumidity(); //Lectura de la humedad

  delay(1500);//tiempo de retardo para guardar los datos en la base de datos
  Serial.print("Humedad: ");
   Serial.print(h);
   Serial.print(" %\t");
   Serial.print("Temperatura: ");
   Serial.print(t);
   Serial.print(" *C ");
   Serial.println();

}
```

BLYNK

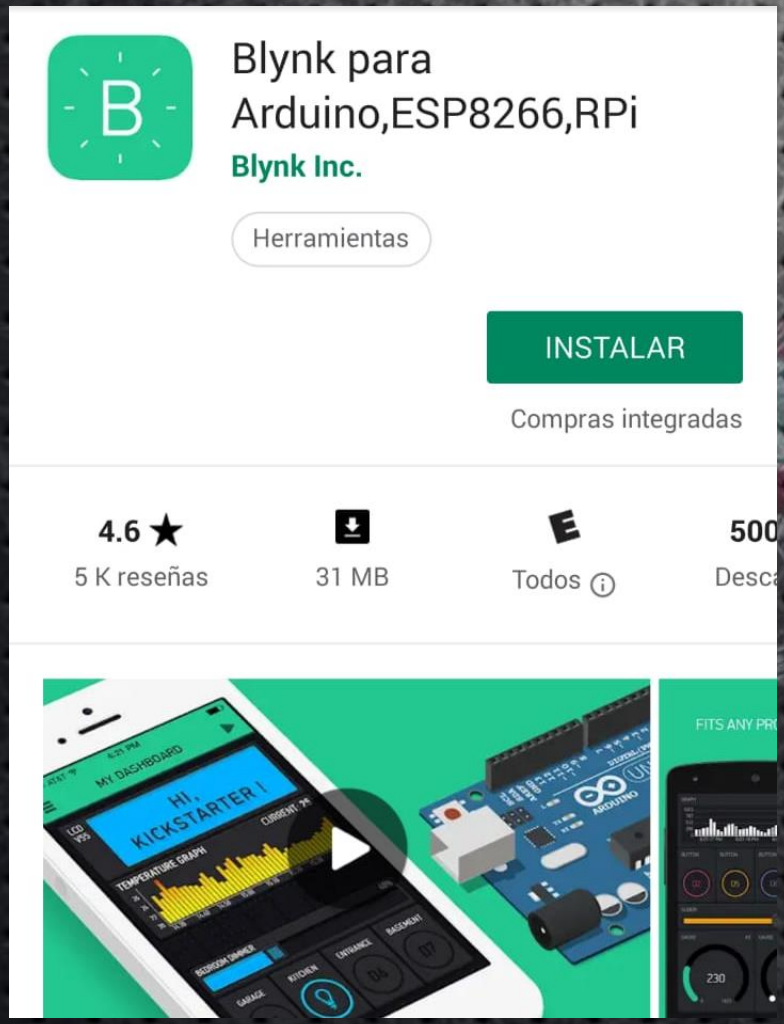
Blynk es una plataforma con aplicaciones iOS y Android para controlar Arduino, Rasberry Pi y otros microcontroladores.

Es un panel digital donde se puede crear una interfaz gráfica para un proyecto, simplemente arrastrando y soltando widgets.

ARQUITECTURA DE BLYNK



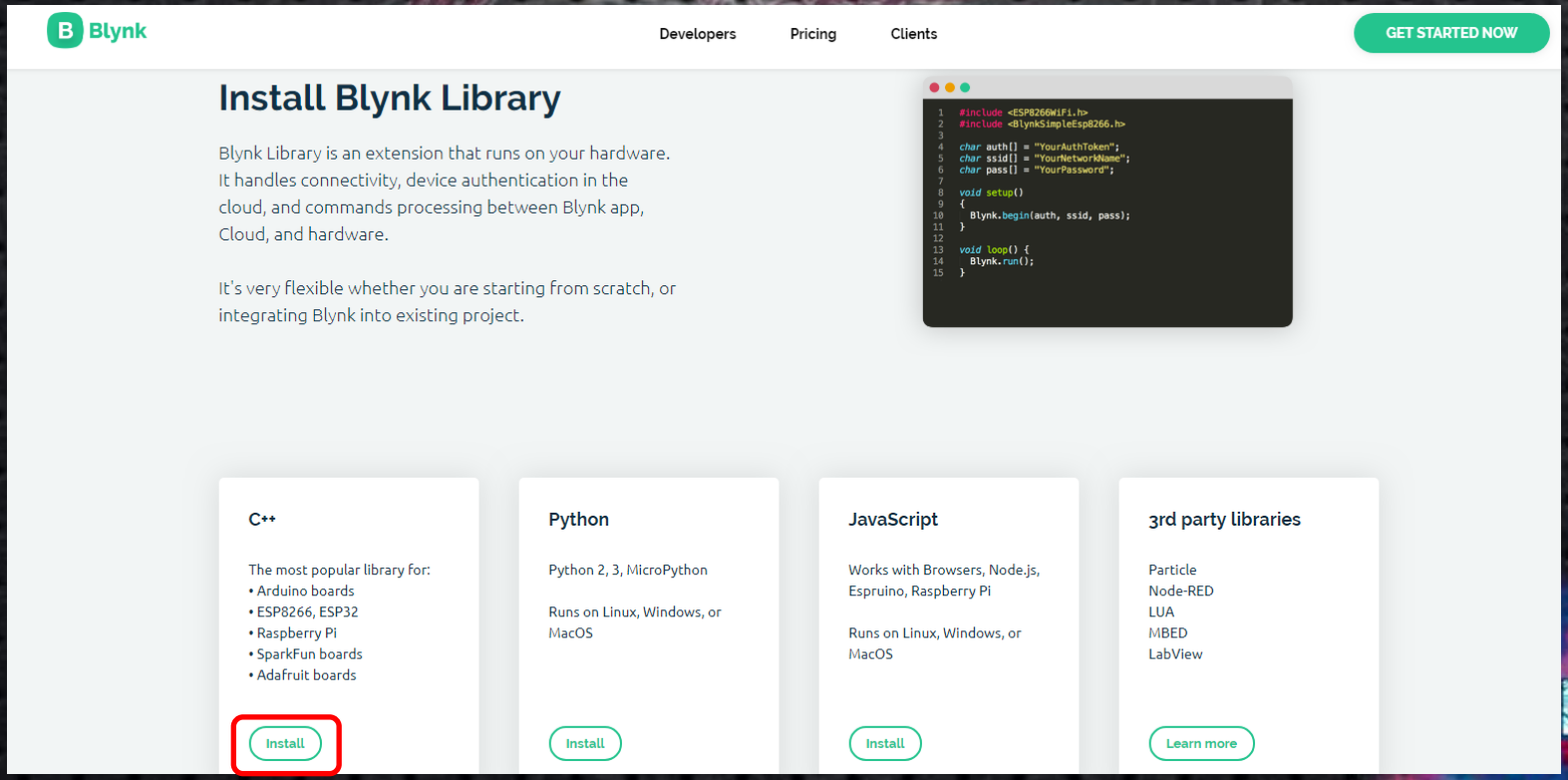
INSTALACIÓN



La aplicación Blynk esta disponible en *Play Store y Apple Store*.

INSTALACIÓN

Para que **Blynk** pueda interactuar con el Nodemcu necesitara de una librería. (https://blynk.io/en/getting-started)



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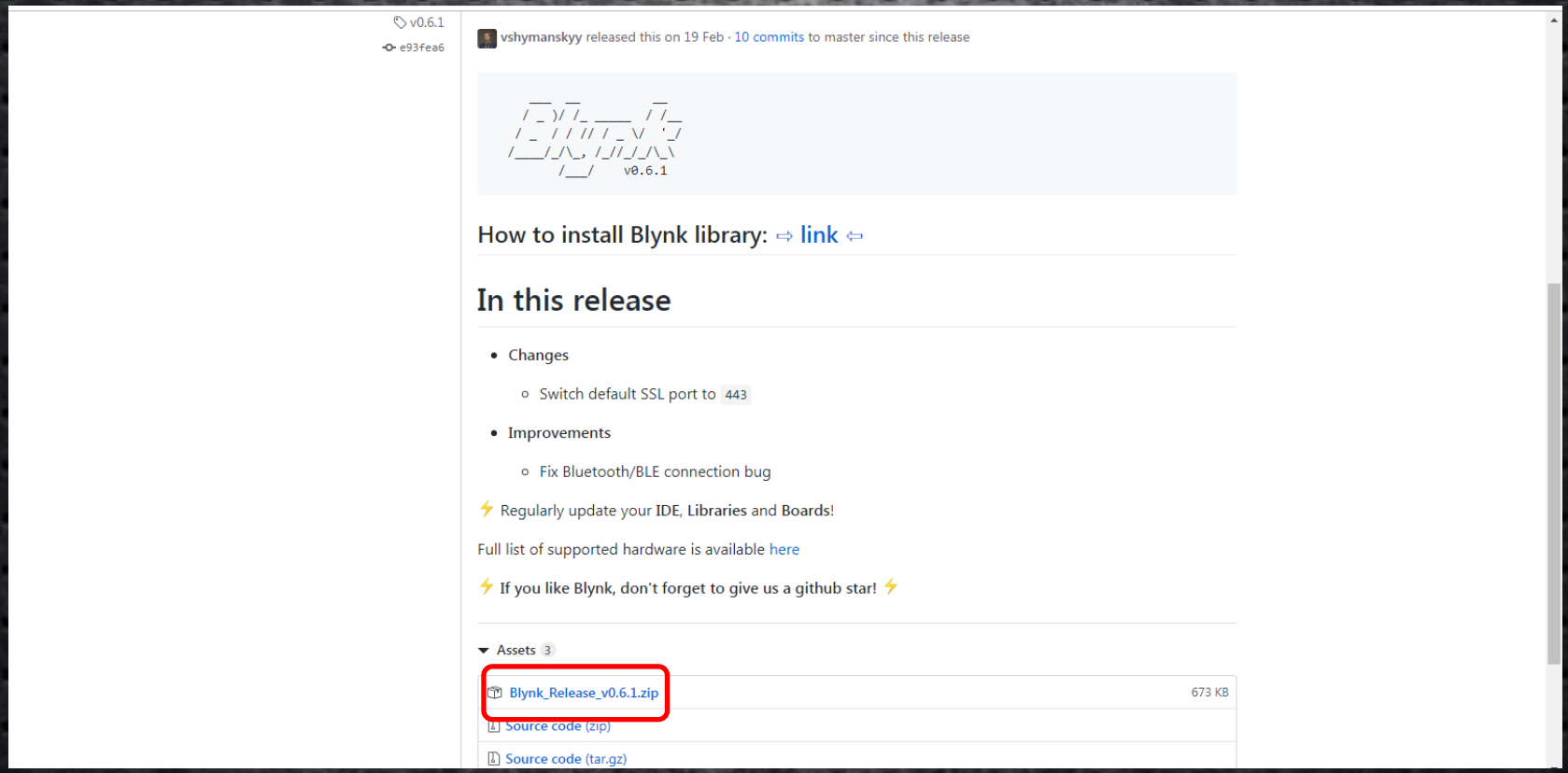

v0.6.1
e93fea6

vshymanskyy released this on 19 Feb · 10 commits to master since this release

```
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  / _ )/ /_ ____  / /__
 / _  / / // / _ \/  '_/
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       /___/    v0.6.1
```

How to install Blynk library: ⇨ link ⇦

In this release

- Changes
  - Switch default SSL port to `443`
- Improvements
  - Fix Bluetooth/BLE connection bug

⚡ Regularly update your **IDE**, **Libraries** and **Boards**!

Full list of supported hardware is available here

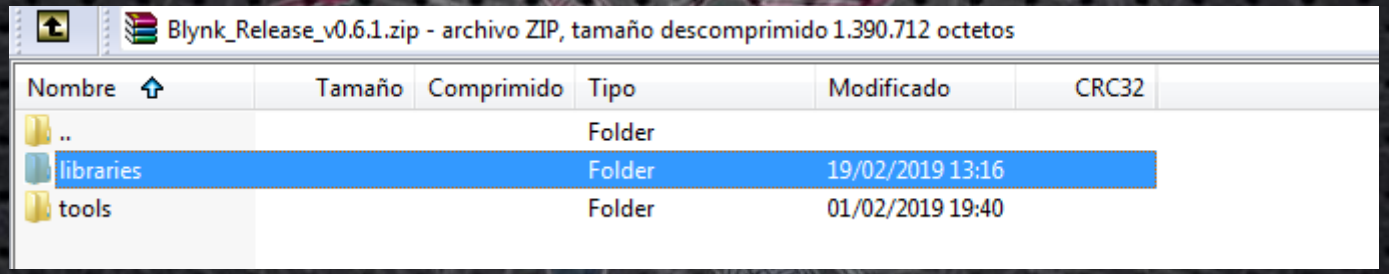
⚡ **If you like Blynk, don't forget to give us a github star!** ⚡

▼ Assets 3

Blynk_Release_v0.6.1.zip 673 KB
Source code (zip)
Source code (tar.gz)

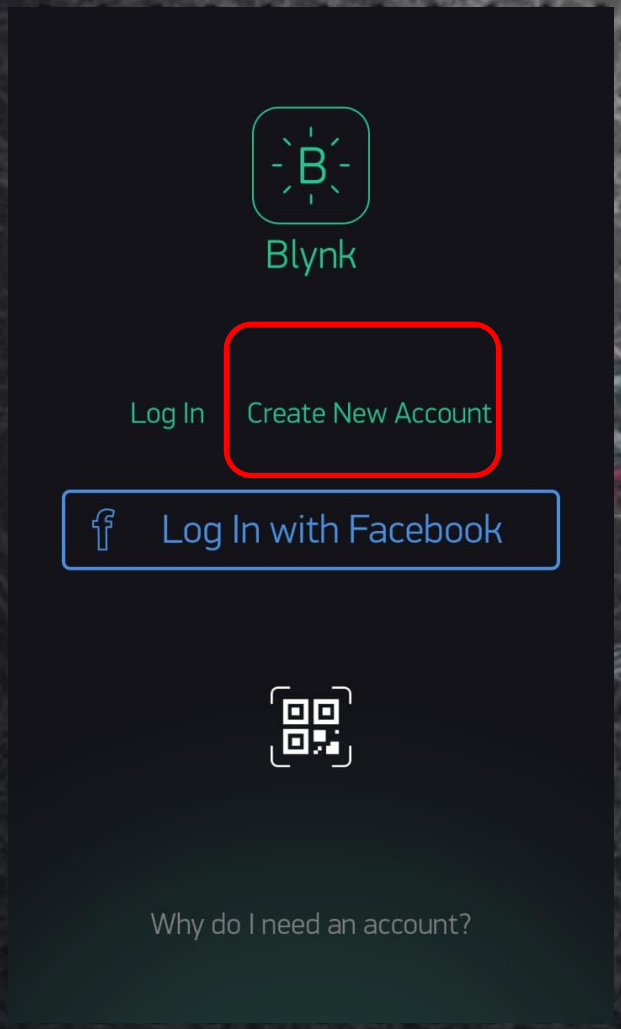
INSTALACIÓN

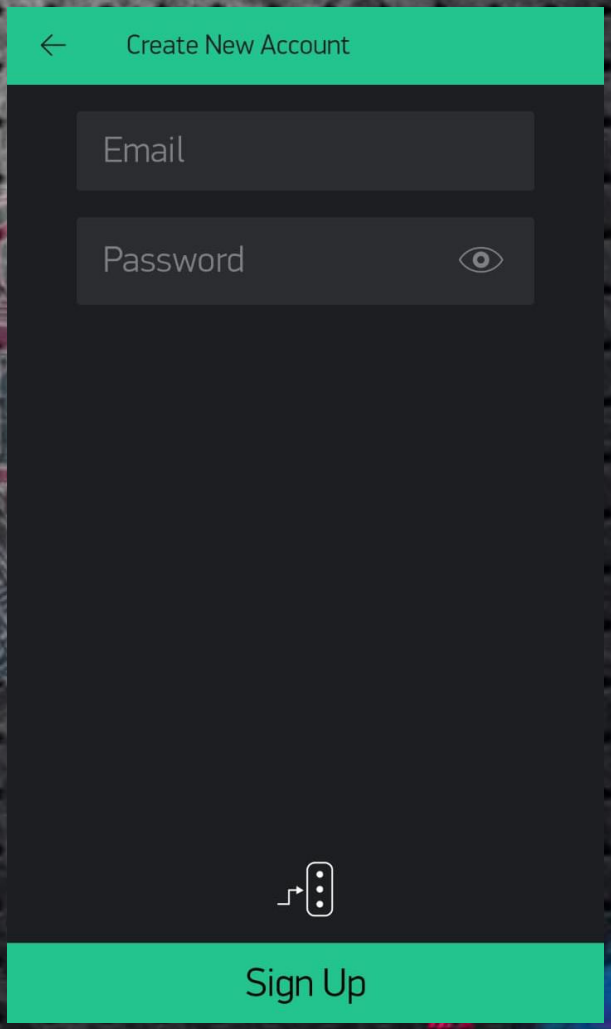
De la carpeta que se descargo, copiar las carpetas que se encuentran en **libraries.**



Pegar en la siguiente dirección :
C:\Users\nomUsuario\Documents\Arduino

HOLA MUNDO BLYNK





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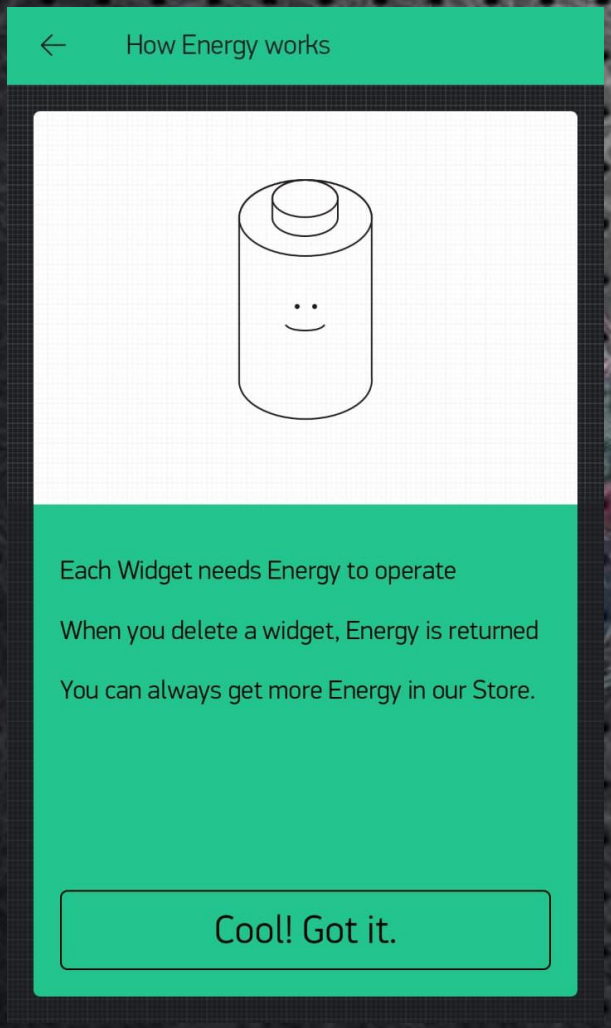
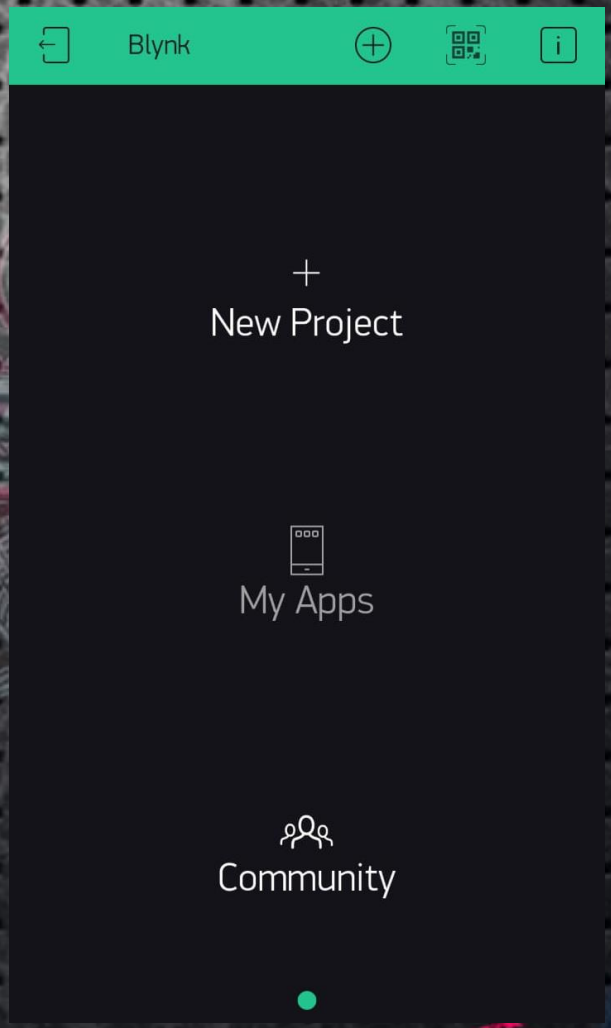
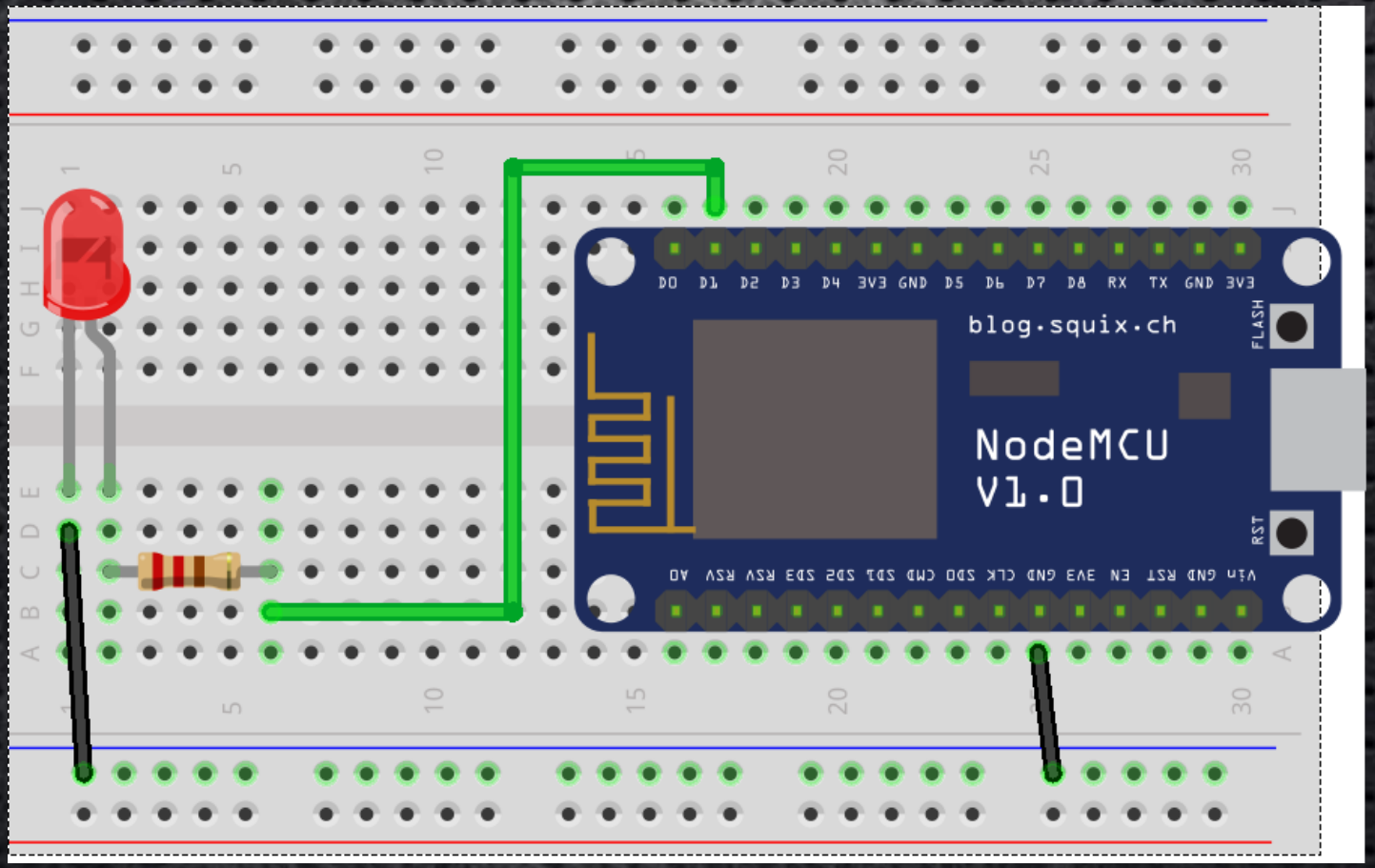




ESQUEMA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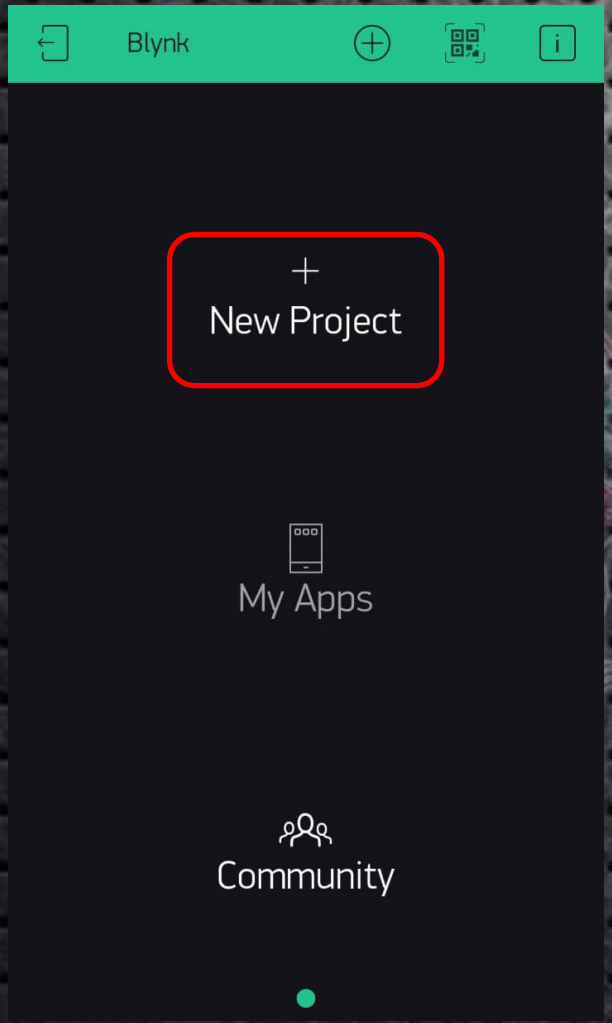

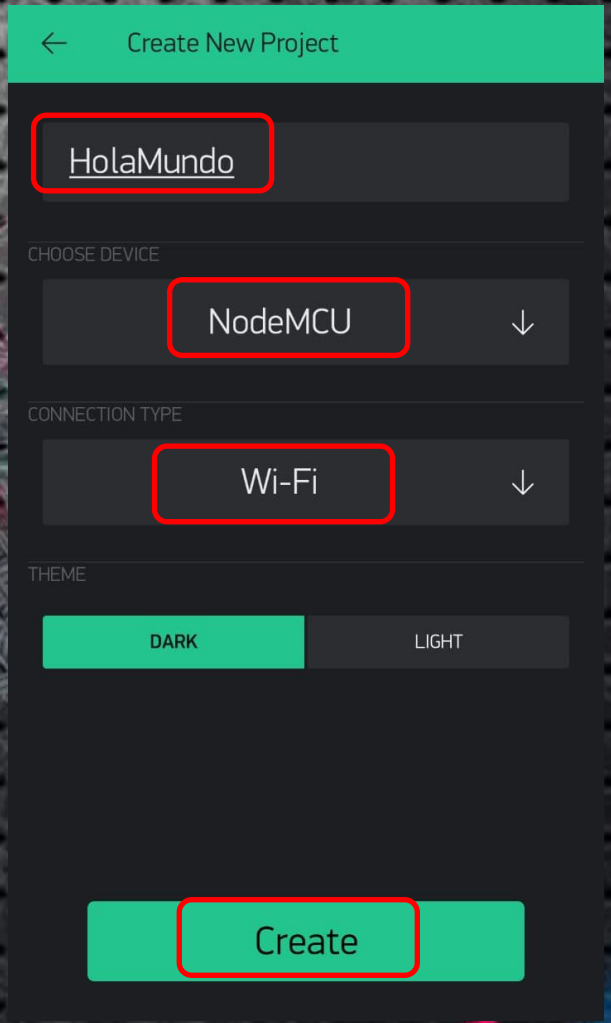

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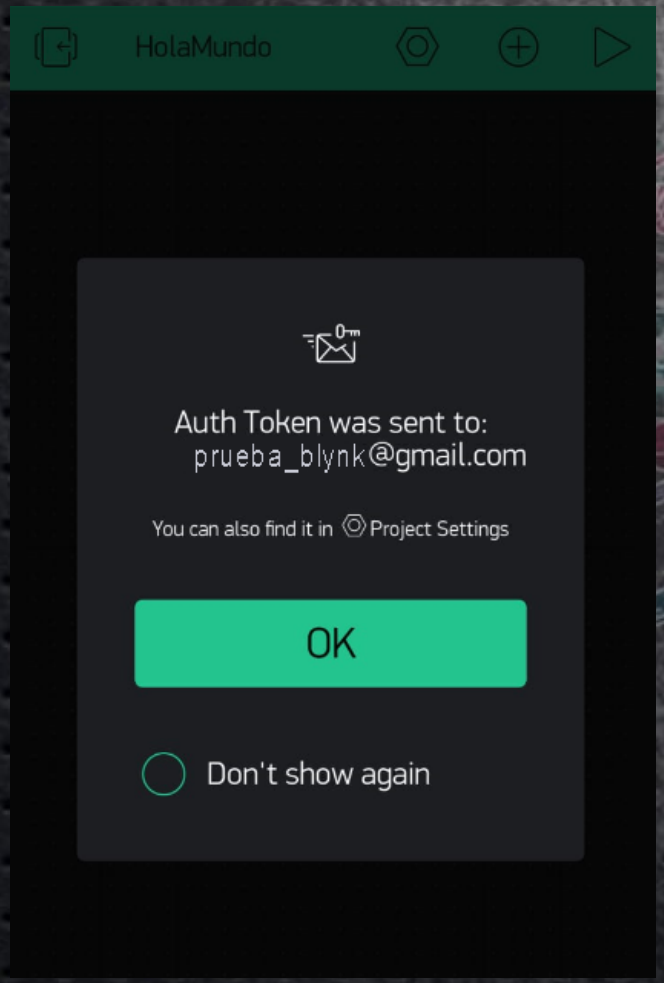

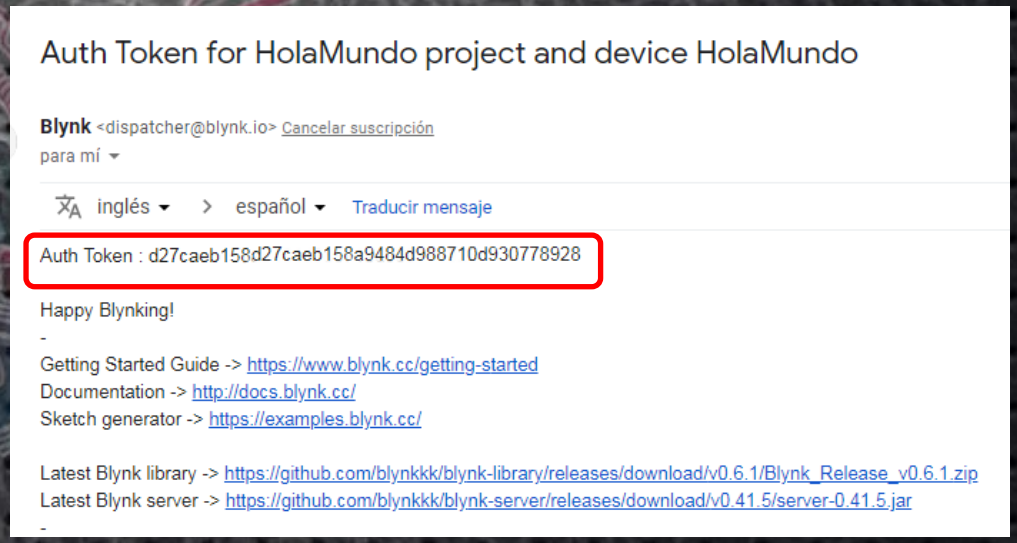

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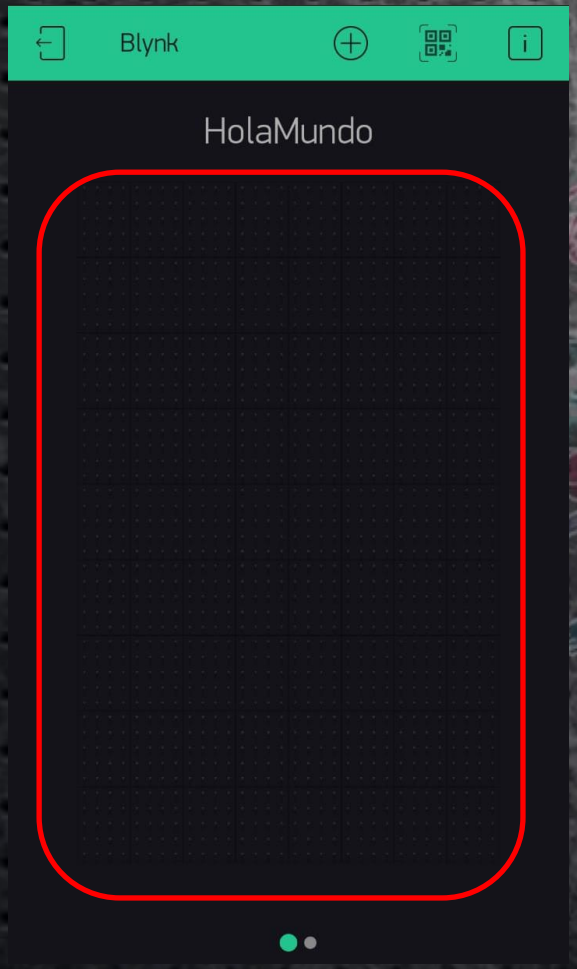

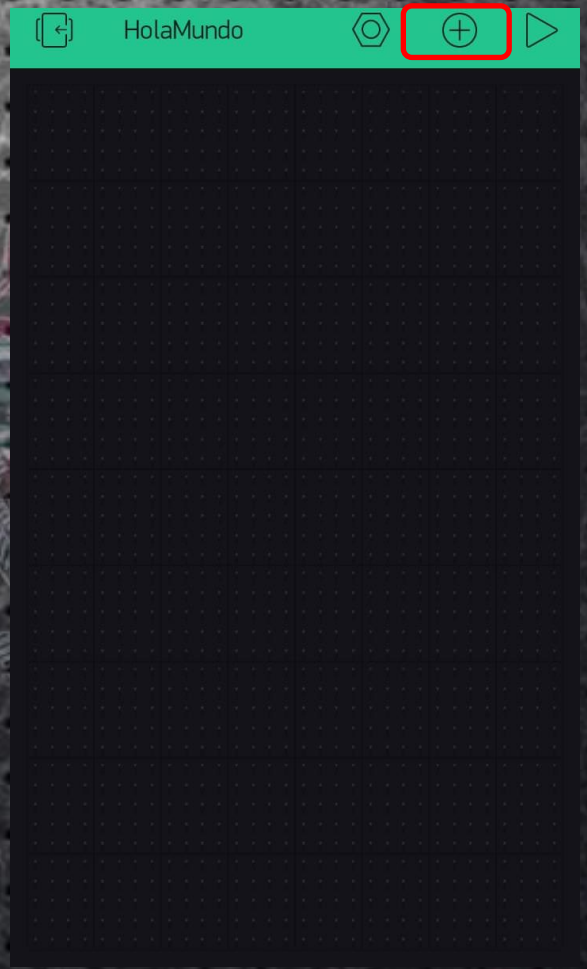

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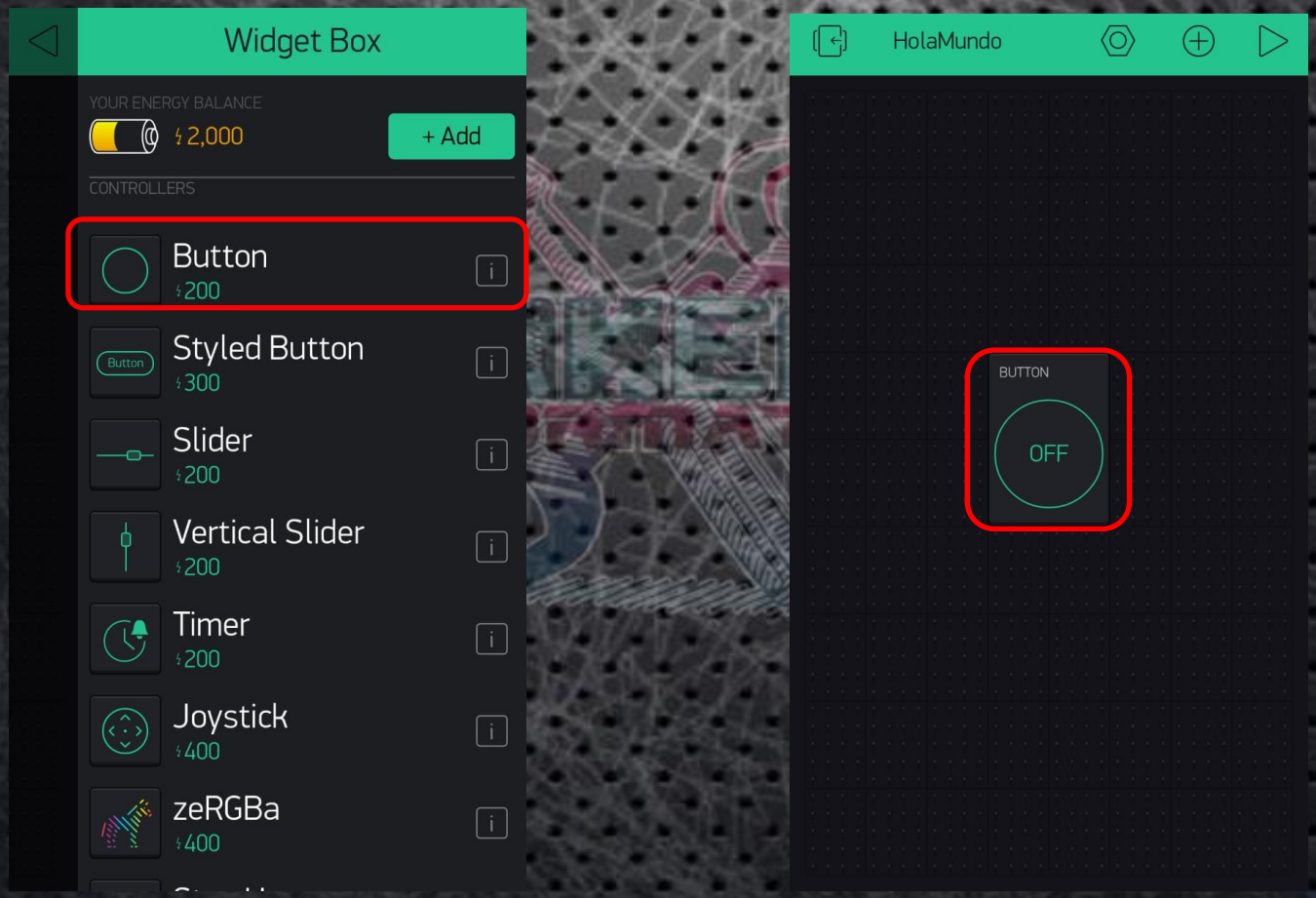

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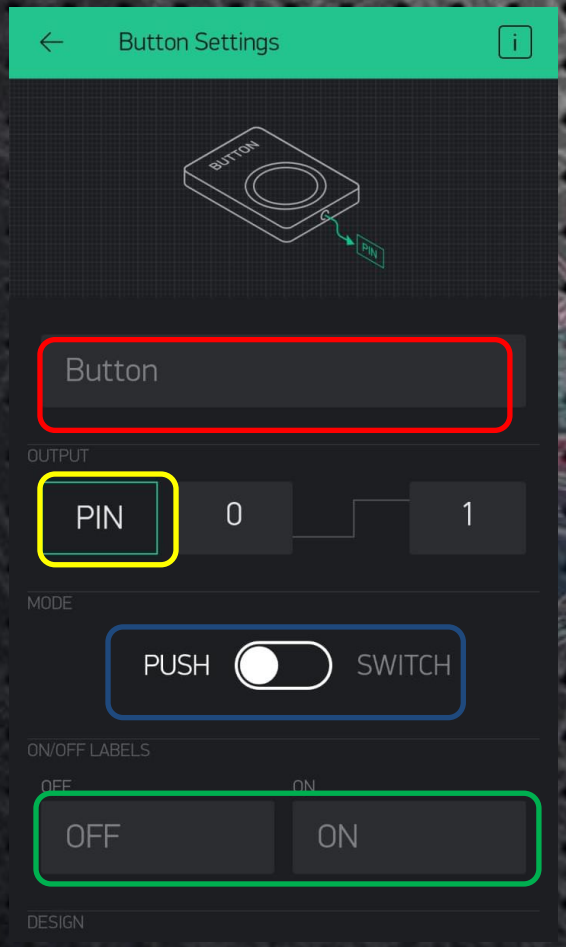

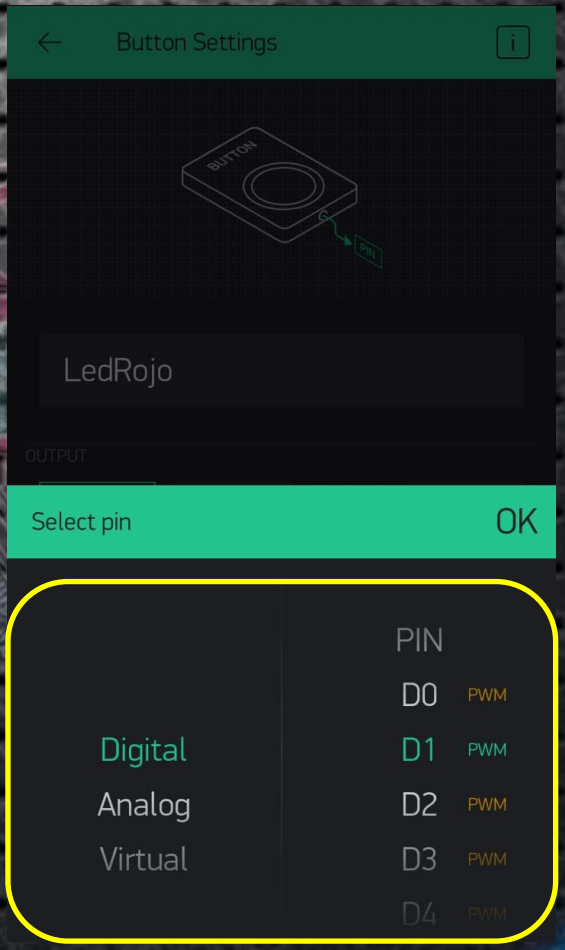

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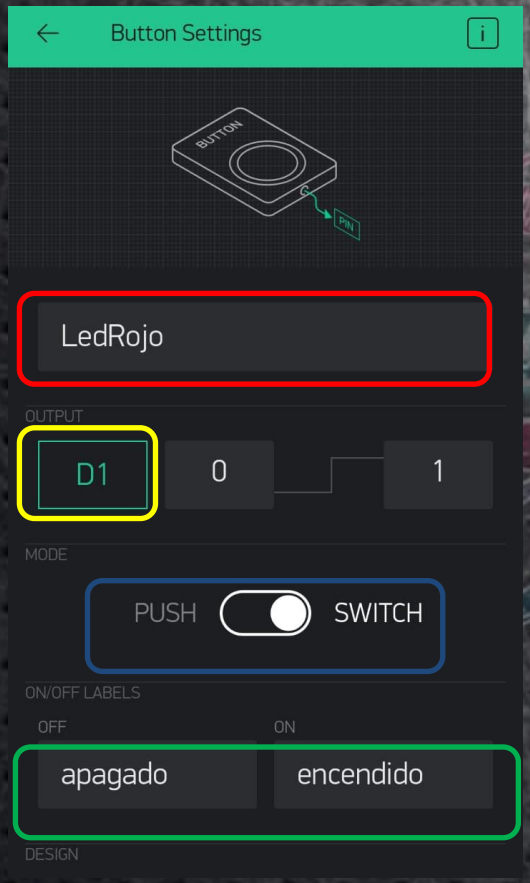

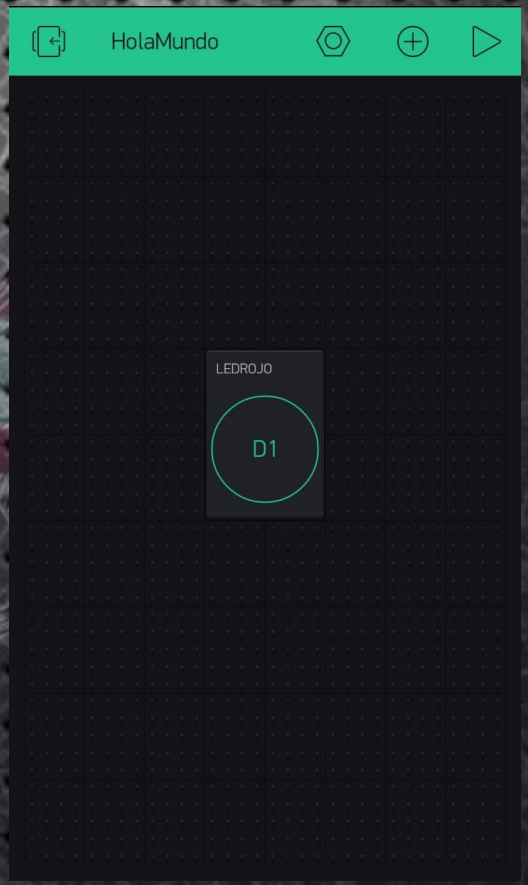

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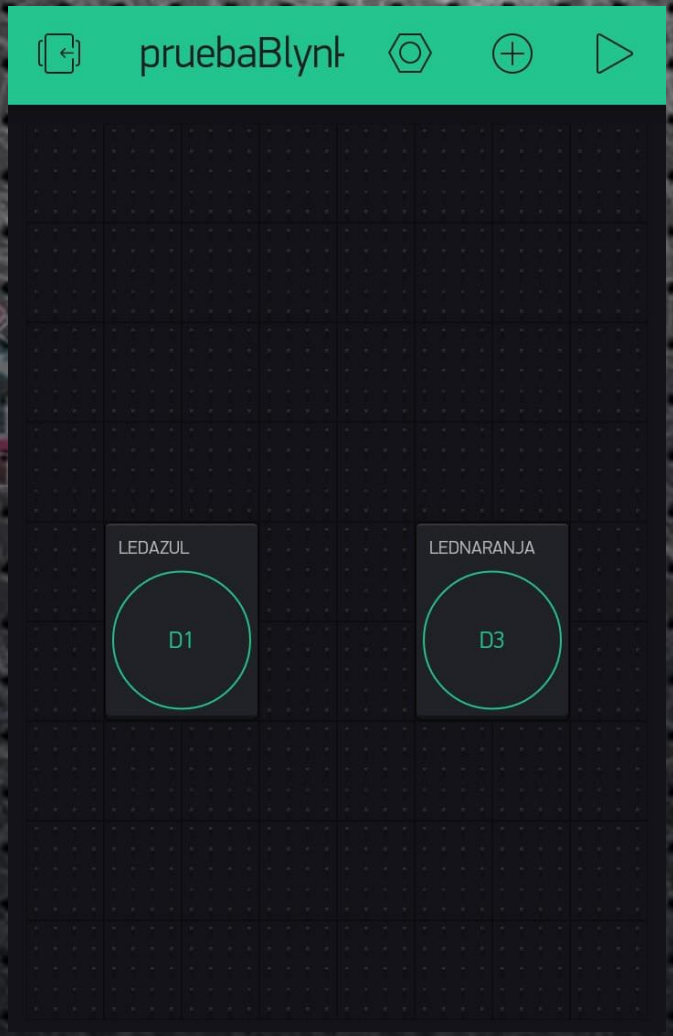

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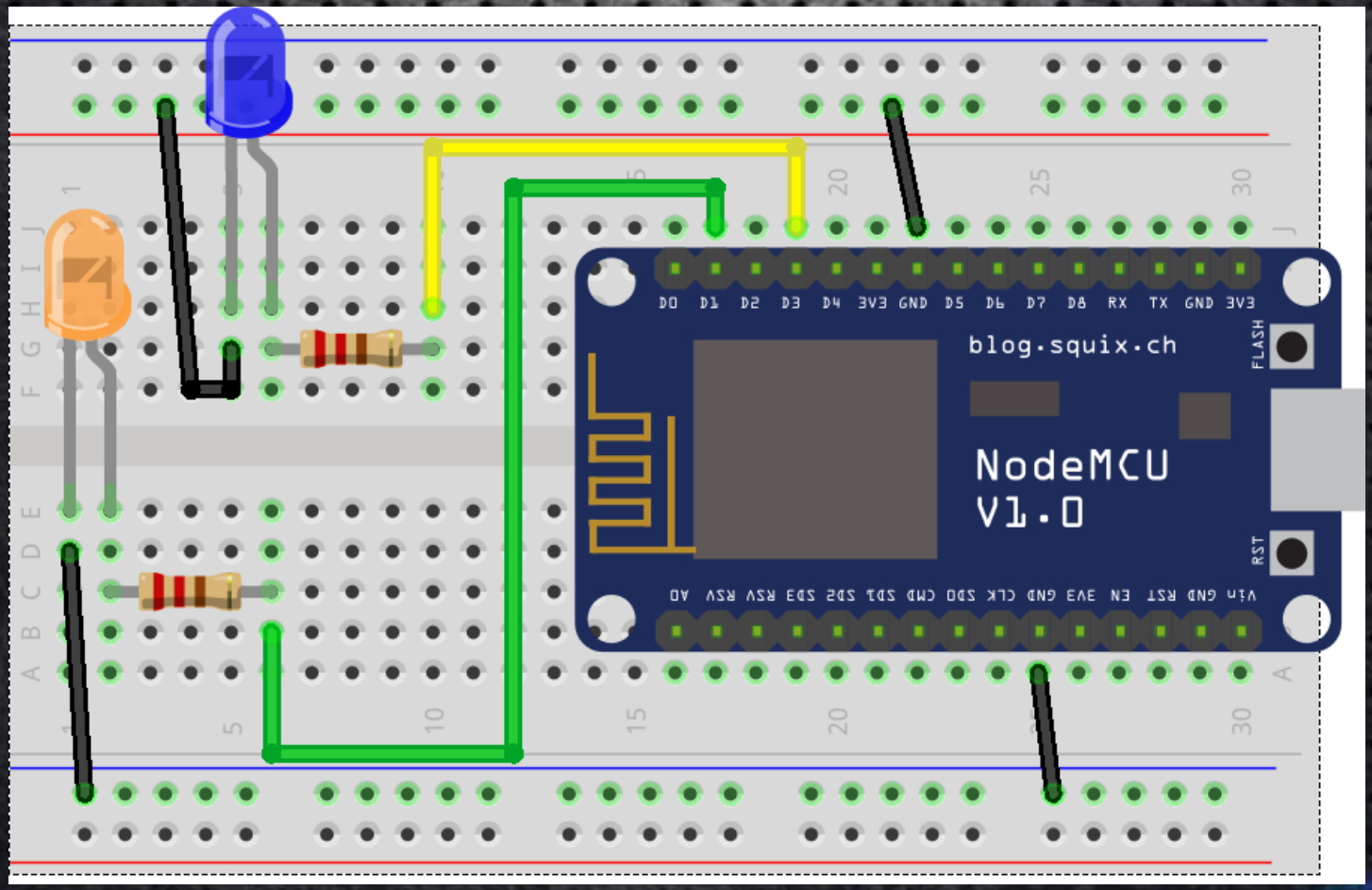
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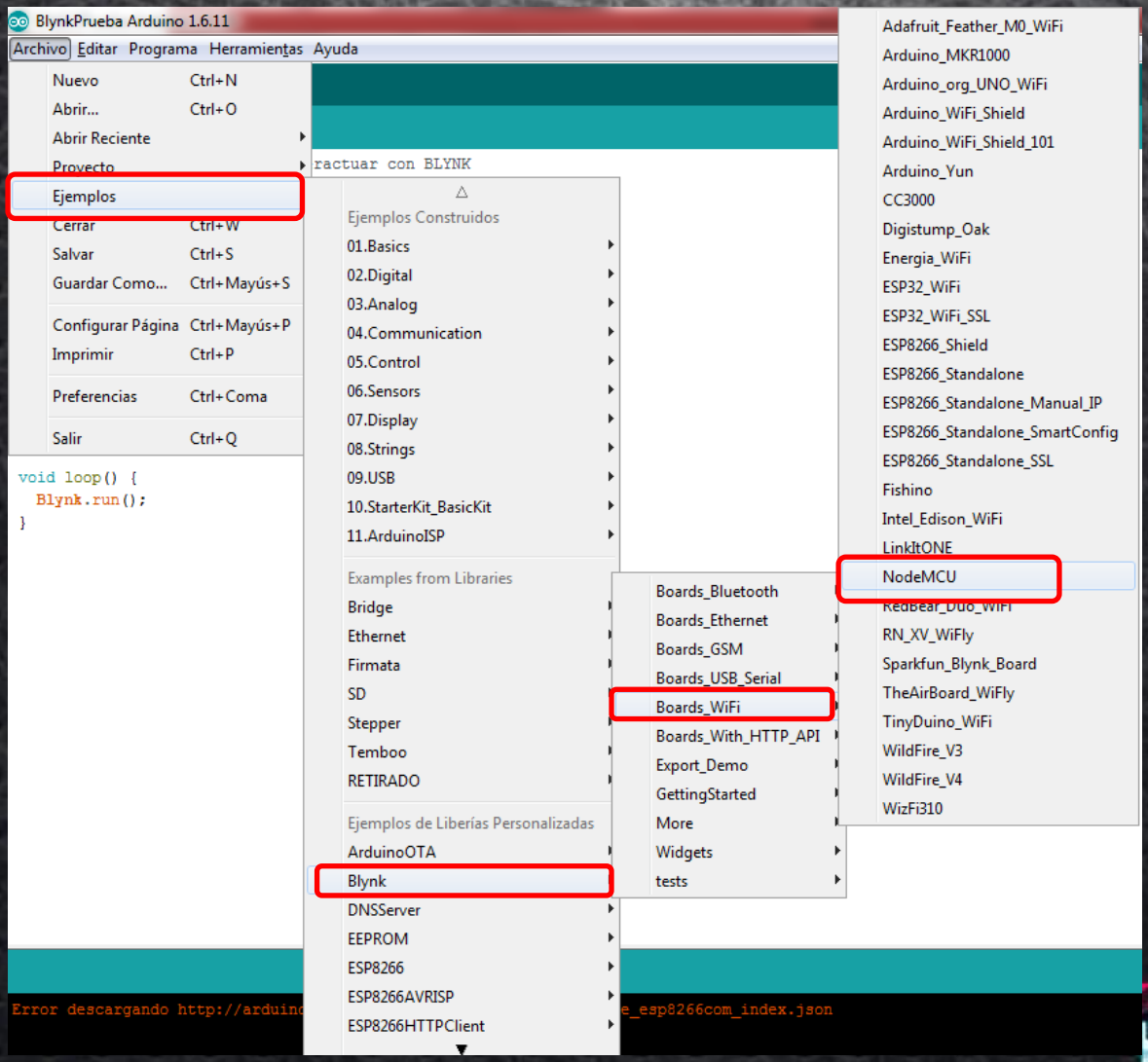
CÓDIGO BLYNK



CÓDIGO BLYNK

Archivo Editar Programa Herramientas Ayuda

NodeMCU §

```
#define BLYNK_PRINT Serial

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

char auth[] = "COPIAR_EL_TOKEN_GENERADO";

char ssid[] = "NOMBRE_DE_RED_WIFI";
char pass[] = "CONTRASEÑA_DE_LA_RED_WIFI";

void setup()
{
  Serial.begin(115200);
  Blynk.begin(auth, ssid, pass);
}

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

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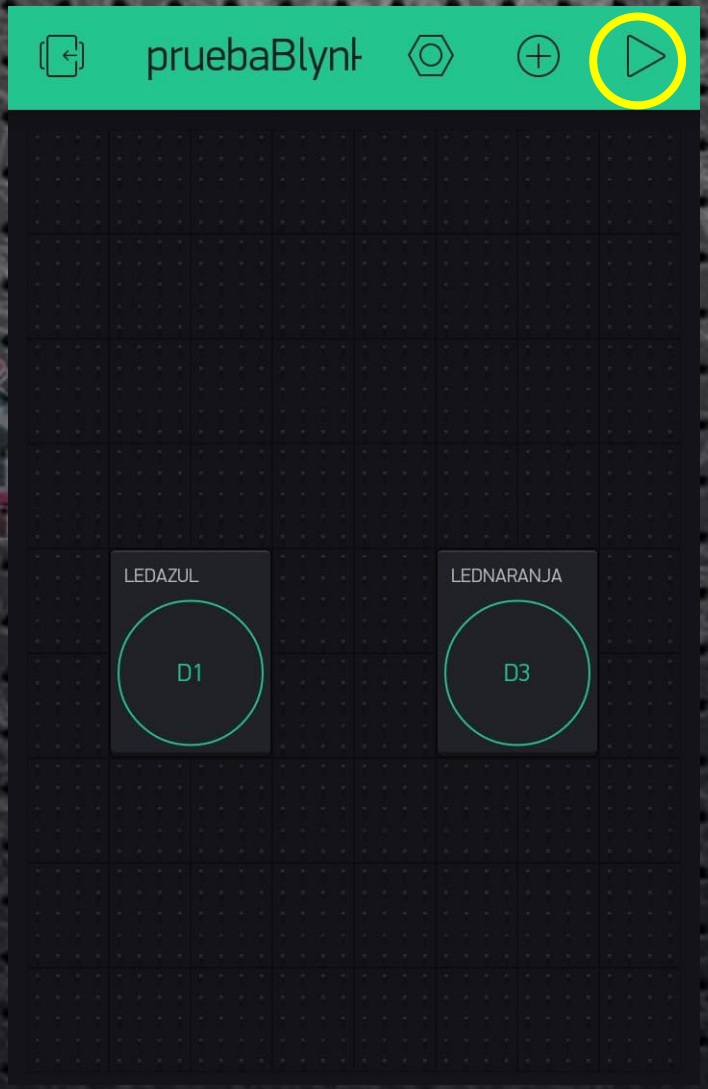
HOLA MUNDO BLYNK



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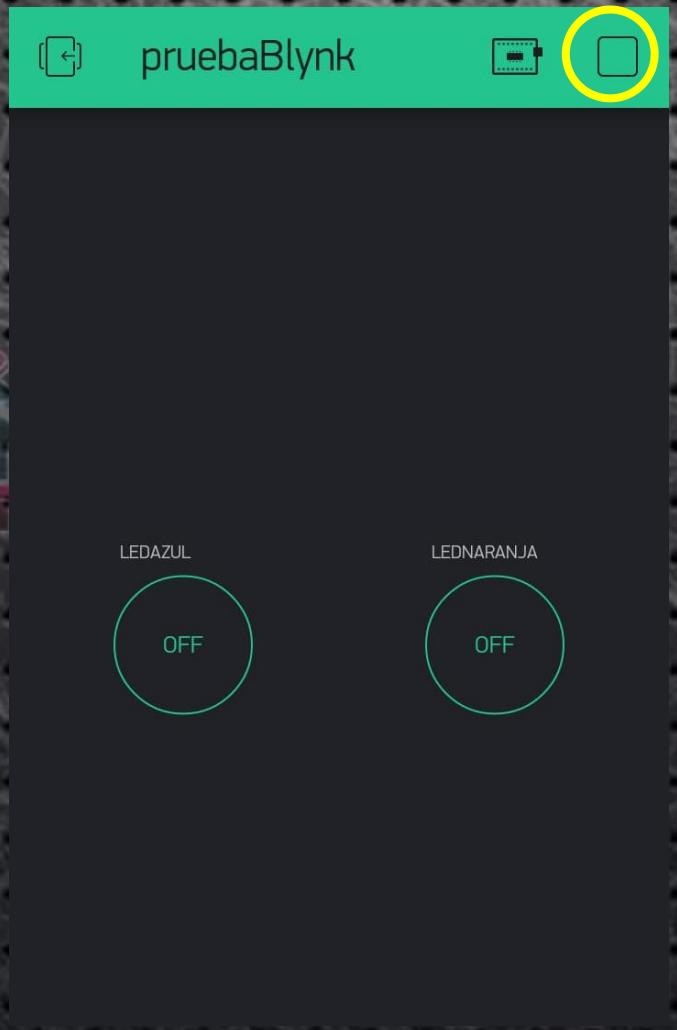
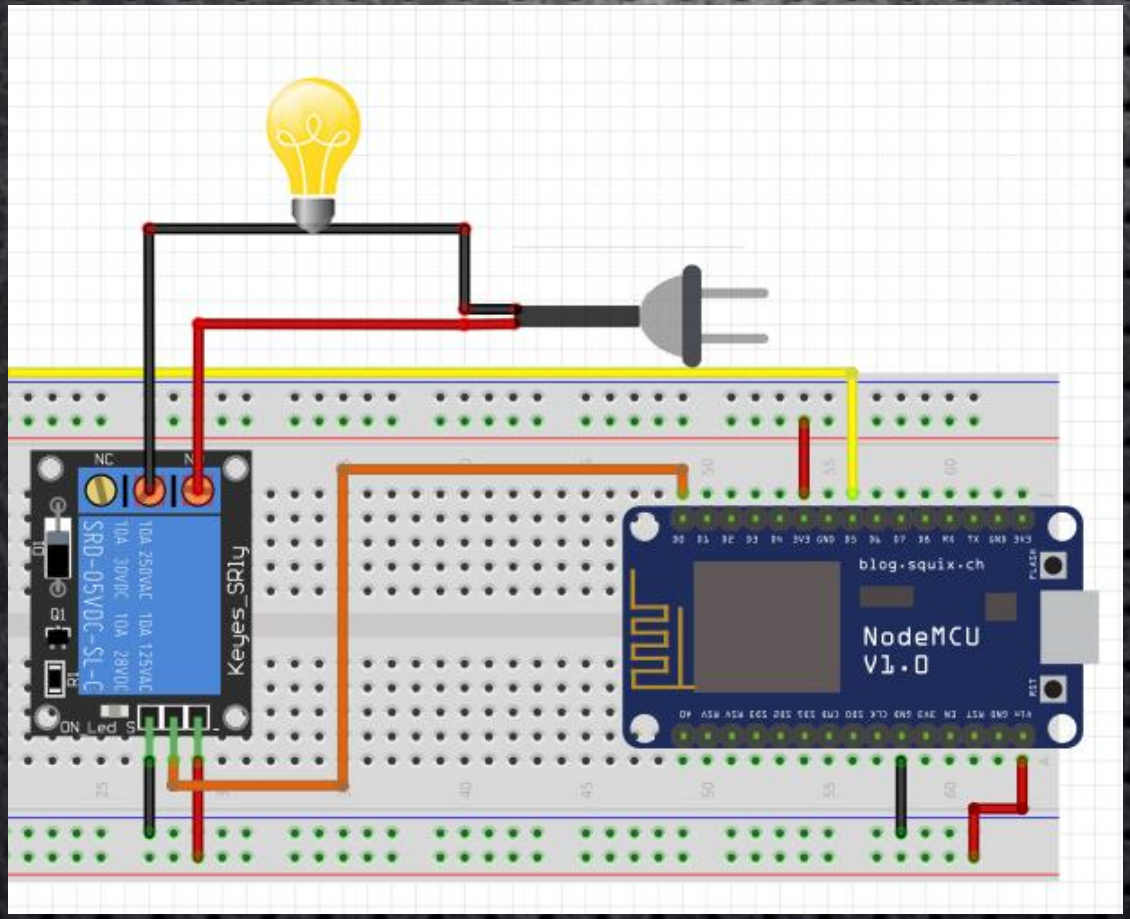


PRÁCTICA

- Encender/Apagar un foco con Blynk
- Manejo de un led RGB con Blynk

PRÁCTICA 1



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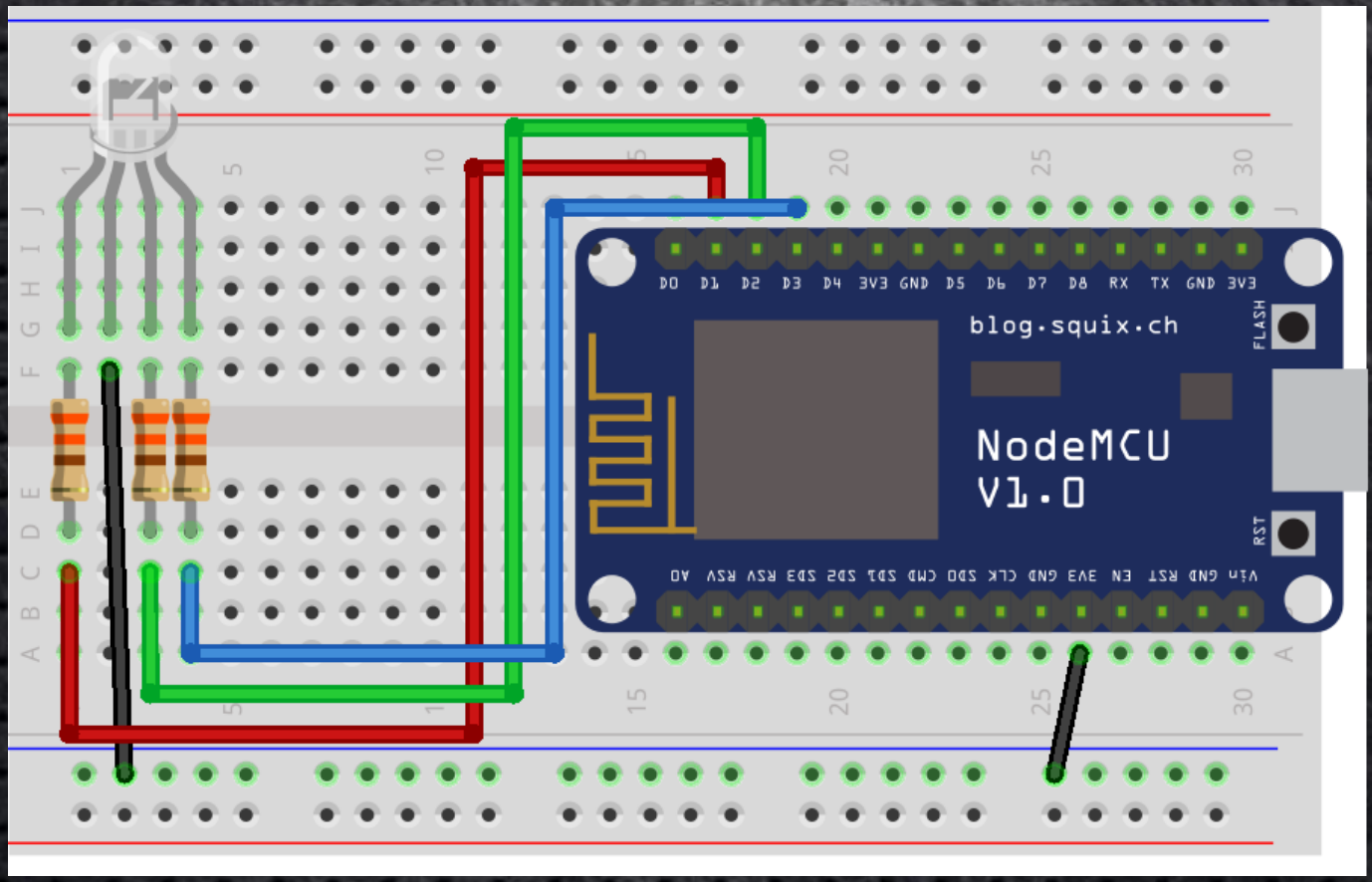
D0 D1 D2 D3 D4 3V3 GND D5 D6 D7 D8 RX TX GND 3V3
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