

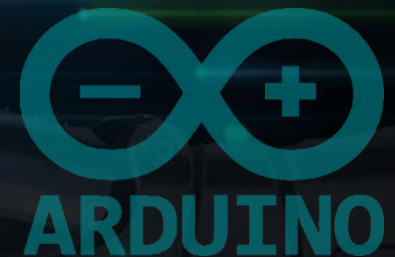
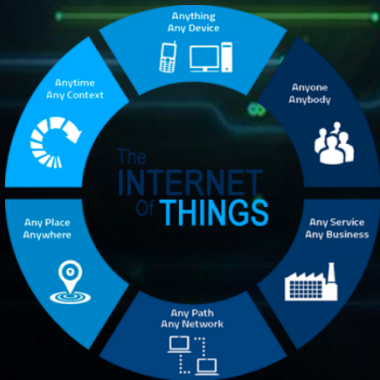


UNIVERSIDAD MAYOR DE SAN ANDRÉS

CARRERA DE INFORMÁTICA



NODEMCU ESP8266 Y BLYNK, LA COMBINACIÓN PERFECTA



Lic. Arnaldo Muñoz Mendoza

BLYNK

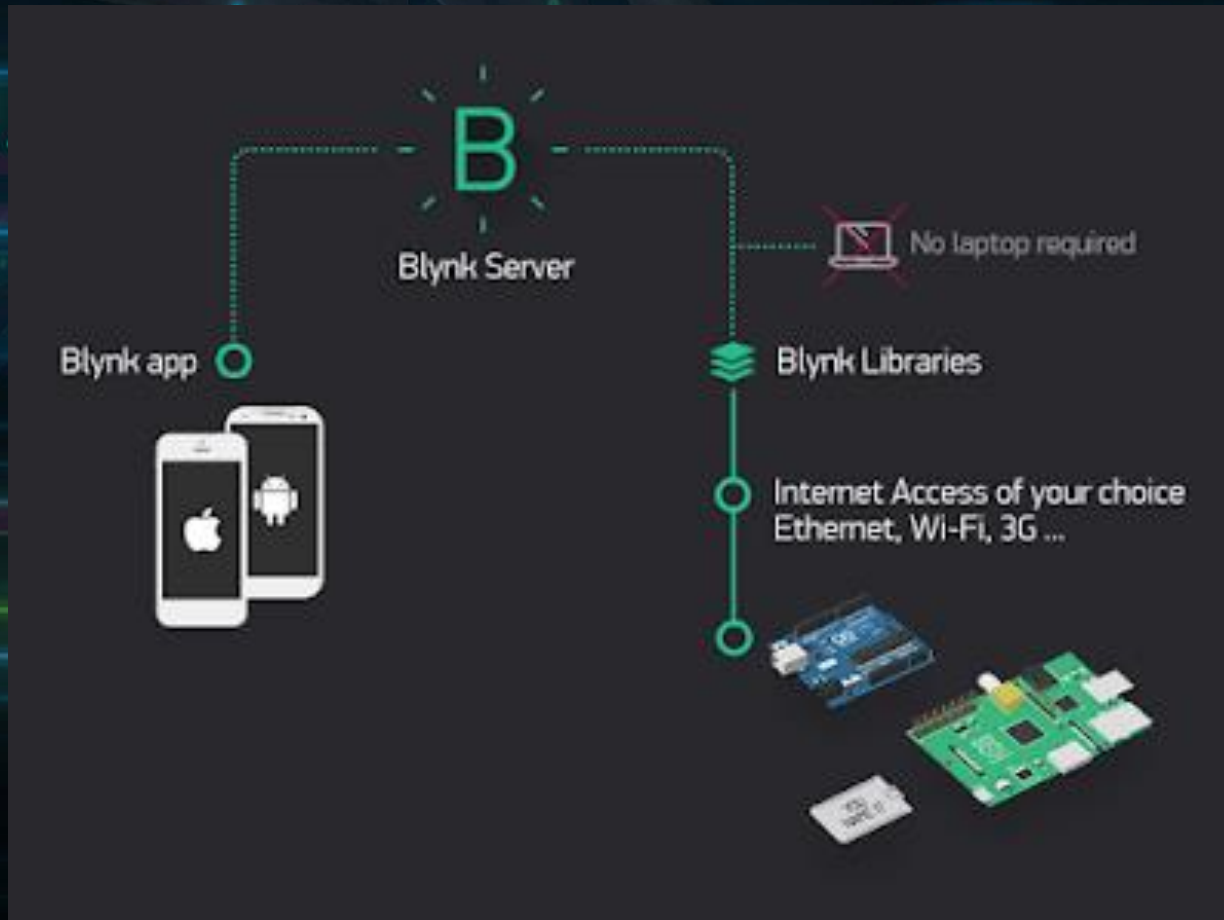


The
MAKERS
INFORMATICA

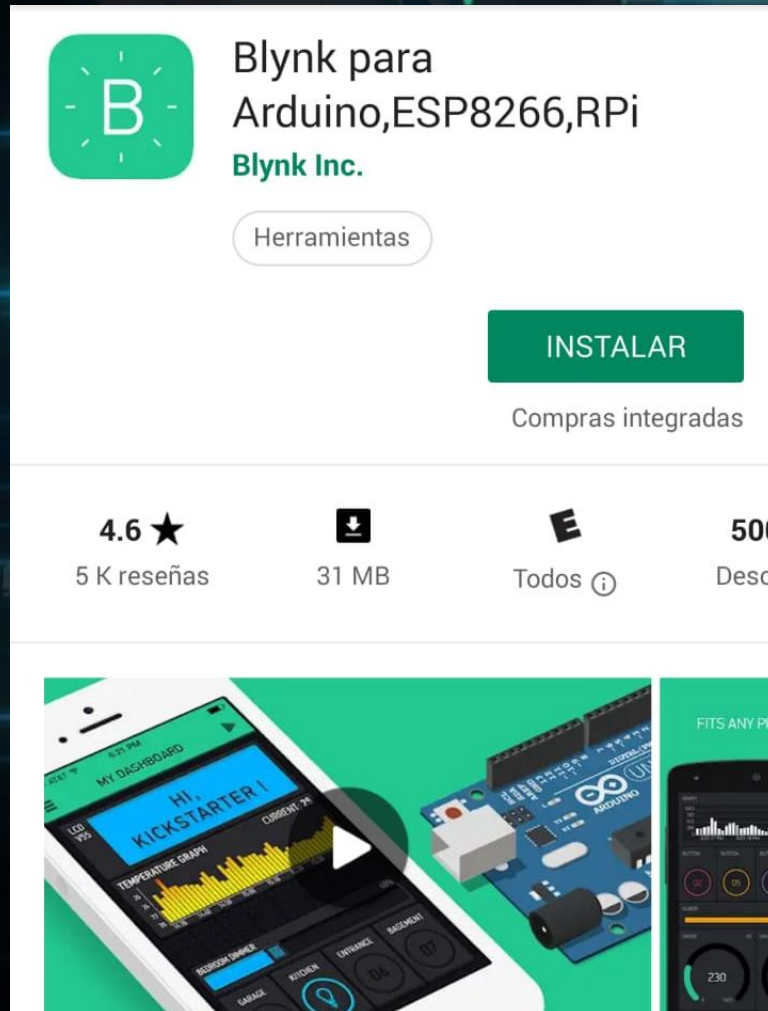
BLYNK

Blynk es una plataforma con aplicaciones iOS y Android que permite controlar ciertos microcontroladores como ser :
Arduino, Raspberry Pi y otros.

ARQUITECTURA DE BLYNK



INSTALACIÓN

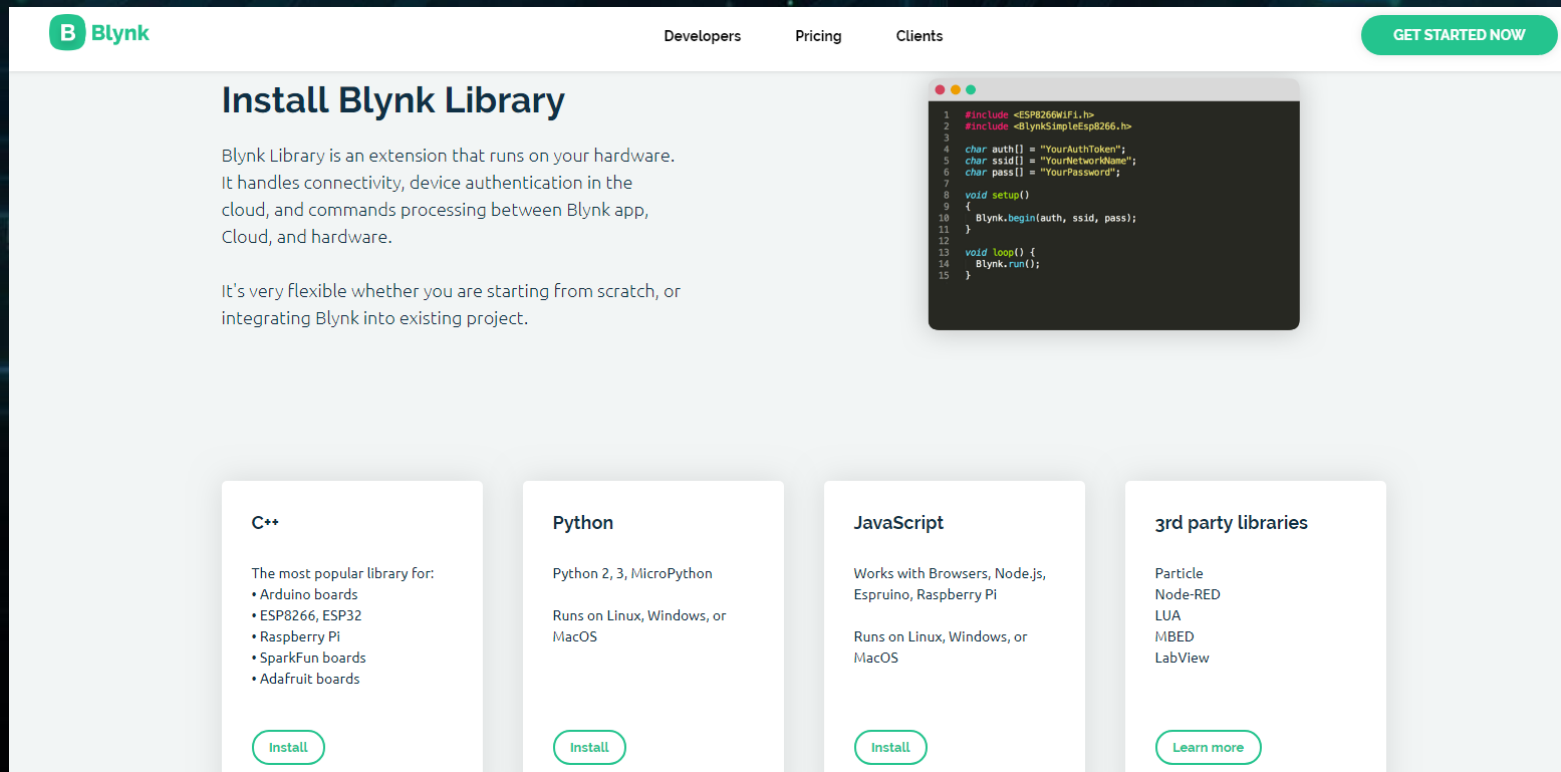


La aplicación
Blynk esta
disponible en
*Play Store y
Apple Store.*

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INSTALACIÓN

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



Blynk Developers Pricing Clients [GET STARTED NOW](#)

Install Blynk Library

Blynk Library is an extension that runs on your hardware. It handles connectivity, device authentication in the cloud, and commands processing between Blynk app, Cloud, and hardware.

It's very flexible whether you are starting from scratch, or integrating Blynk into existing project.

```
1 #include <ESP8266WiFi.h>
2 #include <BlynkSimpleEsp8266.h>
3
4 char auth[] = "YourAuthToken";
5 char ssid[] = "YourNetworkName";
6 char pass[] = "YourPassword";
7
8 void setup()
9 {
10   Blynk.begin(auth, ssid, pass);
11 }
12
13 void loop() {
14   Blynk.run();
15 }
```

C++

The most popular library for:

- Arduino boards
- ESP8266, ESP32
- Raspberry Pi
- SparkFun boards
- Adafruit boards

[Install](#)

Python

Python 2, 3, MicroPython

Runs on Linux, Windows, or MacOS

[Install](#)

JavaScript

Works with Browsers, Node.js, Espruino, Raspberry Pi

Runs on Linux, Windows, or MacOS

[Install](#)

3rd party libraries

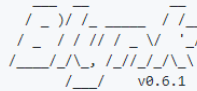
Particle
Node-RED
LUA
MBED
LabView

[Learn more](#)

INSTALACIÓN

v0.6.1
e93fea6

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



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](#)

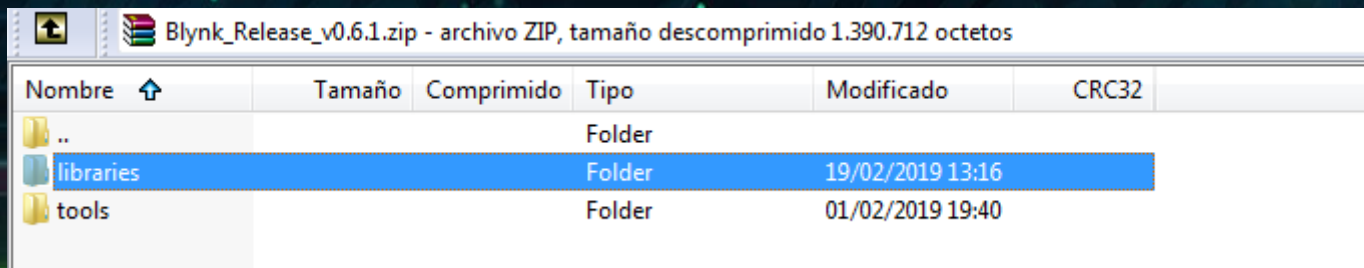
⚡ If you like Blynk, don't forget to give us a github star! ⚡

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.



Blynk_Release_v0.6.1.zip - archivo ZIP, tamaño descomprimido 1.390.712 octetos					
Nombre	Tamaño	Comprimido	Tipo	Modificado	CRC32
..			Folder		
libraries			Folder	19/02/2019 13:16	
tools			Folder	01/02/2019 19:40	

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

HOLA MUNDO BLYNK



Blynk

[Log In](#) | [Create New Account](#)



Log In with Facebook



[Why do I need an account?](#)



Create New Account

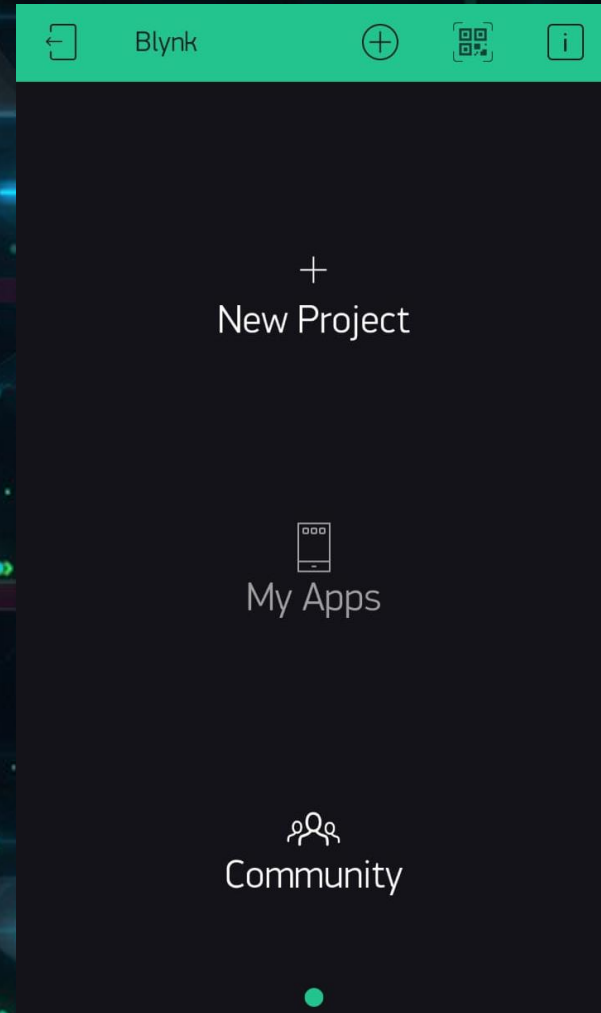
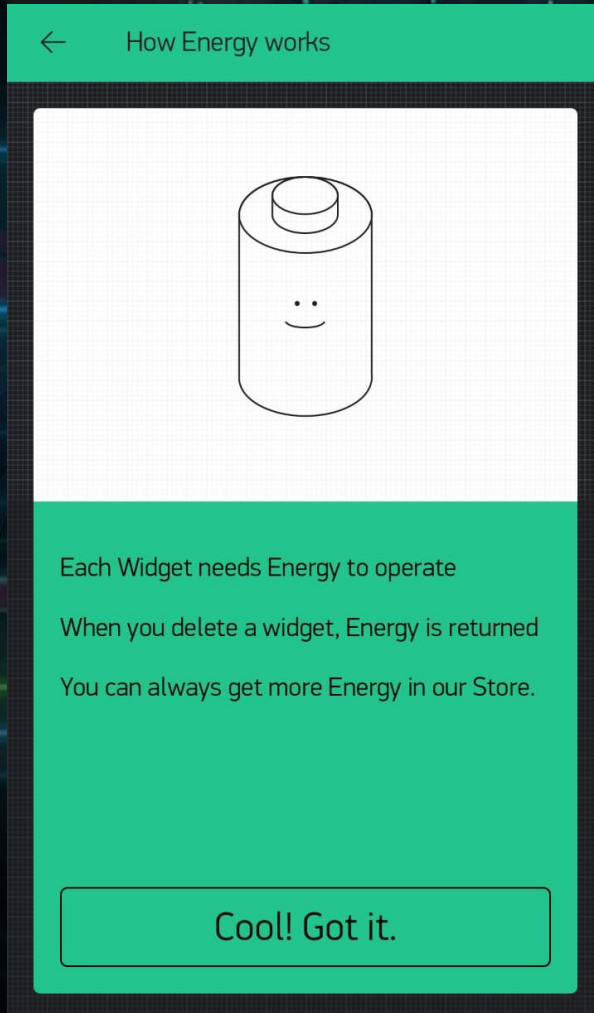
Email

Password

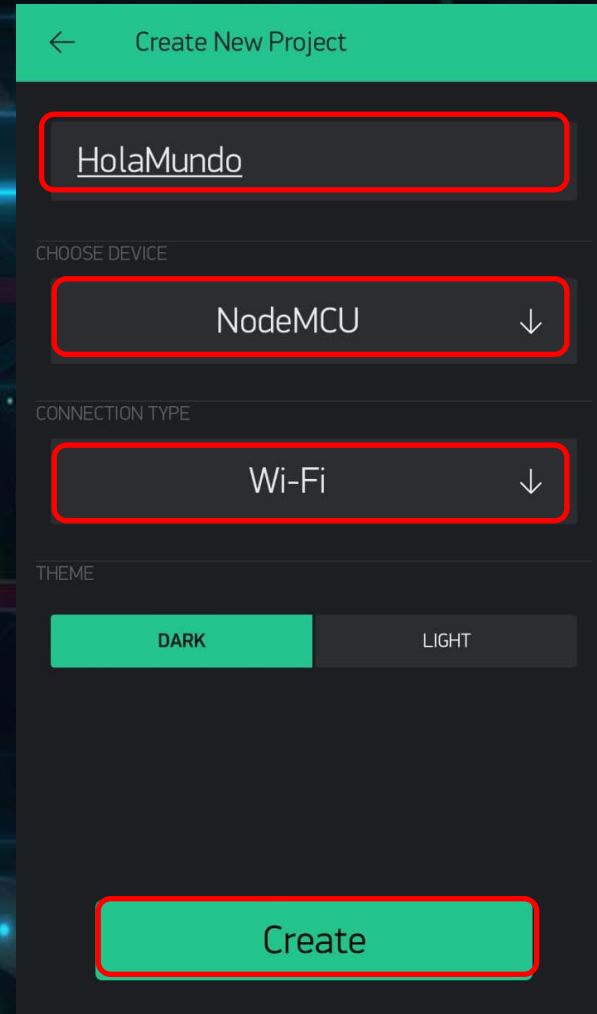
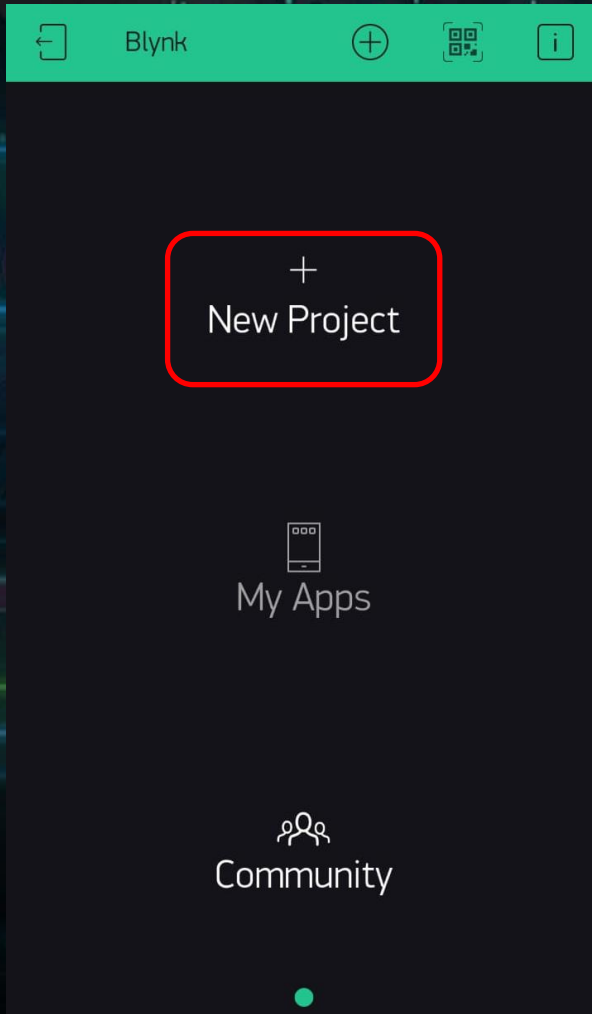


Sign Up

HOLA MUNDO BLYNK



HOLA MUNDO BLYNK




HOLA MUNDO BLYNK



HolaMundo



Auth Token was sent to:
prueba_blynk@gmail.com

You can also find it in  Project Settings

OK



Don't show again

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INFORMATICA

HOLA MUNDO BLYNK

Auth Token for HolaMundo project and device HolaMundo

Blynk <dispatcher@blynk.io> [Cancelar suscripción](#)
para mí ▼

🌐 inglés ▼ > español ▼ [Traducir mensaje](#)

Auth Token d27caeb15 28

Happy Blynking!

-

Getting Started Guide -> <https://www.blynk.cc/getting-started>

Documentation -> <http://docs.blynk.cc/>

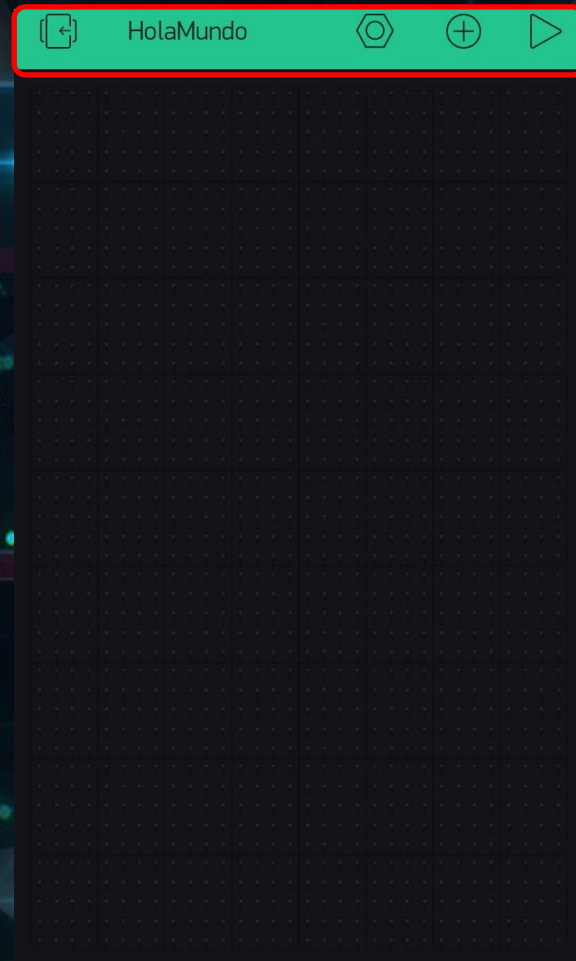
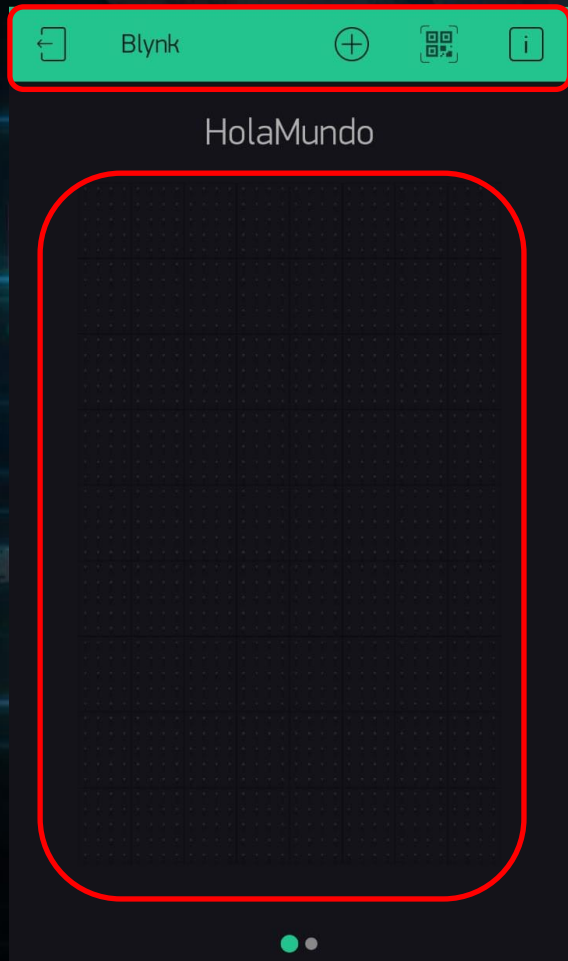
Sketch generator -> <https://examples.blynk.cc/>

Latest Blynk library -> https://github.com/blynkkk/blynk-library/releases/download/v0.6.1/Blynk_Release_v0.6.1.zip

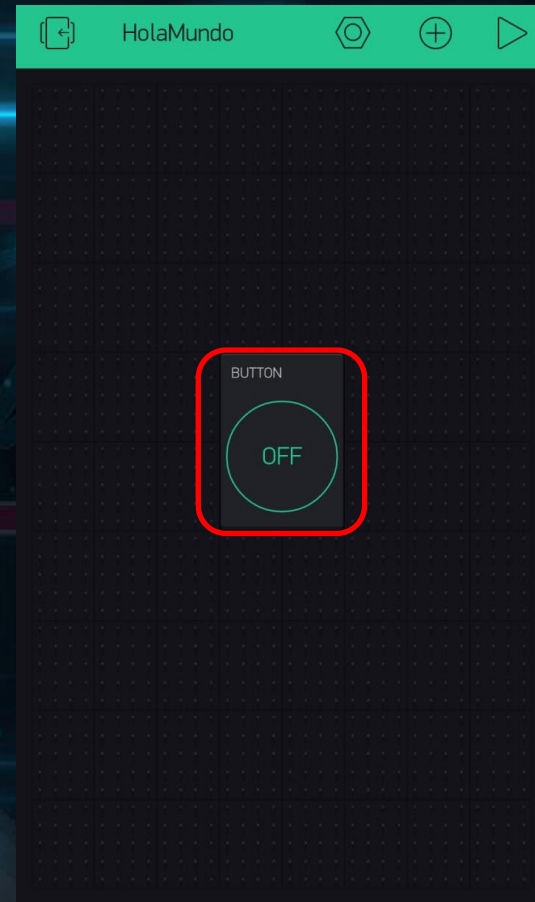
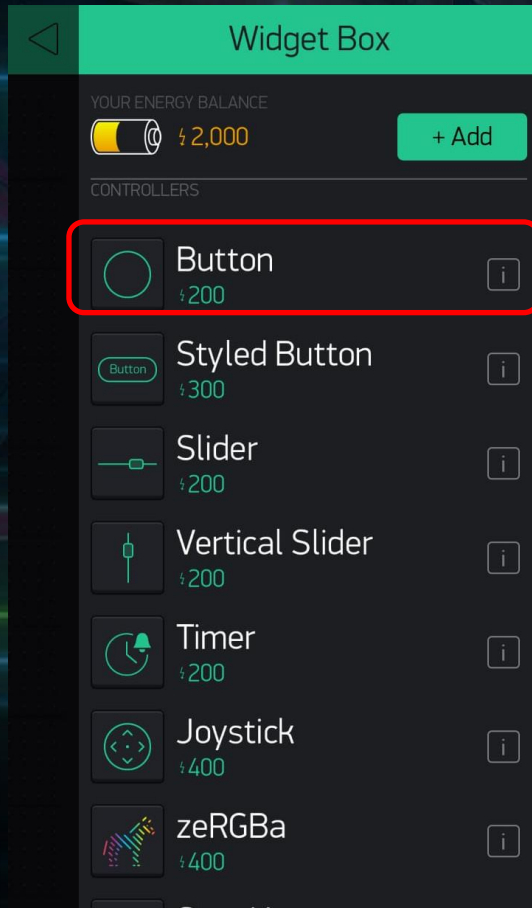
Latest Blynk server -> <https://github.com/blynkkk/blynk-server/releases/download/v0.41.5/server-0.41.5.jar>

-



HOLA MUNDO BLYNK

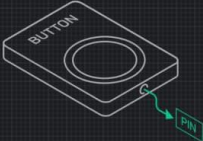


HOLA MUNDO BLYNK



HOLA MUNDO BLYNK

 Button Settings 



Button

OUTPUT

PIN

0

1

MODE

PUSH

☒



SWITCH


ON/OFF LABELS

OFF

ON

DESIGN

 Button Settings 



LedRojo

OUTPUT

Select pin

OK

Digital

Analog

Virtual

PIN

D0

D1

D2

D3

D4

PWM

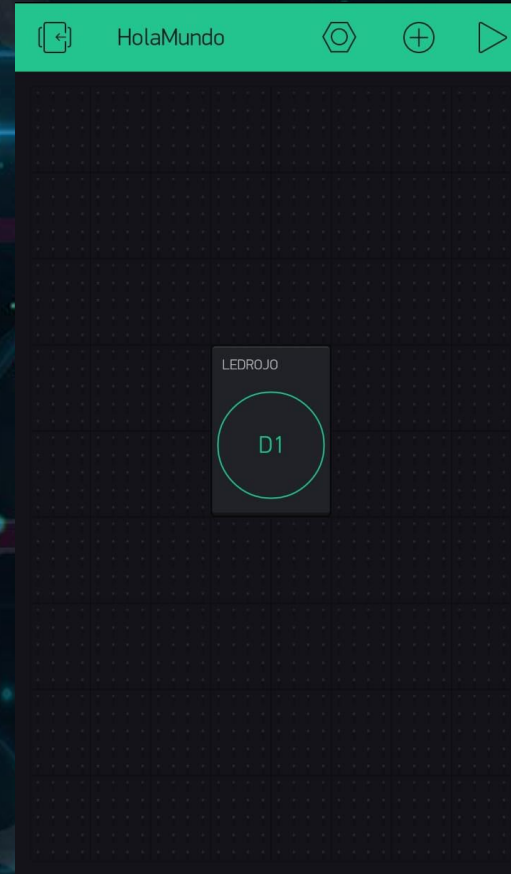
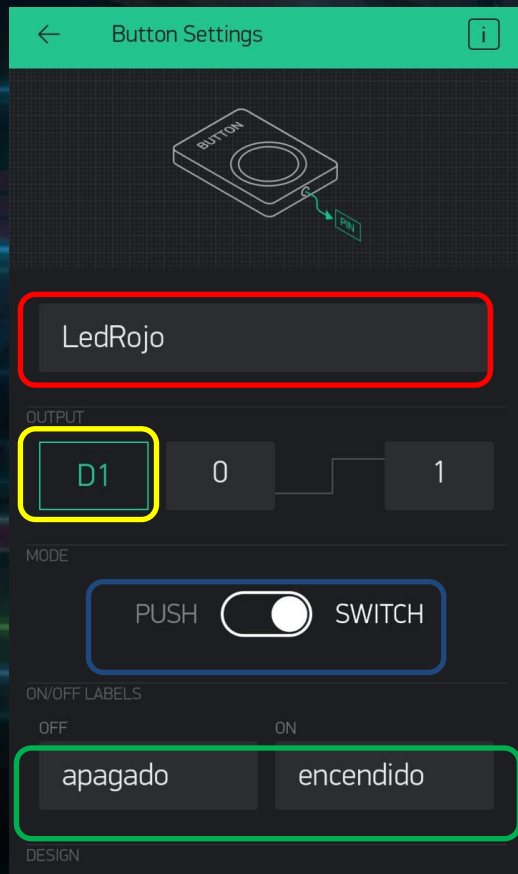
PWM

PWM

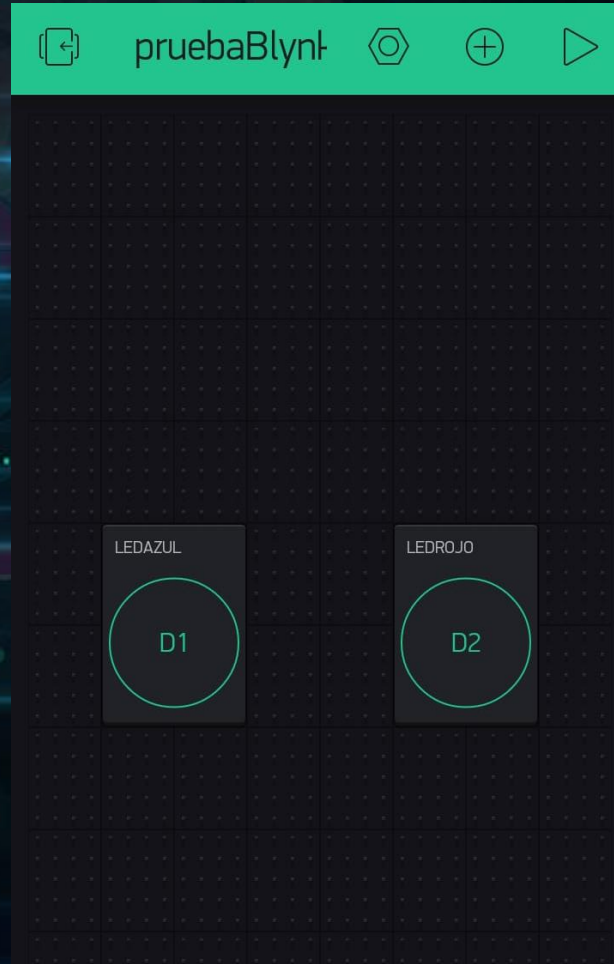
PWM

PWM

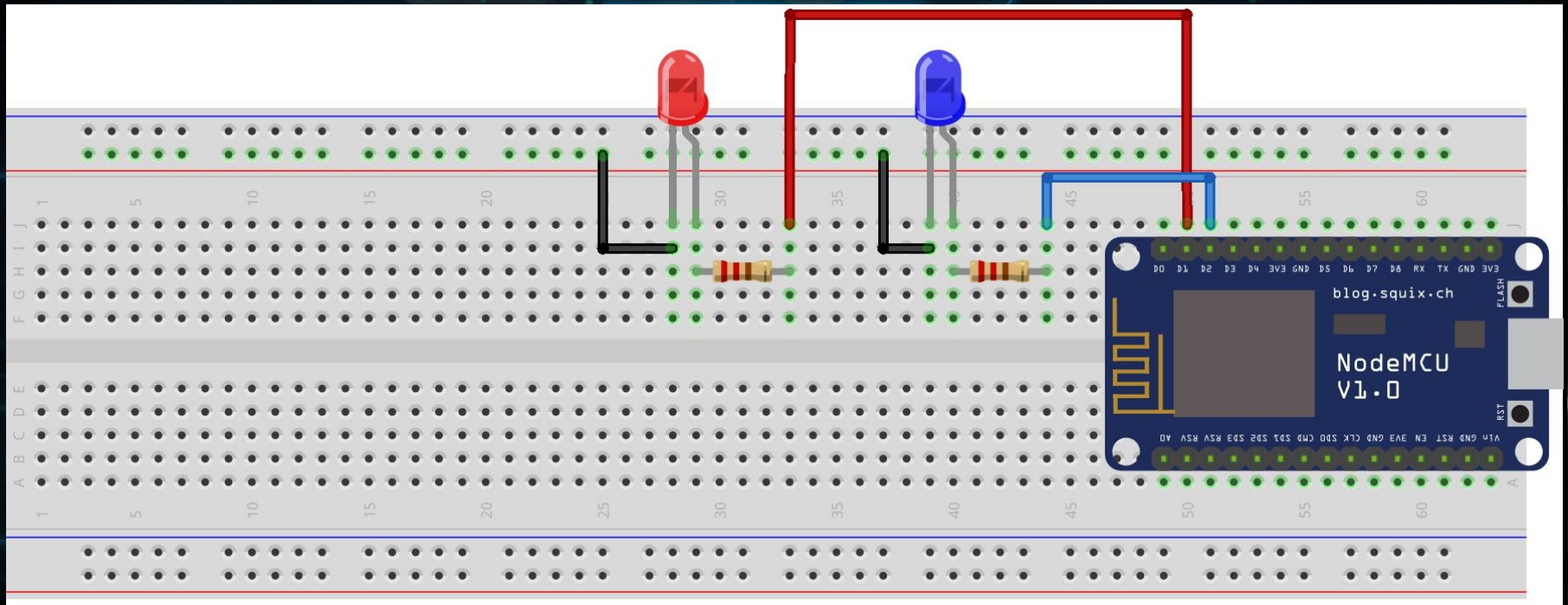
HOLA MUNDO BLYNK



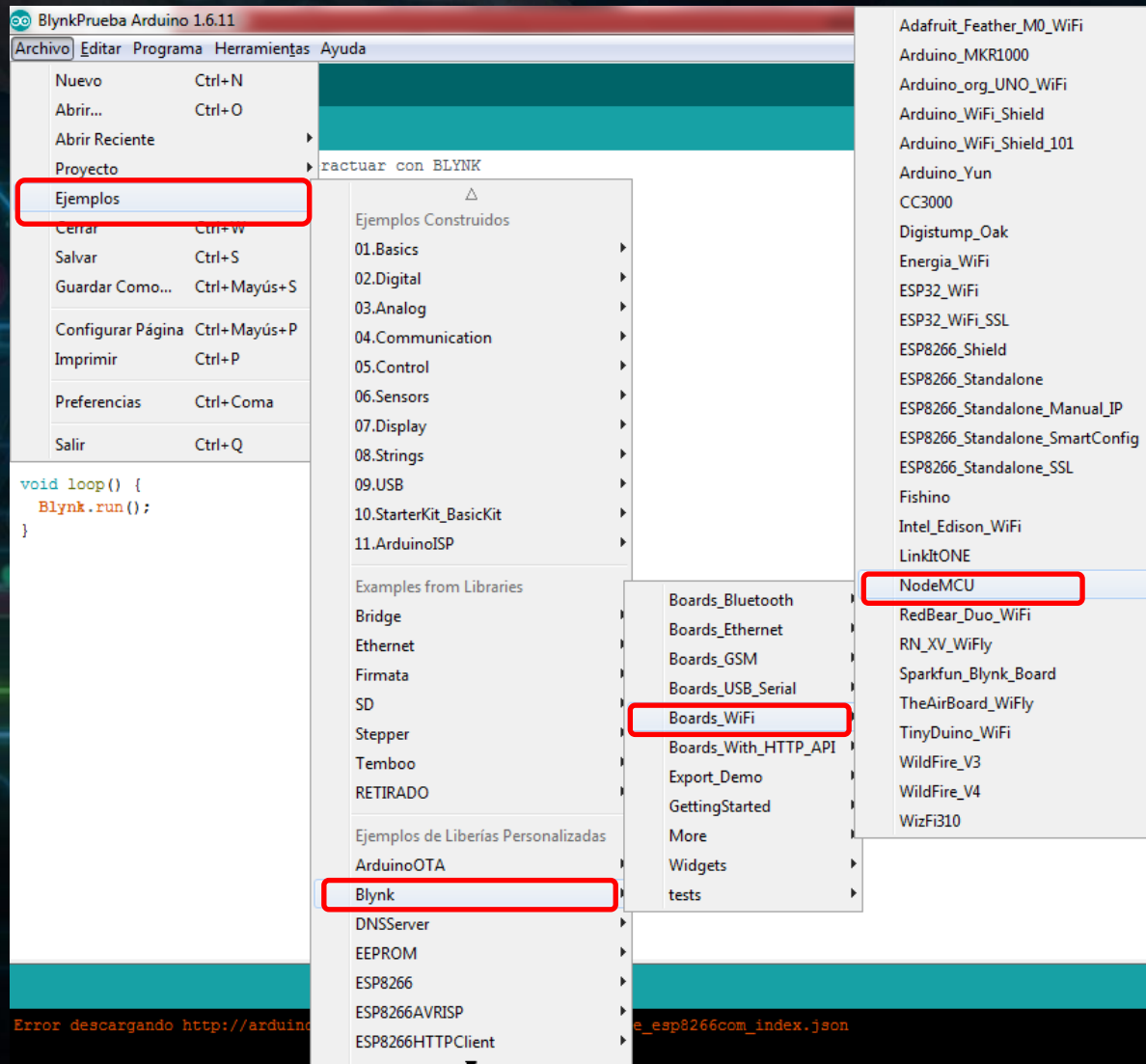
TAREA BLYNK



ESQUEMA



ESQUEMA



Archivo > Ejemplos > Blynk > Boards_WiFi > Nodemcu

CÓDIGO BLYNK

```
Archivo  Editar  Programa  Herramientas  Ayuda

✓ → 📄 ⬆ ⬇

NodeMCU §

#define BLYNK_PRINT Serial

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

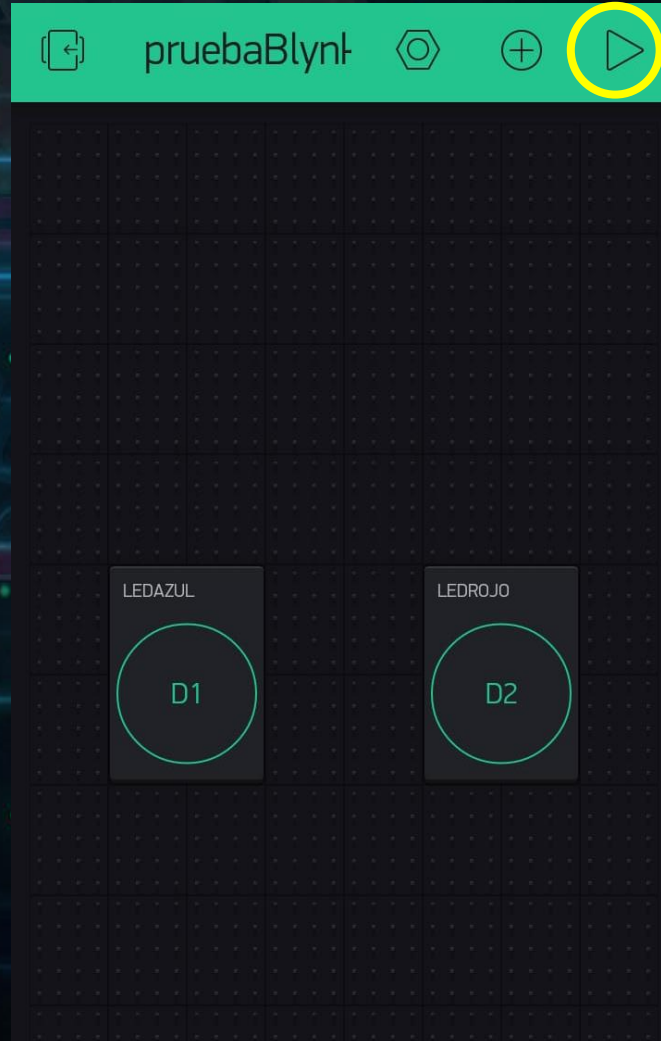
char auth[] = "COPIAR_EL_TOKEN_GENERADO";

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

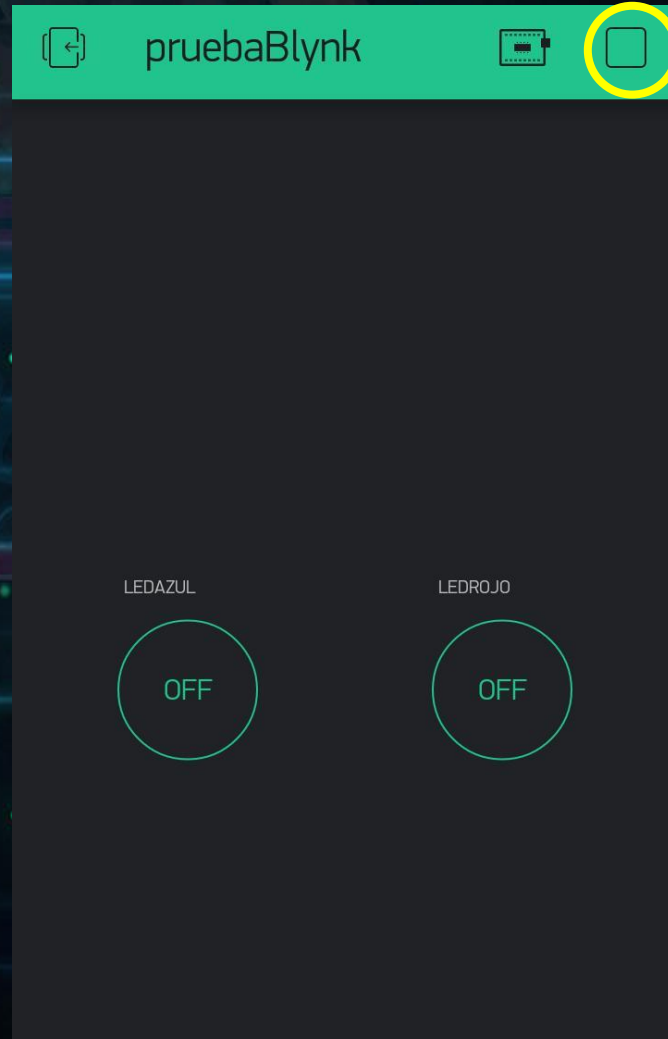
void setup()
{
  Serial.begin(115200);
  Blynk.begin(auth, ssid, pass);
}

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

HOLA MUNDO BLYNK



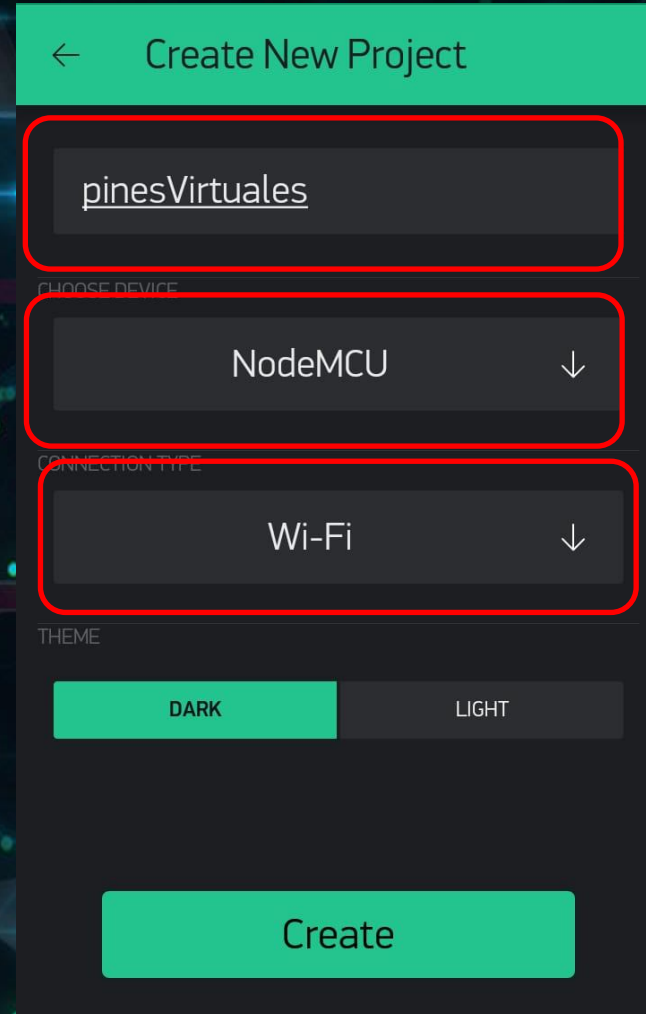
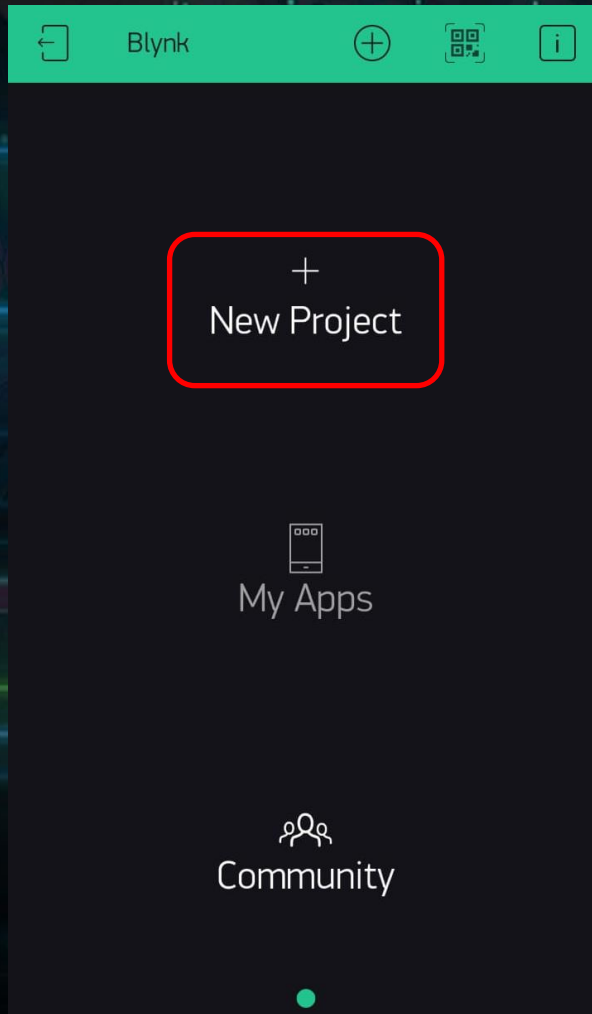
HOLA MUNDO BLYNK



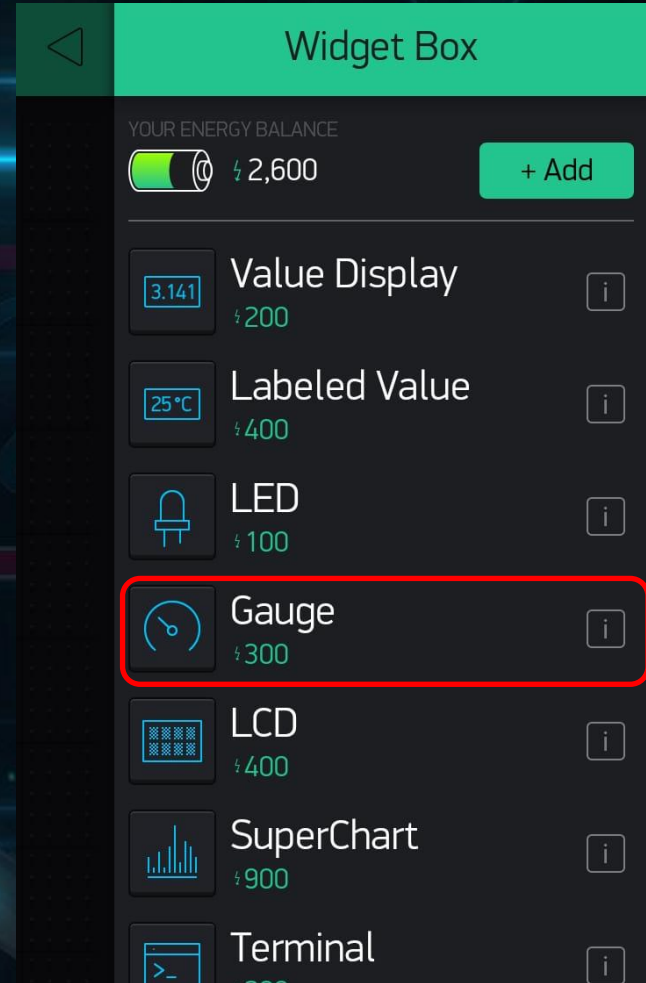
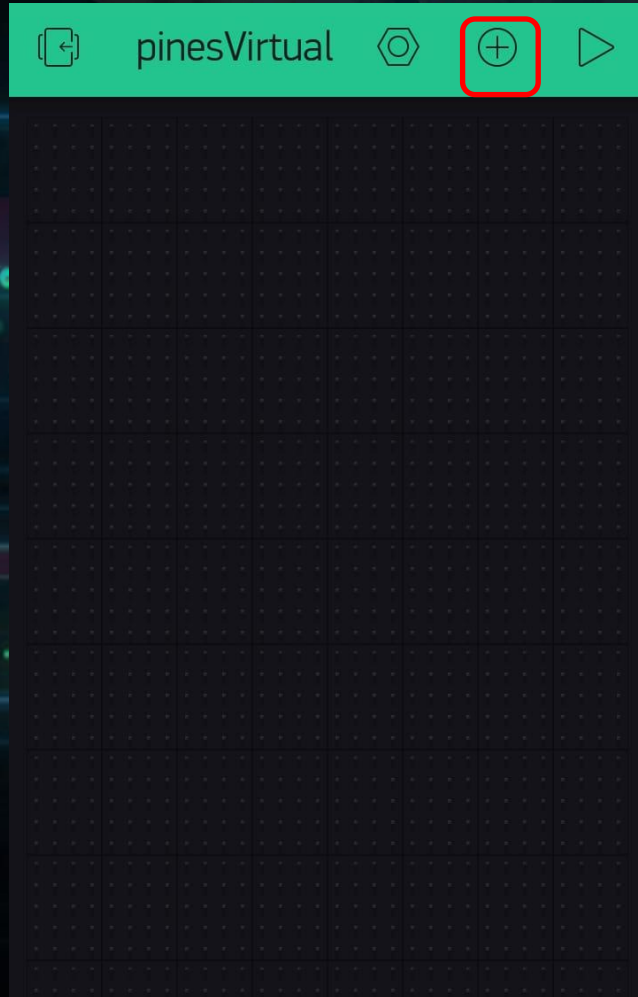
PINES VIRTUALES BLYNK

Los pines virtuales son canales para enviar datos. Estos pines no tienen una representación física.

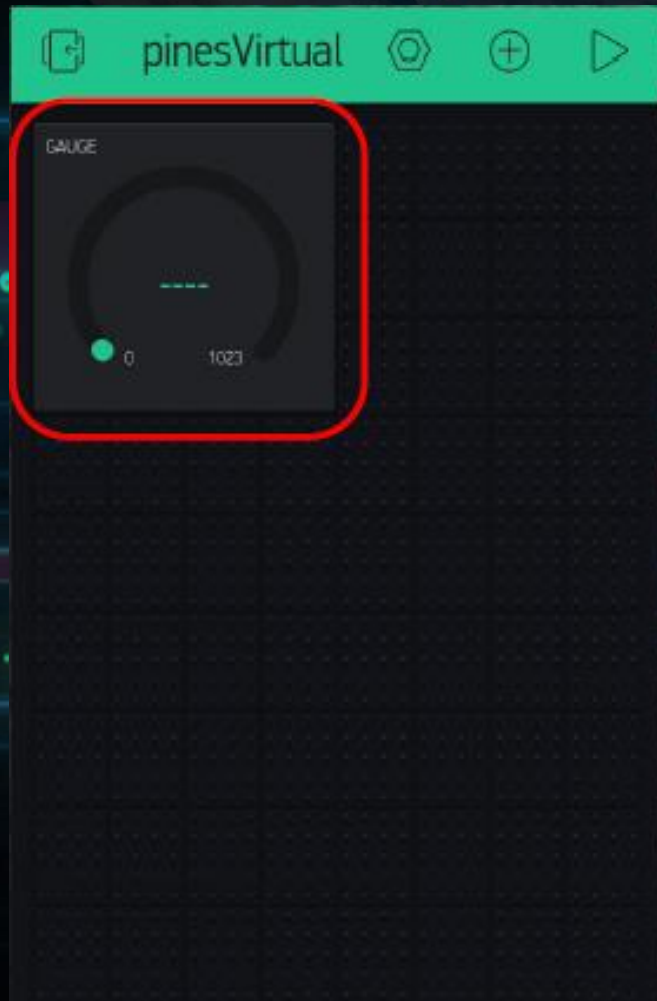
PINES VIRTUALES BLYNK



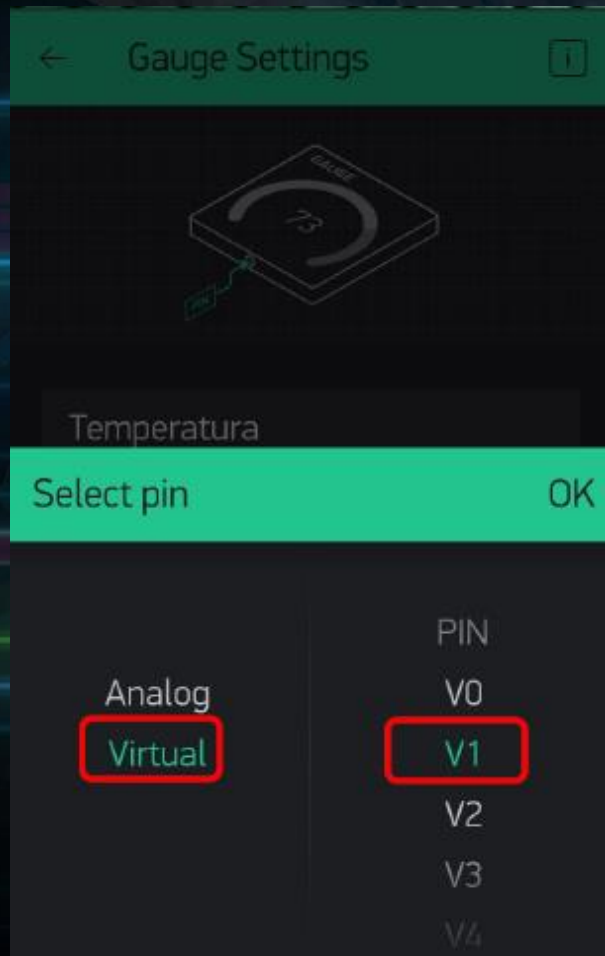
PINES VIRTUALES BLYNK



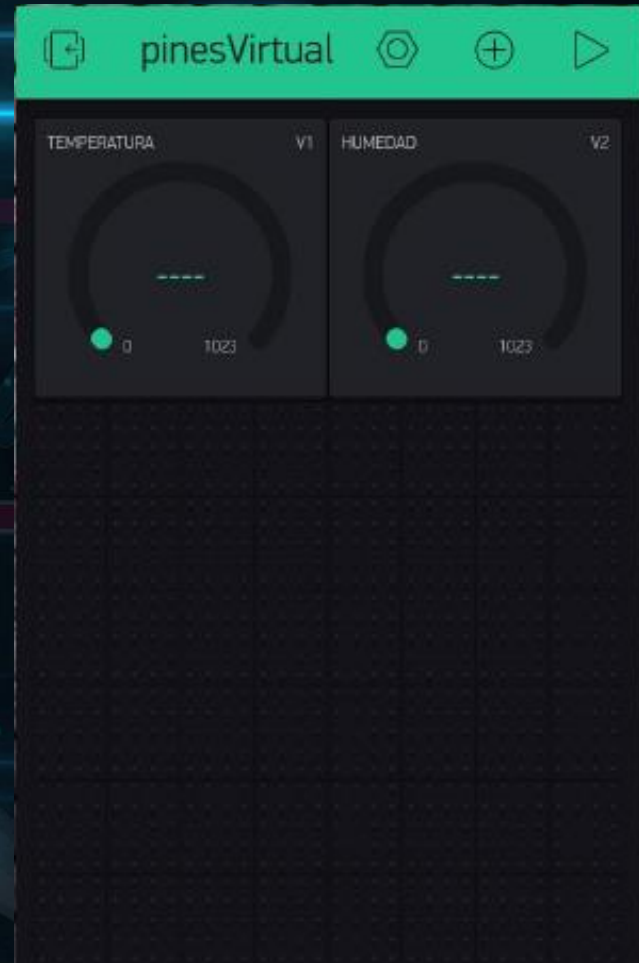
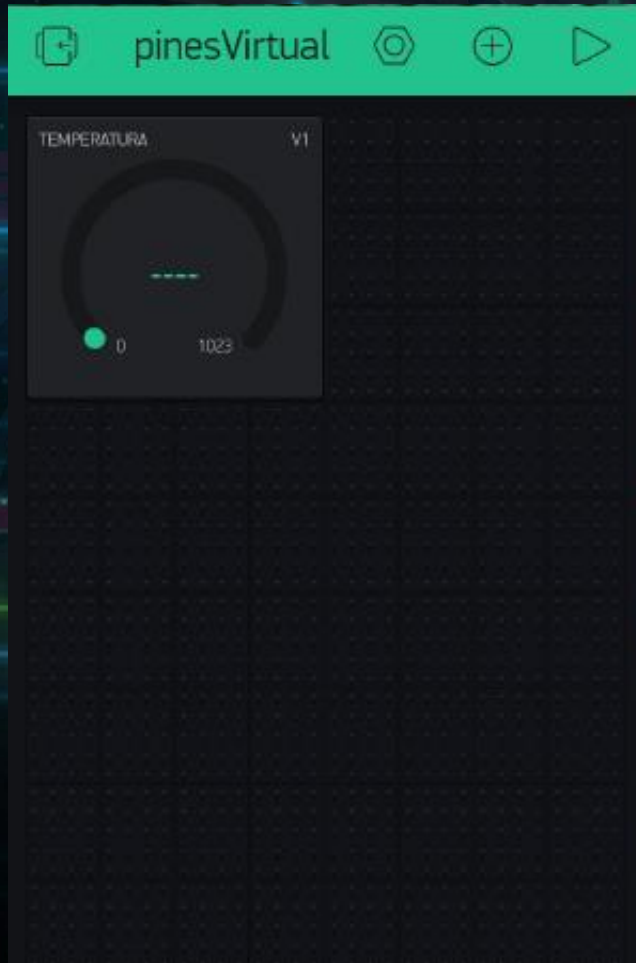
PINES VIRTUALES BLYNK



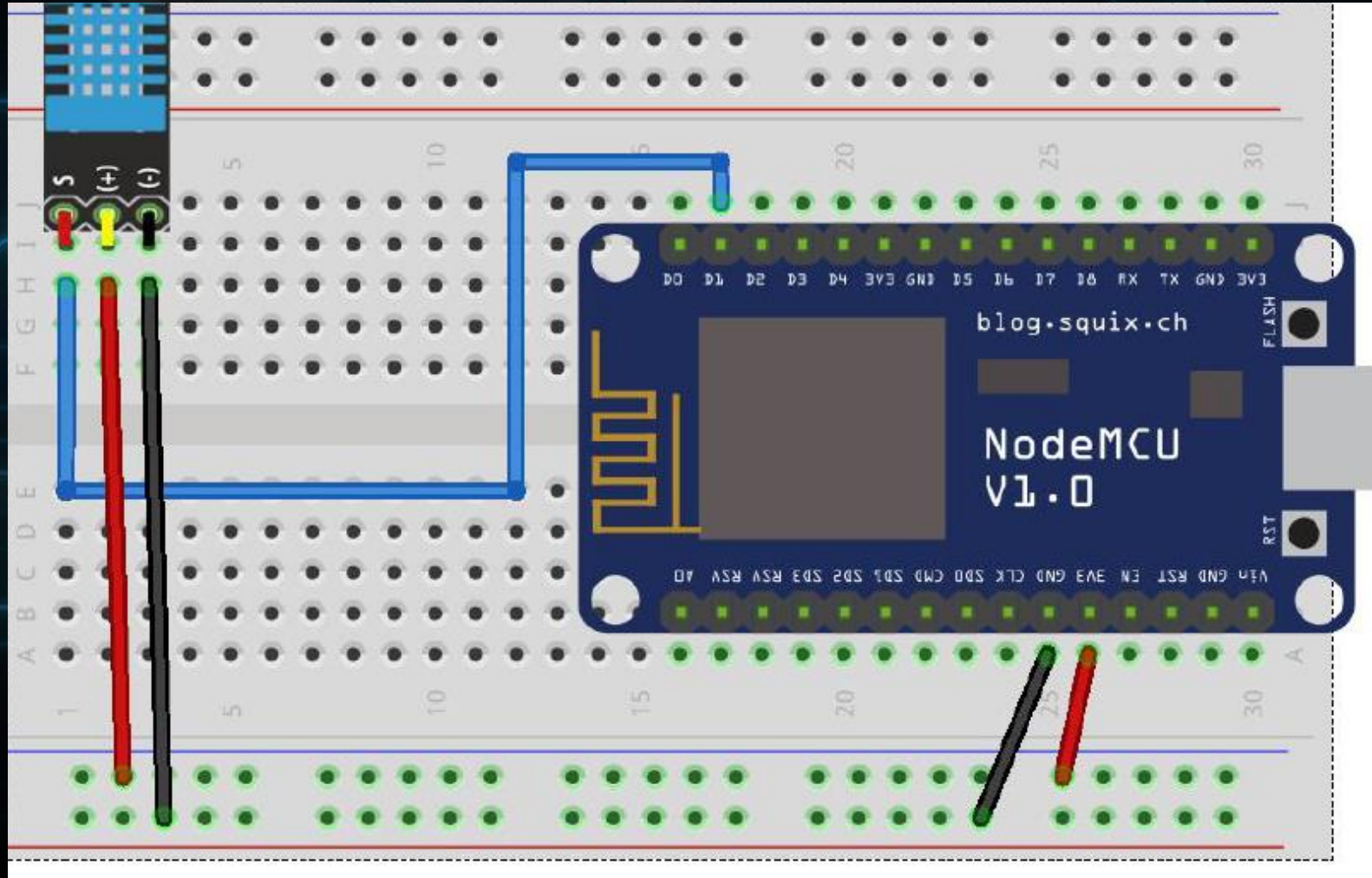
PINES VIRTUALES BLYNK



PINES VIRTUALES BLYNK



PINES VIRTUALES BLYNK



CÓDIGO PINES VIRTUALES BLYNK

pruebaDhtBlynk

```
#define BLYNK_PRINT Serial
#include <ESP8266WiFi.h>
#include <BlynkSimpleEsp8266.h>
#include <ESP8266WiFi.h>
#include <DHT.h>
#define DHTPIN D4 //pin donde conectamos el sensor
#define DHTTYPE DHT22 // iniciamos el dht11
DHT dht(DHTPIN, DHTTYPE);

const char auth[]="6c                                ";
const char* ssid ="                                "; //red WiFi
const char* pass="                                "; //contraseña de la red WiFi

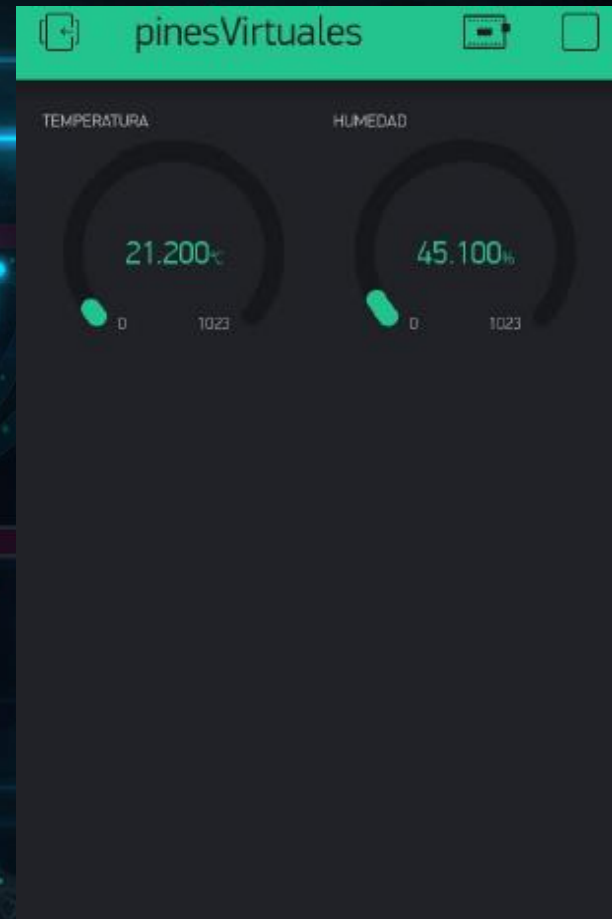
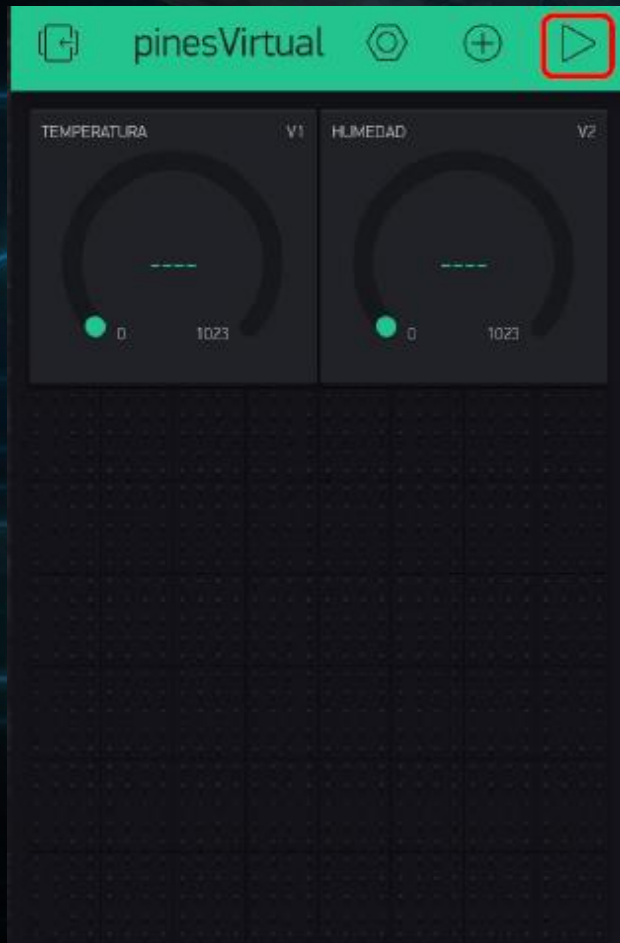
void setup() {
  // put your setup code here, to run once:
  Serial.begin(115200);
  dht.begin();
  Blynk.begin(auth,ssid,pass);
}
```

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CÓDIGO PINES VIRTUALES BLYNK


```
void loop() {  
    // put your main code here, to run repeatedly:  
    // lectura del sensor de temperatura y humedad  
    float t=dht.readTemperature();  
    float h=dht.readHumidity();  
  
    Blynk.virtualWrite(V1,t);  
    Blynk.virtualWrite(V2,h);  
  
    Serial.println("Temperatura : ");  
    Serial.println(t);  
    Serial.println("Humedad: ");  
    Serial.println(h);  
}
```


PINES VIRTUALES BLYNK



PINES VIRTUALES BLYNK

← Gauge Settings ⓘ



Temperatura

INPUT

V1 0 60

LABEL

/pin/°C

DESIGN

FONT SIZE T T T

TEXT

← Gauge Settings ⓘ



Humedad

INPUT

V2 10 100

LABEL

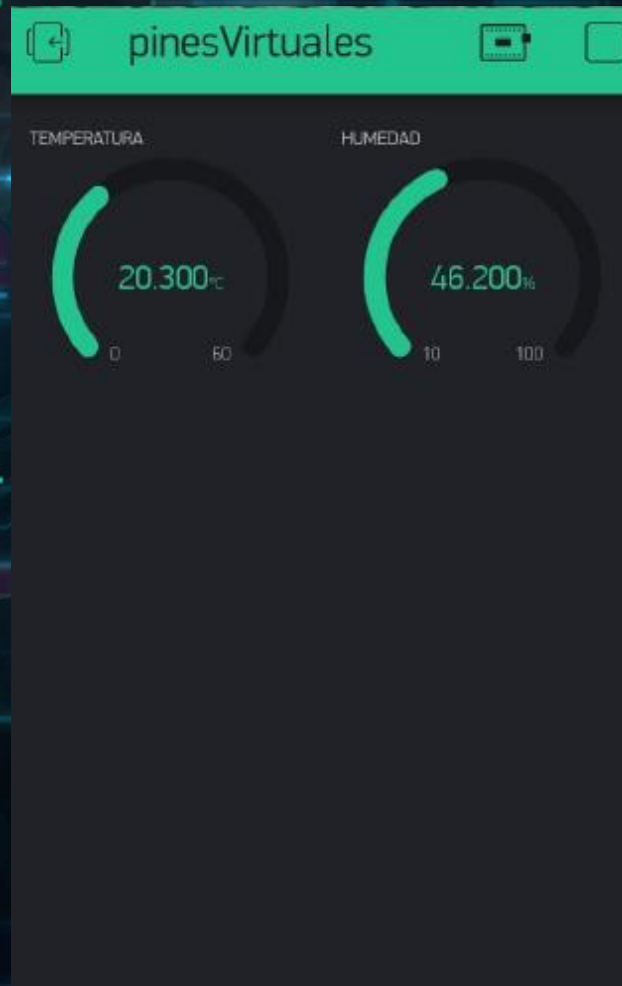
/pin/%

DESIGN

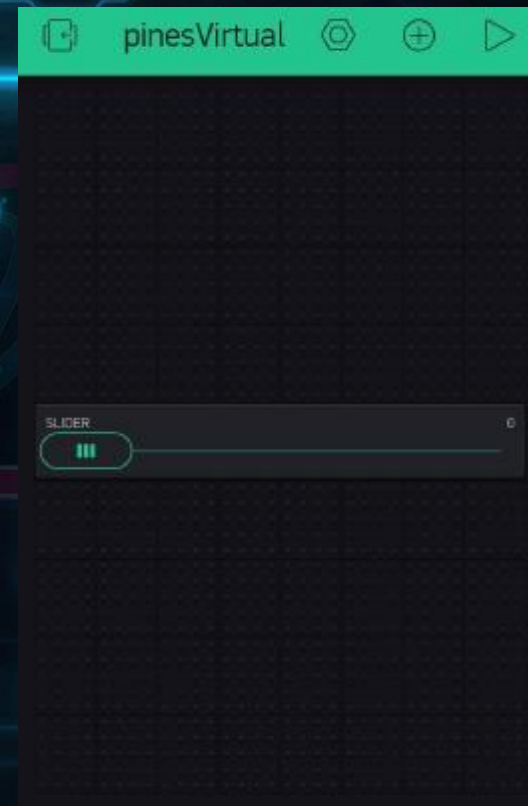
FONT SIZE T T T

TEXT

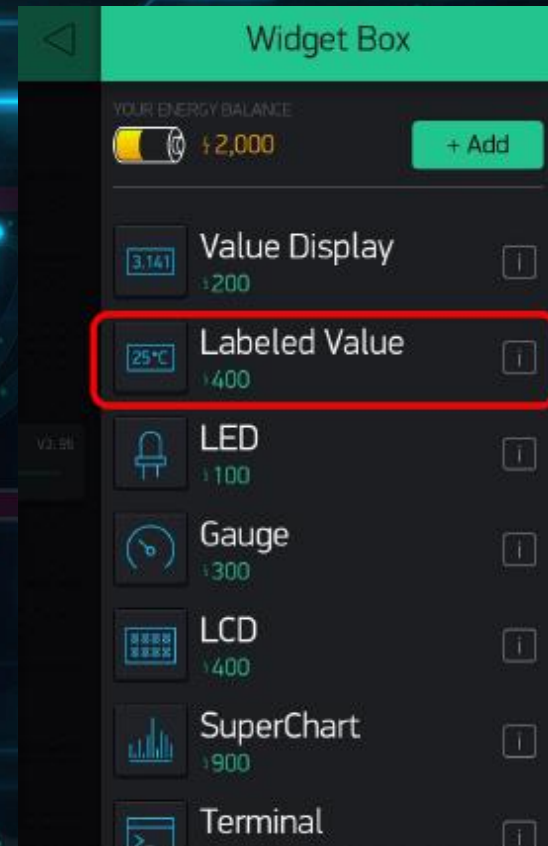
PINES VIRTUALES BLYNK



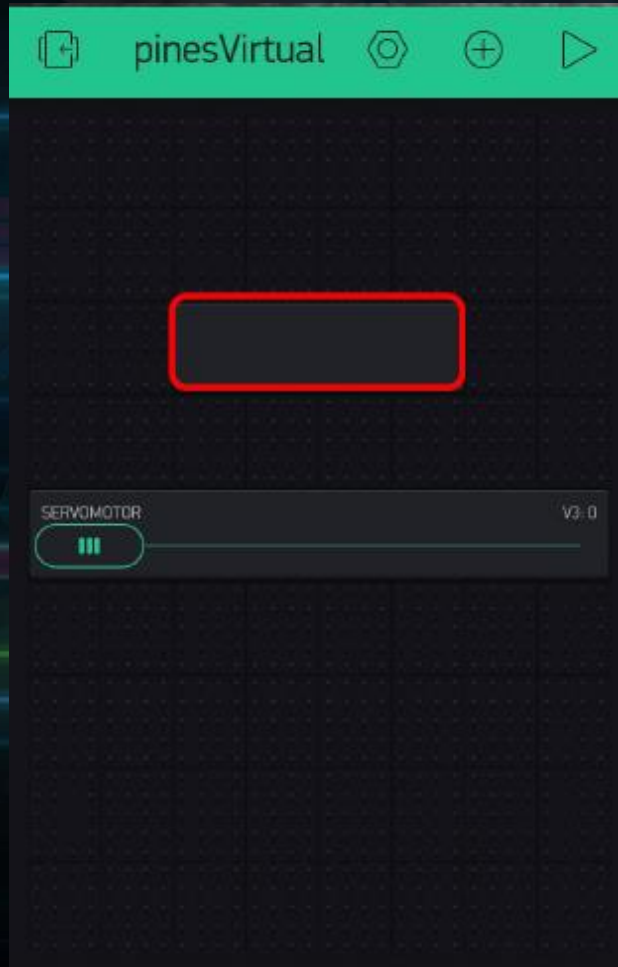
SERVOMOTOR - BLYNK



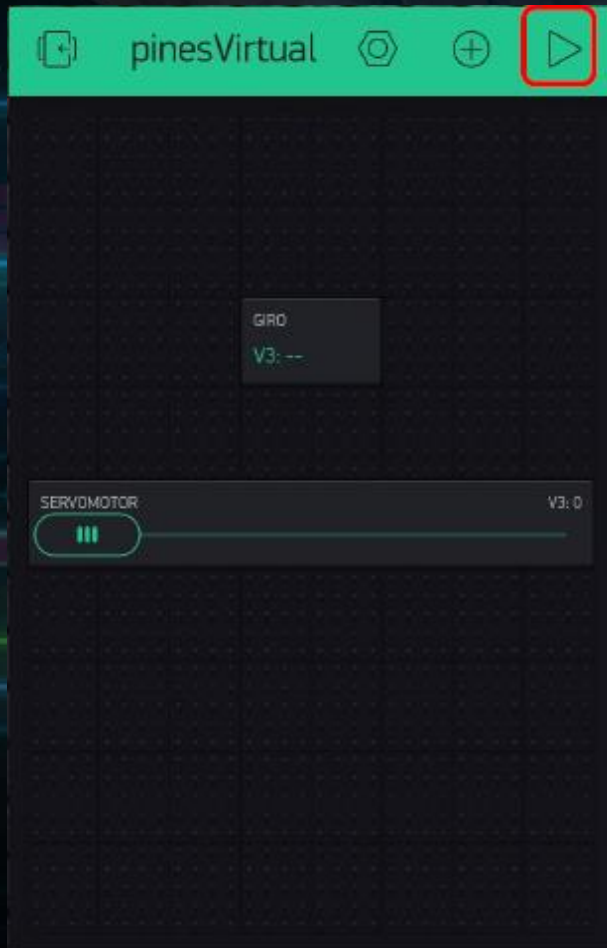
SERVOMOTOR - BLYNK



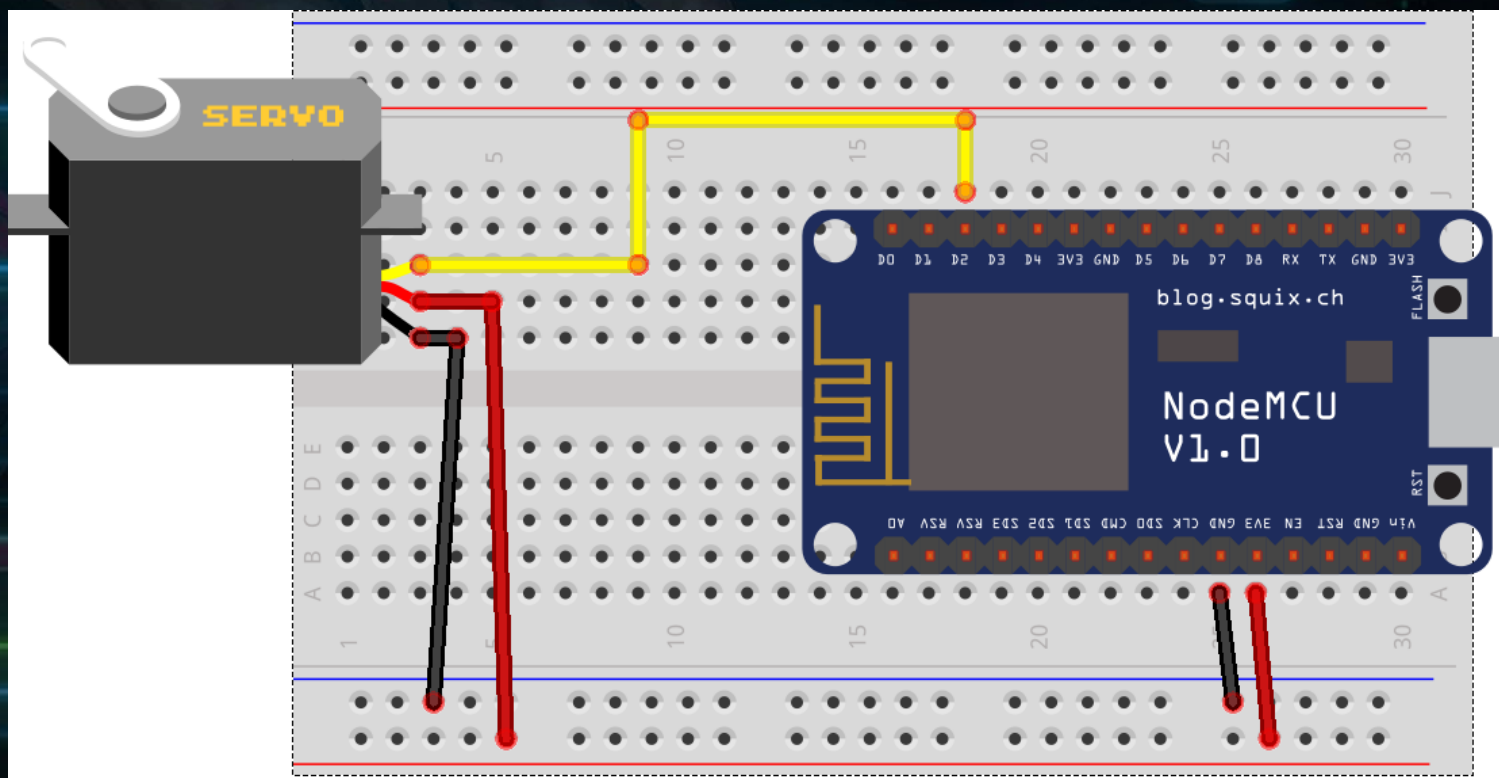
SERVOMOTOR - BLYNK



SERVOMOTOR - BLYNK



ESQUEMA



CÓDIGO SERVOMOTOR BLYNK

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

Servo servo;

const char auth[]="6dc555cca93642258e375dd44d931e11";
const char* ssid ="ZTE-bdb669";//red WiFi
const char* pass="ec8a4cbd";//contraseña de la red WiFi

void setup() {
    // put your setup code here, to run once:
    Serial.begin(115200);
    Blynk.begin(auth,ssid,pass);
    servo.attach(D2);
}

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

BLYNK_WRITE(V3) {
    servo.write(param.asInt());
}
```

BONUS

- Manejo de notificaciones (email).
- Manejo de notificaciones (alarma).

A digital-themed background featuring a dark blue space with glowing blue and green circuit lines and particles. In the upper left, a human hand reaches down. In the lower right, a grey robotic hand reaches up. The word 'BOLIVIA' is written in a stylized, semi-transparent font in the upper left. The word 'GRACIAS' is prominently displayed in the center in a large, white, serif font. In the bottom right corner, there is a logo for 'MAKERS INFORMATICA' with a red 'The' above it.

BOLIVIA

GRACIAS

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