1. Baixar a biblioteca no git

Download latest Blynk library here:
   https://github.com/blynkkk/blynk-library/releases/latest

extrair arquivo e para adicionar na IDE do Arduino ir para pasta libraries/blynk

2. Instalar o aplicativo no seu celular

  Blynk is a platform with iOS and Android apps to control
  Arduino, Raspberry Pi and the likes over the Internet.
  You can easily build graphic interfaces for all your
  projects by simply dragging and dropping widgets.

Voce tem vários opções com o Blynk. Usar localmente com USB, usar com Bluetooth, usar com modulo Ethernet, usar com NodeMCU.

3. Ir no docs e fazer piscar um led no nodeMCU

    Downloads, docs, tutorials: http://www.blynk.cc
    Sketch generator:        http://examples.blynk.cc
    Blynk community:         http://community.blynk.cc
    Social networks:         http://www.fb.com/blynkapp
                      http://twitter.com/blynk_app

Voce pode abrir o exemplo nodemcu dentro das boards_wifi. Inserir seu token e a configuracao do seu wifi local.
No aplicativo, criar um device como o nome por exemplo nodemcu, no projeto settings, enviar o email com o token no icone da "porca hexagonal", criar um botão , usar o D4.

Pode enviar email ou twitter , com o blink… existem muitas opções.

No caso do blynk com USB deve usar o software
sudo apt-get install socat
cd Arduino/libraries/Blynk/scripts/
./blynk-ser.sh

EXERCICIOS

1. Controlar o led 13  no UNO com USB
2. Controlar o led 13  no UNO com Ethernet
3. Controlar o Led do NodeMCU
4. Controlar um led e ler um  sensor DHT ou Ultrasonico no UNO com USB, Ethernet e NodeMCU
5. Enviar um email ou sms com um limite do SENSOR
6. Enviar um valor para ajustar o limite do sensor usando o Blynk.

Abaixo alguns exemplos da Biblioteca.

# Blynk com ethernet

```cpp
#define BLYNK_PRINT Serial


#include <SPI.h>
#include <Ethernet.h>
#include <BlynkSimpleEthernet.h>

// You should get Auth Token in the Blynk App.
// Go to the Project Settings (nut icon).
char auth[] = "YourAuthToken";

#define W5100_CS  10
#define SDCARD_CS 4

void setup()
{
  // Debug console
  Serial.begin(9600);

  pinMode(SDCARD_CS, OUTPUT);
  digitalWrite(SDCARD_CS, HIGH); // Deselect the SD card

  Blynk.begin(auth);
  // You can also specify server:
  //Blynk.begin(auth, "blynk-cloud.com", 8442);
  //Blynk.begin(auth, IPAddress(192,168,1,100), 8442);
  // For more options, see Boards_Ethernet/Arduino_Ethernet_Manual example
}

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

Para adicionar um acelerometro do Celular ao Arduino

```cpp
 setup()
….
BLYNK_WRITE(V0) {
    int x = param[0].asFloat();
    Serial.print("x =");
    Serial.println(x);

  }

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

**Blynk com USB**

```
/* Comment this out to disable prints and save space */
#define BLYNK_PRINT DebugSerial
// You could use a spare Hardware Serial on boards that have it (like Mega)
#include <SoftwareSerial.h>
SoftwareSerial DebugSerial(2, 3); // RX, TX

#include <BlynkSimpleStream.h>

// You should get Auth Token in the Blynk App.
// Go to the Project Settings (nut icon).
char auth[] = "3db38f13c8274b2c87eee83356d13e99";

void setup()
{
  // Debug console
  DebugSerial.begin(9600);

  // Blynk will work through Serial
  // Do not read or write this serial manually in your sketch
  Serial.begin(9600);
  Blynk.begin(Serial, auth);

}

void loop()
{
  Blynk.run();

}
```

Adicionando o Sensor DHT

```
/* Comment this out to disable prints and save space */
#define BLYNK_PRINT DebugSerial


// You could use a spare Hardware Serial on boards that have it (like Mega)
#include <SoftwareSerial.h>
SoftwareSerial DebugSerial(2, 3); // RX, TX

#include <BlynkSimpleStream.h>
#include <DHT.h>

// You should get Auth Token in the Blynk App.
// Go to the Project Settings (nut icon).
char auth[] = "3db38f13c8274b2c87eee83356d13e99";

#define DHTPIN 2          // What digital pin we're connected to

// Uncomment whatever type you're using!
//#define DHTTYPE DHT11     // DHT 11
#define DHTTYPE DHT22   // DHT 22, AM2302, AM2321
//#define DHTTYPE DHT21   // DHT 21, AM2301
```

```
DHT dht(DHTPIN, DHTTYPE);
BlynkTimer timer;



// This function sends Arduino's up time every second to Virtual Pin (5).
// In the app, Widget's reading frequency should be set to PUSH. This means
// that you define how often to send data to Blynk App.
void sendSensor()
{
  float h = dht.readHumidity();
  float t = dht.readTemperature(); // or dht.readTemperature(true) for Fahrenheit

  if (isnan(h) || isnan(t)) {
    Serial.println("Failed to read from DHT sensor!");
    return;
  }
  // You can send any value at any time.
  // Please don't send more that 10 values per second.
  Blynk.virtualWrite(V5, h);
  Blynk.virtualWrite(V6, t);
}



void setup()
{
  // Debug console
  DebugSerial.begin(9600);

  // Blynk will work through Serial
  // Do not read or write this serial manually in your sketch
  Serial.begin(9600);
  Blynk.begin(Serial, auth);
    dht.begin();

  // Setup a function to be called every second
  timer.setInterval(1000L, sendSensor);

}

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

}
```