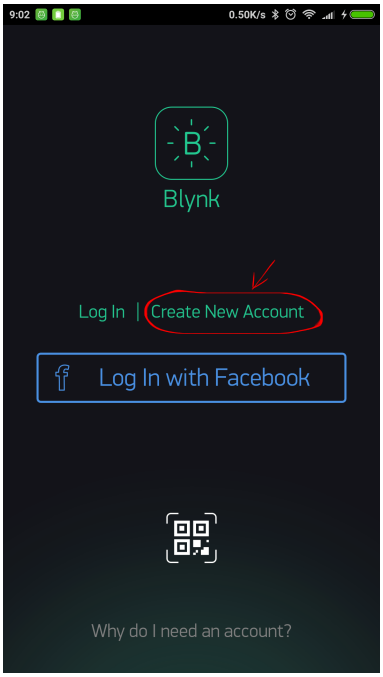
Internet of Plant"IoP" by (Cairo hackerspace)

Download Blynk App for Android or iOS

Blynk for Android "https://play.google.com/store/apps/details?id=cc.blynk"

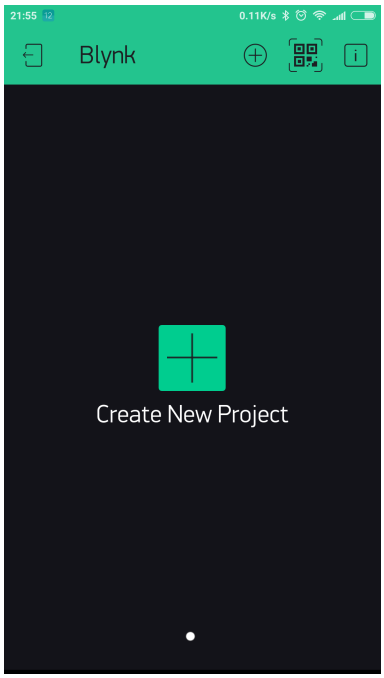
Blynk for iPhone "https://itunes.apple.com/us/app/blynk-control-arduino-raspberry/id808760481?ls=1&mt=8"



Getting Started With The Blynk App

1. Create a Blynk Account

After you download the Blynk App, you'll need to create a New Blynk account.

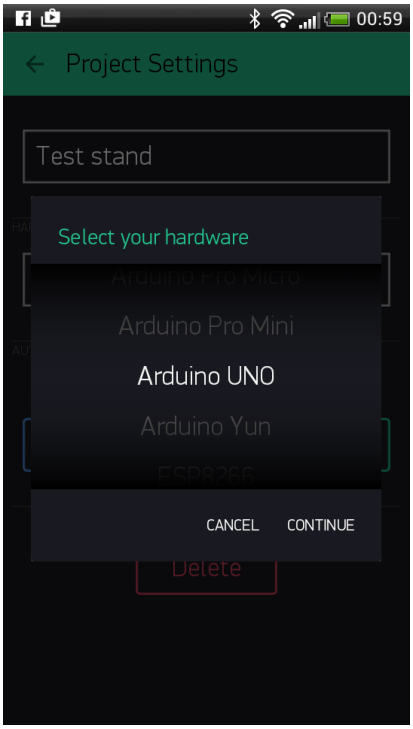


2. Create a New Project

After you've successfully logged into your account, start by creating a new project.

3. Choose Your Hardware

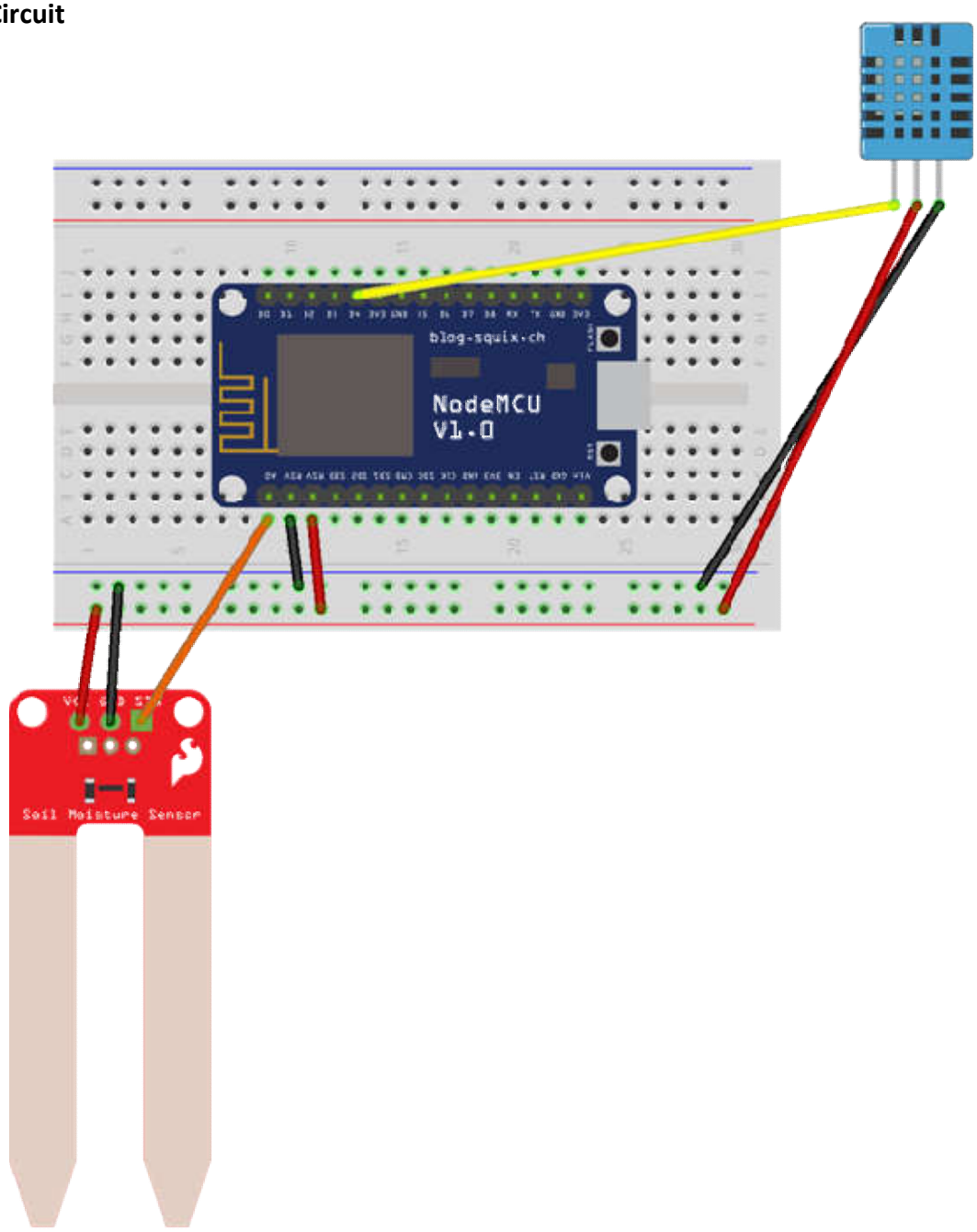
Select the hardware model you will use. "**NodeMCU**"



4. Auth Token

Auth Token is a unique identifier which is needed to connect your hardware to your smart phone. Every new project you create will have its own Auth Token. You'll get Auth Token automatically on your email after project creation.

5. Build the IoP Circuit



6. Install Blynk Library

From Arduino “Library Manager” search for “Blynk” and install it

1. Copy the attached code to Arduino Sketch
2. From Board Manager Choose NodeMCU 1.0
3. Type you WiFi SSID, password, and Auth Token in the code

7. Flash the code to your hardware

- Copy the attached code to Arduino Sketch
- From Board Manager Choose NodeMCU 1.0
- Type you WiFi SSID, password, and Auth Token in the code
- Flash the code to your hardware

8. Add a Widget

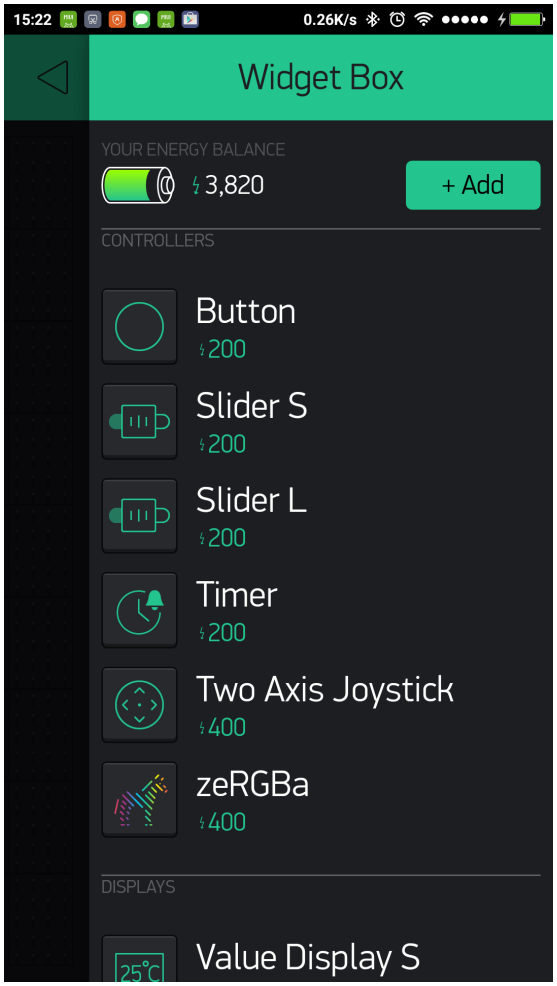
Your project canvas is empty, let's add a Labeled Value.

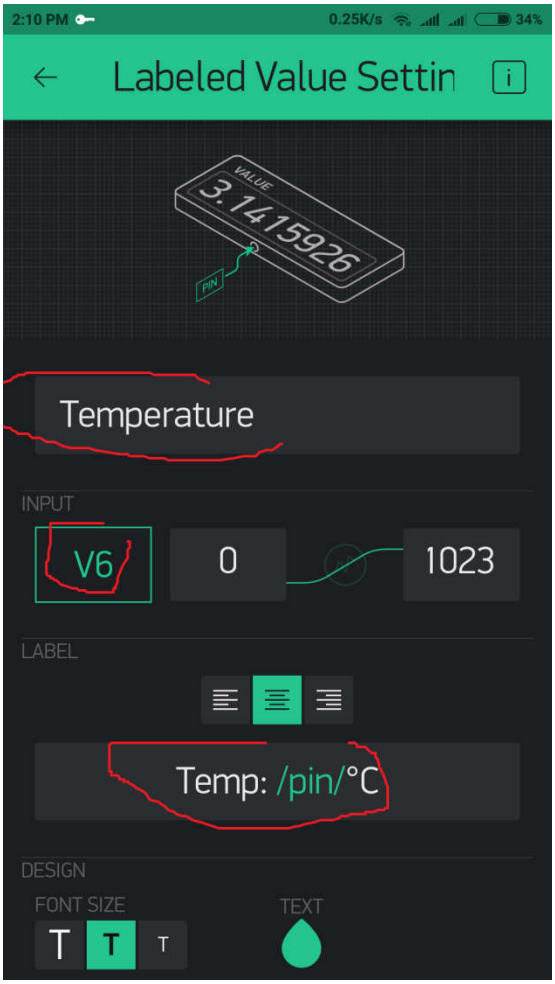
Tap anywhere on the canvas to open the widget box. All the available widgets are located here. Now pick a Labeled Value.

Widget Box

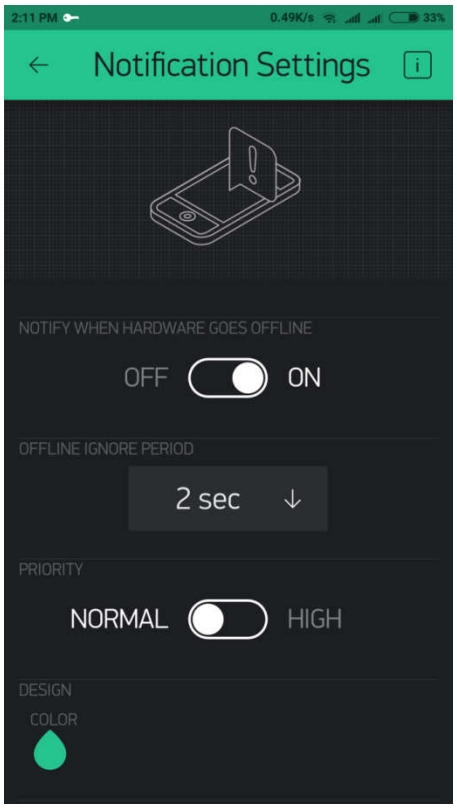
Drag-n-Drop - Tap and hold the Widget to drag it to the new position.

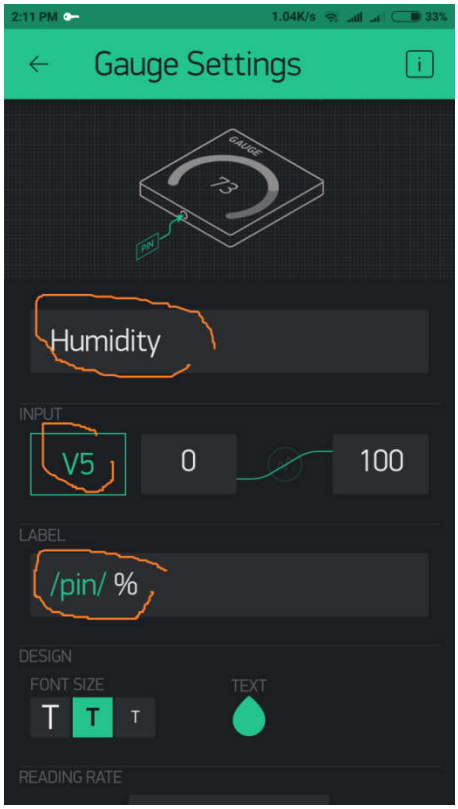
Widget Settings - Each Widget has its own settings. Tap on the widget to get to them.





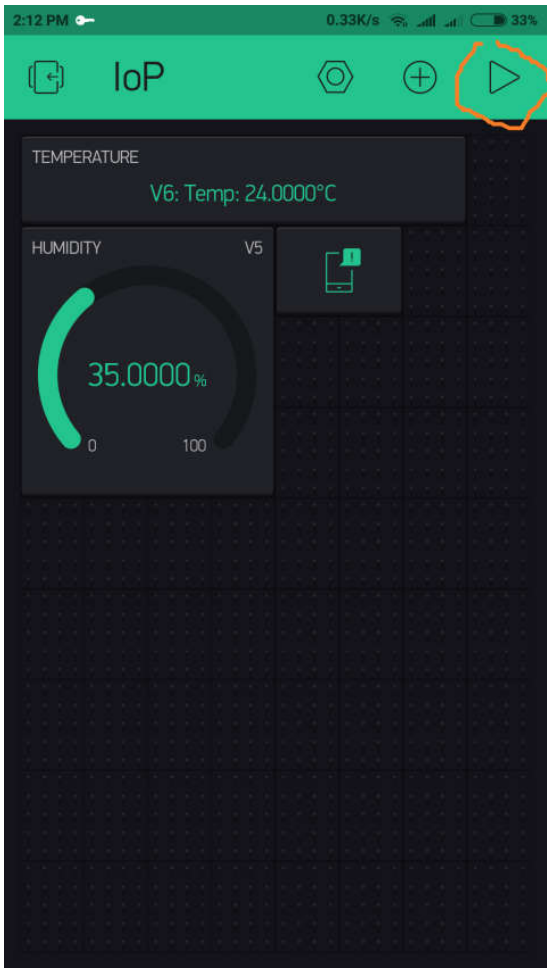
Add Gauge widget for Humidity and Notification Widget





9. Run the Project

When you are done with the Settings - press the **PLAY** button. This will switch you from EDIT mode to PLAY mode where you can interact with the hardware.



IoP Circuit Code

```
/*************************************************************
Download latest Blynk library here: https://github.com/blynkkk/blynk-library/releases/latest
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.
Downloads, docs, tutorials: http://www.blynk.cc
Blynk library is licensed under MIT license
*************************************************************
This example shows how value can be pushed from Arduino to the Blynk App.
WARNING :
For this example you'll need Adafruit DHT sensor libraries:
https://github.com/adafruit/Adafruit_Sensor
https://github.com/adafruit/DHT-sensor-library
App project setup:
Value Display widget a0ached to V5
Value Display widget a0ached to V6
*************************************************************/
#define BLYNK_PRINT Serial
#include <ESP8266WiFi.h>
#include <BlynkSimpleEsp8266.h>
#include <DHT.h>
// You should get Auth Token in the Blynk App.
char auth[] = "YourAuthToken";
char ssid[] = "YourNetworkName";
char pass[] = "YourPassword";
#define DHTPIN 2
#define DHTTYPE DHT11
DHT dht(DHTPIN, DHTTYPE);
BlynkTimer timer;
int Sensorvalue=0;
int sensorPin=A0;
int sensorValuePercent=0;
// This funcGon sends Arduino's up Gme 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()
{
int x = analogRead(A0);
```

```
float h = dht.readHumidity();
float t = dht.readTemperature();
if (isnan(h) || isnan(t)) {
Serial.println("Failed to read from DHT sensor!");
return;
}
Blynk.virtualWrite(V5, h);
Blynk.virtualWrite(V6, t);
if (x<200)
{
Blynk.notify("Water your plants");
}
}
void setup()
{
Serial.begin(9600);
Blynk.begin(auth, ssid, pass);
dht.begin();
// Setup a function to be called every second
timer.setInterval(1000, sendSensor);
}
void loop()
{
Blynk.run();
timer.run();
}
```