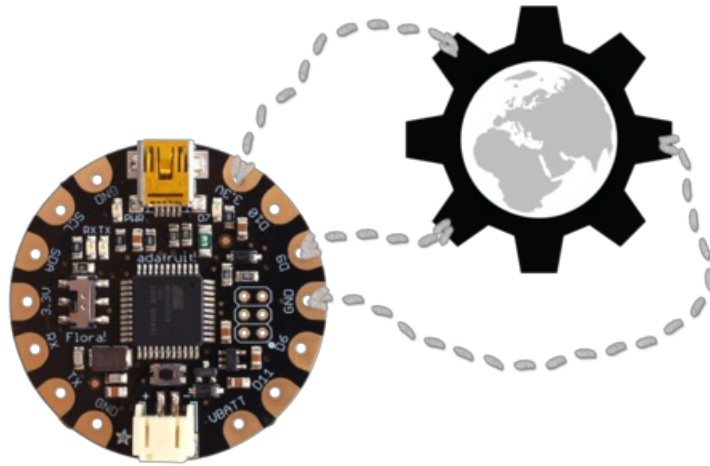




FLORA & Codebender

Created by Nick Lamprianidis

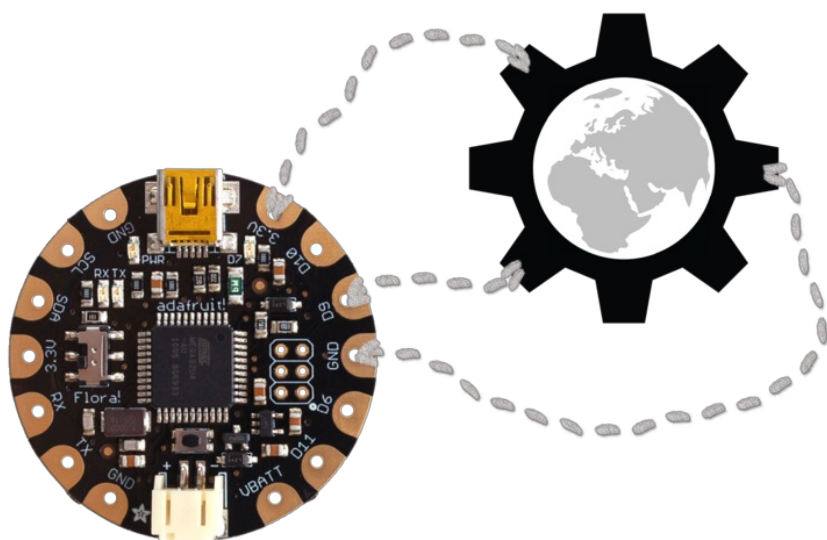


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Overview



codebender is an online development and collaboration platform for all Arduino users, makers, and engineers out there. It makes it easy for anyone, no matter how novice they are, to program their favorite microcontroller.

codebender takes away all the frustration of setting up and maintaining your computer when developing applications for Arduino related hardware.

It offers an advanced **editor** with highlighting, autoformatting, and autocompletion. It has an extensive [repository of libraries \(https://adafru.it/dun\)](https://adafru.it/dun) that you can access directly from the editor, as well as a handy **compiler** with very descriptive output that will help you quickly debug your programs.

Your projects are stored on the cloud, so you can access them anytime, from anywhere, and **share them** with your friends and colleagues. You can even **embed your code** anywhere on the Internet... on your favorite forum, or your personal blog.

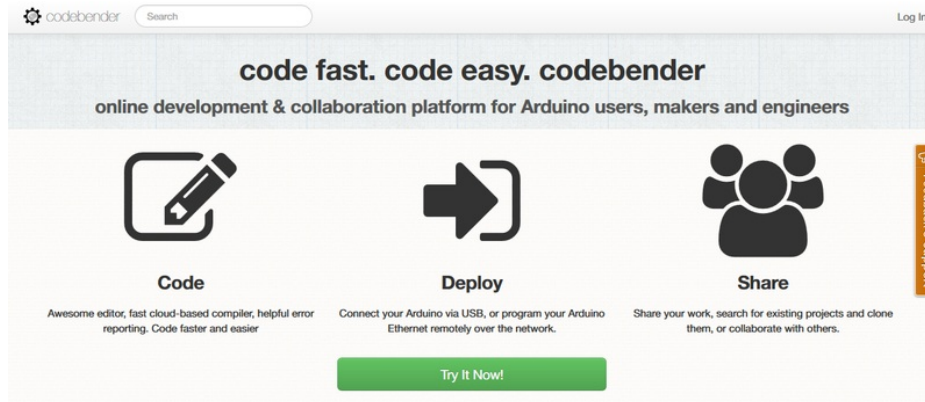
codebender supports an ever-growing **collection of Arduino platforms**. And now, one of those platforms is **FLORA**, Adafruit's wearable electronics platform.



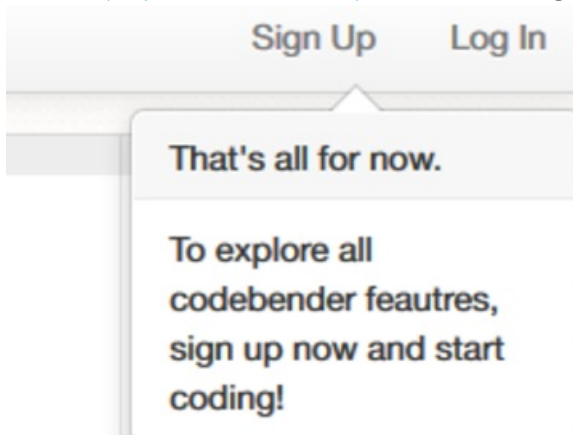
In order to be able to program your FLORA, you need two pieces of software on your computer. The first is a **driver** that will allow your computer to recognize the FLORA. The other is a **browser plugin** that will allow codebender to communicate with the FLORA.

Thankfully, codebender's **Getting Started guide** will help you set these up, and have you programming your FLORA in just minutes. Let's check it out!

Sign Up



For starters, in order to use codebender, you have to create an account. You can visit [codebender \(https://adafru.it/duo\)](https://adafru.it/duo), click on the big "Try It Now!" button and take a quick tour of the editor.



Follow the steps that will get you familiar with the development environment and project properties. When you finish exploring, click "Sign Up" at the title bar to move on.

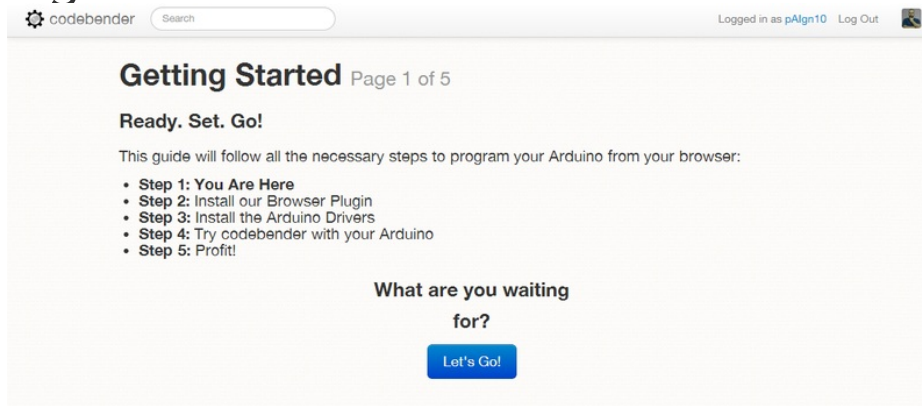
To create an **account**, you can either type in a username, an email, and a password, or sign up with your **Google** or **Github** account (no more passwords to remember).

If you typed in your own credentials, you will receive an **email** with an **activation link**. Just click on the "Confirm Account" button.

If you chose to sign up with Google or Github, you may need to **login** and **authorize** codebender.

After sign up, you will be redirected to your homepage. A message will appear to inform you that you will have to follow the **Getting Started Guide**. Just click on the "Let's Go!" button.

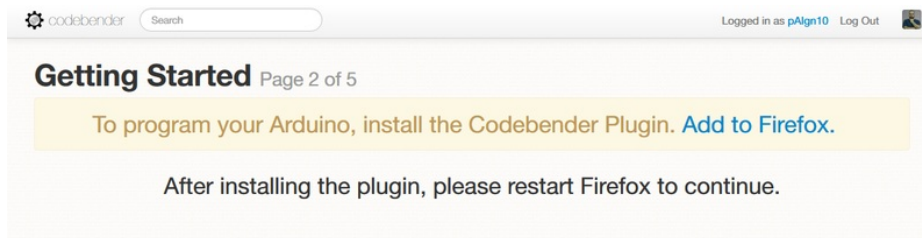
Install Plugin



As the guide suggests, it will help you set everything up and start programming your FLORA. Let's begin.

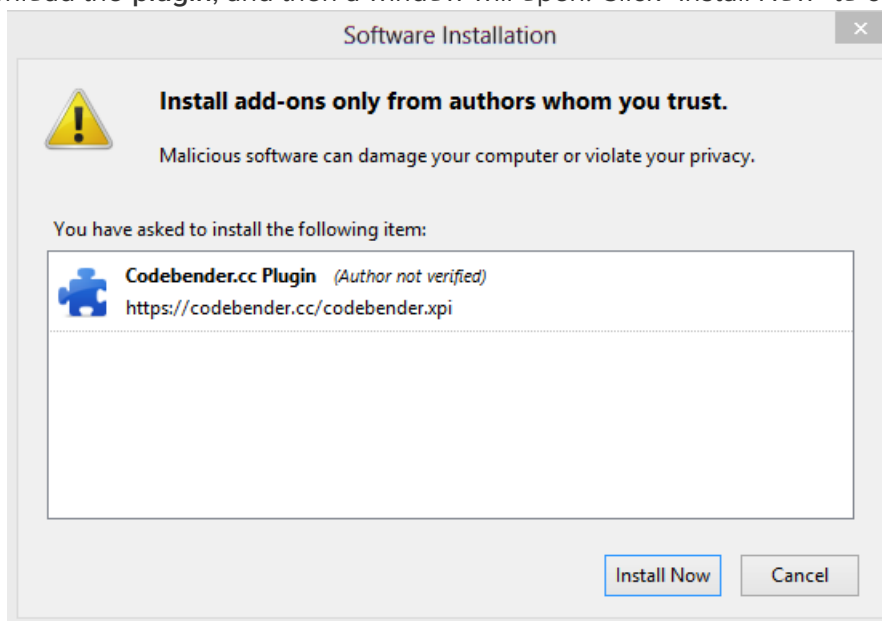
The first step is to install the codebender plugin.

Firefox



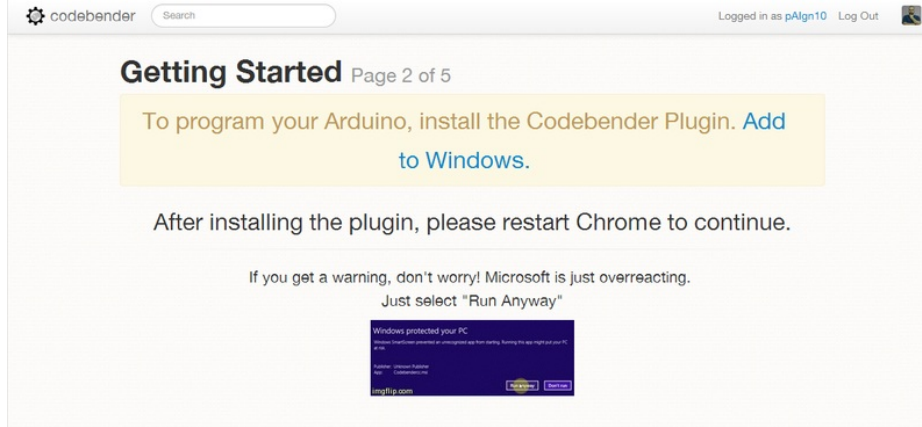
If you are using **Firefox**, click on the "Add to Firefox" link. A popup message will appear... just click "Allow" to continue.

Firefox will download the **plugin**, and then a window will open. Click "Install Now" to continue.

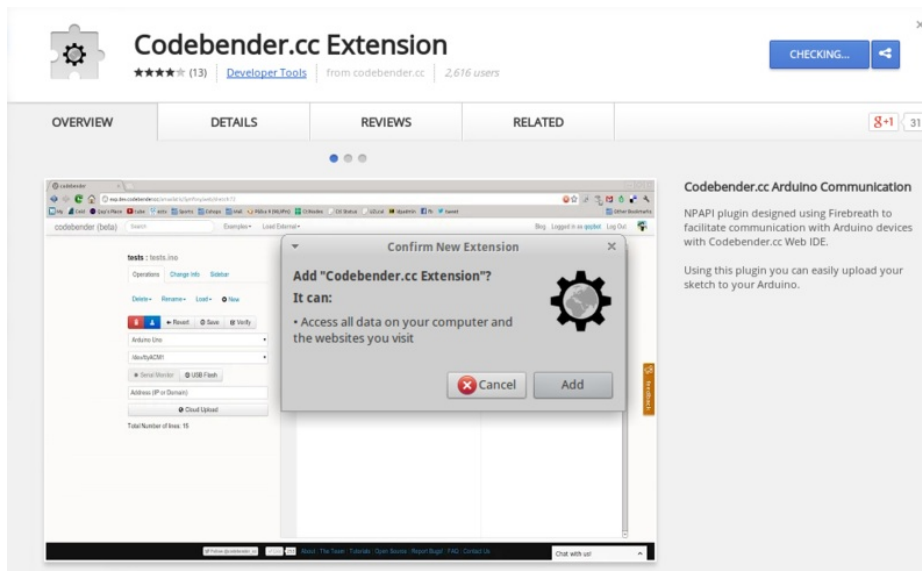


Finally, restart Firefox. When Firefox opens again, you will be automatically directed to the next page.

Chrome



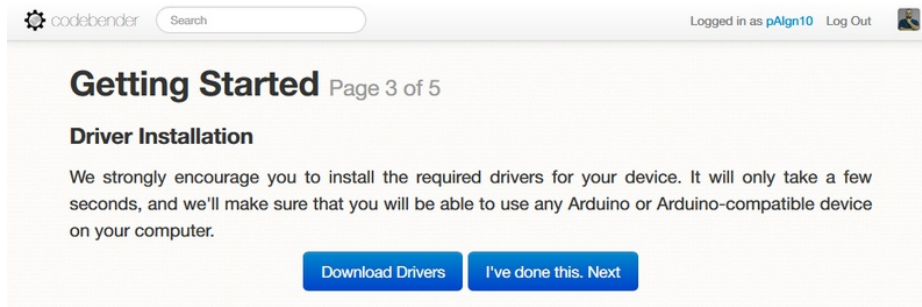
If you are using **Chrome** on **Windows 8/8.1**, click on the "Add to Windows" link to download the **plugin**. A **Codebendercc.msi** file will appear in your **Downloads** folder. Double click on the file to install the plugin. After you've installed the plugin, you'll need to restart Chrome, and you will be redirected to the next page.



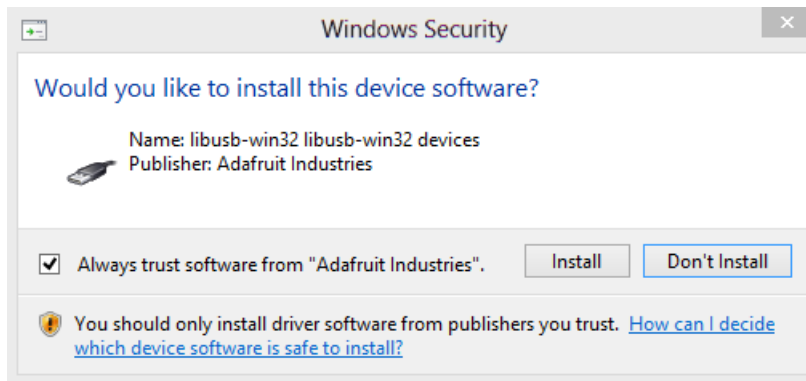
If you are using **Chrome** on **Linux**, **Mac OS X**, or **other Windows editions**, click on the "Add to Chrome" link to get to the **chrome web store**. There, click on the "+ FREE" button to install the plugin. After installation, go back to the guide where you will be redirected to the next page.

Install Drivers

Windows

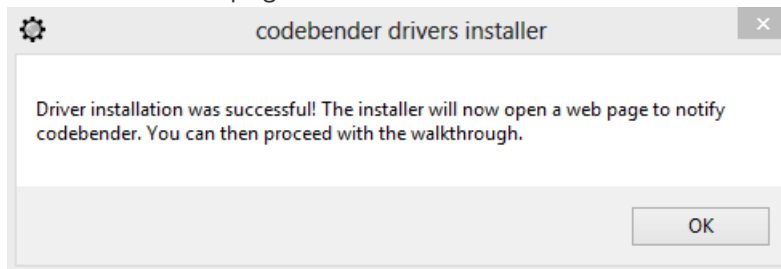


On **Windows**, you have to install the Arduino **drivers**. Click on the "Download Drivers" button. A **windows-driver-installer.zip** file will appear in your **Downloads** folder. Extract the zip file and double click on the **windows-driver-installer.exe** to install the driver. If you get any security warnings, click "Install" to continue.

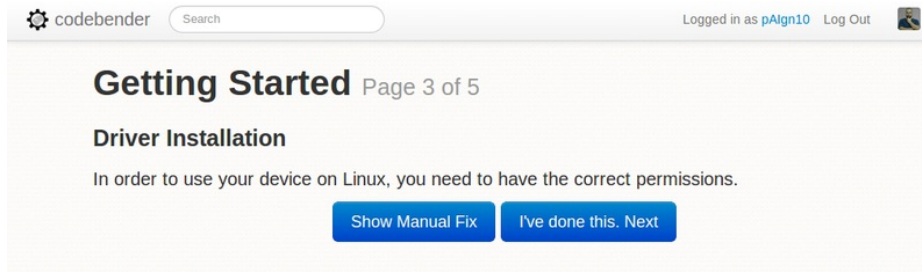


i The drivers installation might take a while, so please be patient.

After the drivers installation, the following window will appear. Click "OK". Then, go back to the guide, and you will be redirected to the next page.



Linux



On **Linux**, you don't have to install any drivers, but you need to set the correct permissions. Click on the "Show Manual Fix" button, and follow the directions there.

Mac OS X

On **OS X**, you don't need to install any driver for FLORA. You can click on the "I've done this. Next" button to move on.

On the other hand, if you're using other Arduino boards like Duemilanove, and other Arduinos that use an **FTDI** chip, you'll need to install the **drivers** at some point. So, if you think that you are going to use Arduino boards like that in the future, you can install the drivers now and have your computer ready.

Test your FLORA

You can see the generic arduino blink sketch here (<https://adafru.it/duq>)

```
1 void setup()
2 {
3   //Set Pins 13, 9, and 7 as outputs.
4   //Some Arduino Boards have a built-in LED on pin 13, while some have it on
5   //pin 9 and others, like Adafruit FLORA, on 7
6   //Enabling all 3 this way, we can support most, if not all, Arduino boards.
7   pinMode(13, OUTPUT);
8   pinMode(9, OUTPUT);
9   pinMode(7, OUTPUT);
10 }
11 void loop()
12 {
13   //Set the LED pins to HIGH. This gives power to the LED and turns it on
14   digitalWrite(13, HIGH);
15   digitalWrite(9, HIGH);
16   digitalWrite(7, HIGH);
17   //Wait for a second
18   delay(1000);
19   //Set the LED pins to LOW. This turns it off
20   digitalWrite(13, LOW);
21   digitalWrite(9, LOW);
22   digitalWrite(7, LOW);
23   //Wait for a second
24   delay(1000);
25 }
```

⚠ To program your Arduino from your browser, please use [Google Chrome/Chromium](#) or [Mozilla Firefox](#).

Please select a board

You're all set up, and it's time to **test** your FLORA.

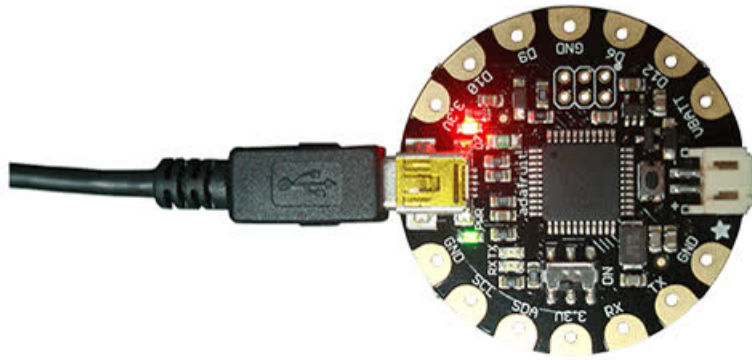
Connect the FLORA to your computer with a USB cable.



On the left drop-down menu select "**Adafruit FLORA**". On the right menu, choose the **port**. If the FLORA is the only board connected on your computer, the right port should appear by default.

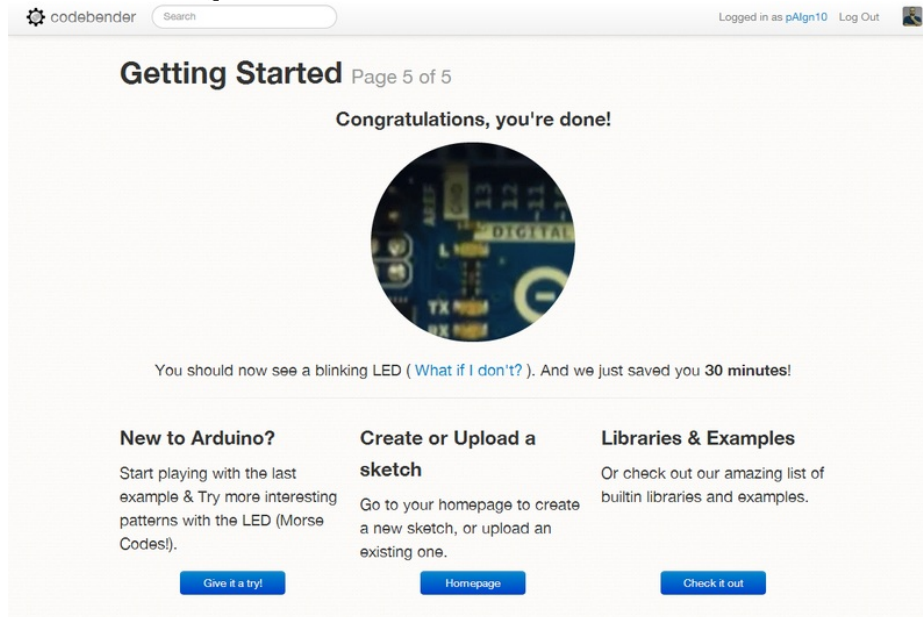
❗ On Windows, the name of that port should be COMxx. On Linux or Mac OS X, it should be /dev/ttyxx.

Then click on the "**Run on Arduino**" button and watch FLORA's **onboard LED blink!**



That's it! Your FLORA works and you are ready to start programming it.

Create New Projects

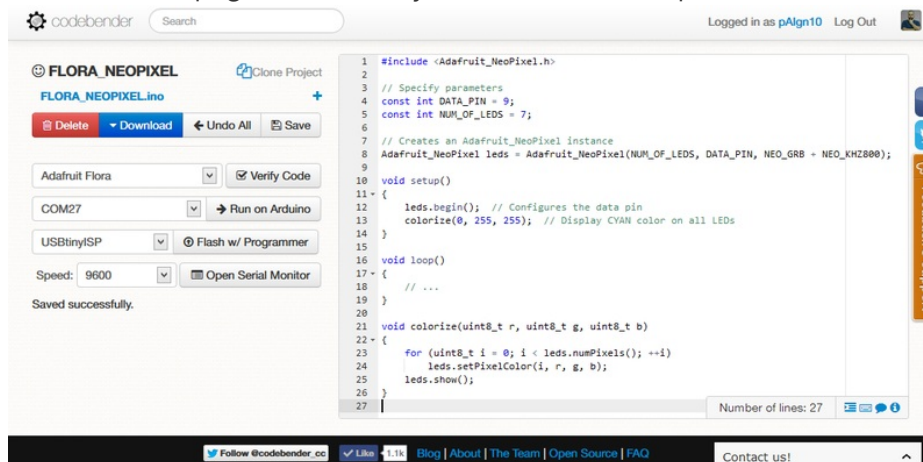


On the final page of the guide, you can get some hints on where to go next.

If you are just starting out with embedded electronics, give the blink example another try. Play with the on/off times of the LED and see what you can come up with.

If you feel more adventurous, try creating your own project. Navigate to your [homepage \(https://adafru.it/dup\)](https://adafru.it/dup) where you can create a new project. Type a name in the box and click on the “Create” button.

You'll be brought to the editor page. On the left you have the control panel, and on the right is the editor.



Write your program in the editor. Then, on the control panel, select your device (Adafruit FLORA), choose the right port, and click "Run on Arduino". The program uploads to your device, and then you can test how it performs.

Have fun creating new and exciting projects.

