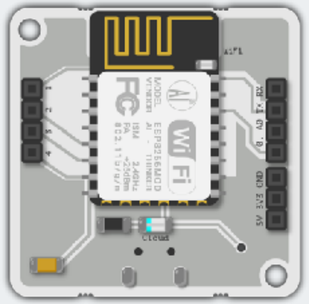
BOLT IoT PLATFORM

Quick Start Guide

BOLT

Setting Up

1. The first step will be to link the Bolt WiFi module with your Bolt Cloud account.

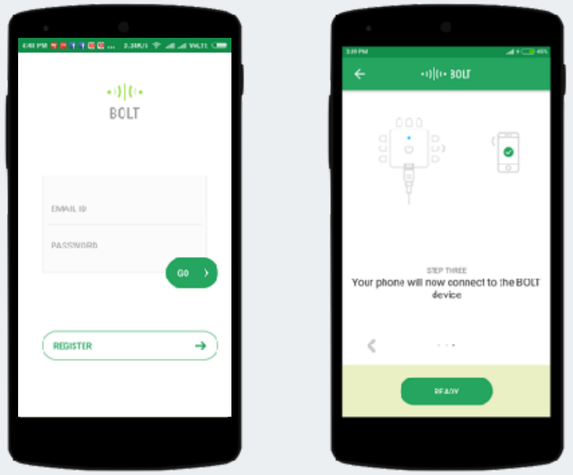


2. Download the 'Bolt IoT' App for Android or iOS. You can either search for 'Bolt IoT' or scan the QR code below.

Android

iOS

3. Log in using the credentials of your cloud account on the app and follow the instructions



BOLT

Setting Up

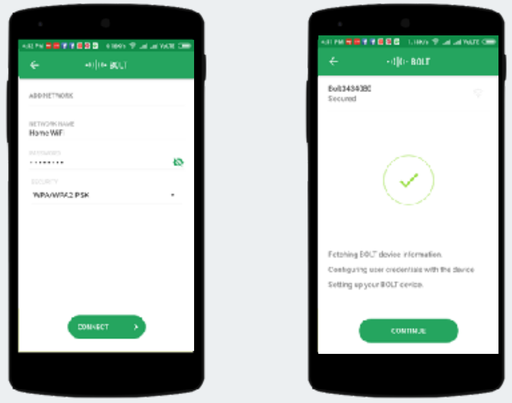
4. How it works:

A. App connects to Bolt WiFi module over Bolt Hotspot. When you enter the SSID (i.e. the Name of your WiFi network) and Password it is transferred to the Bolt and stored on it.

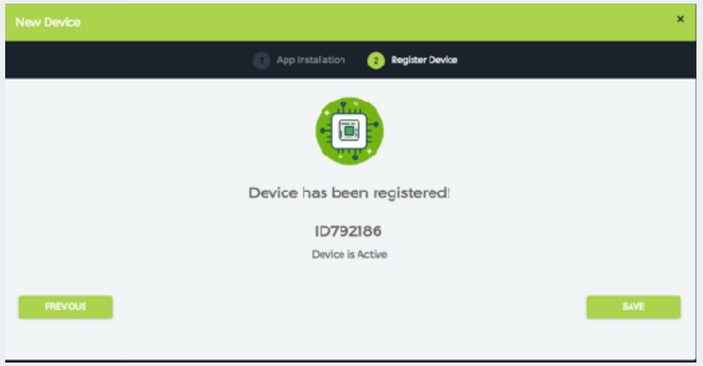
B. When Bolt restarts the next time, it connects to the network you entered.

Note:

- If Blue LED blinks slowly then your Bolt is transmitting hotspot.
- If Blue LED blinks fast then mobile is connected to the Bolt hotspot.
- If Blue LED is stable then your Bolt is connected to the WiFi network.
- If Green LED is glowing then your Bolt is connected to the internet and cloud.



5. Once the setup is complete go back to the browser and you will find that your device has been registered.



Troubleshooting: In case this pop up does not show up:

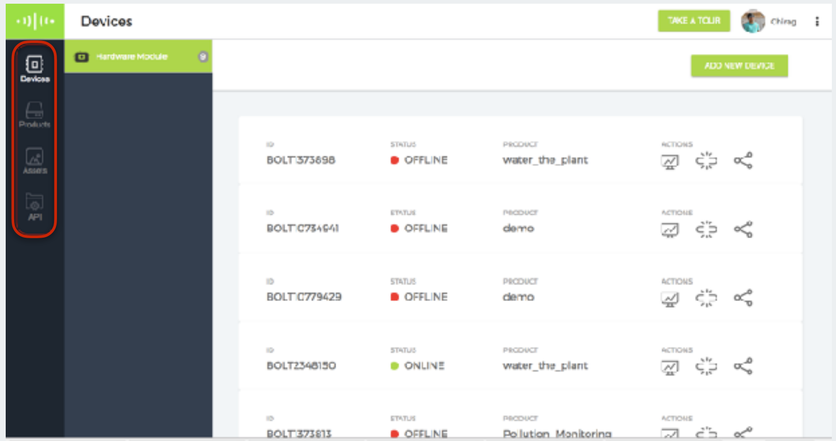
A. Refresh your page to find your linked device.

B. Redo the setup process via app.

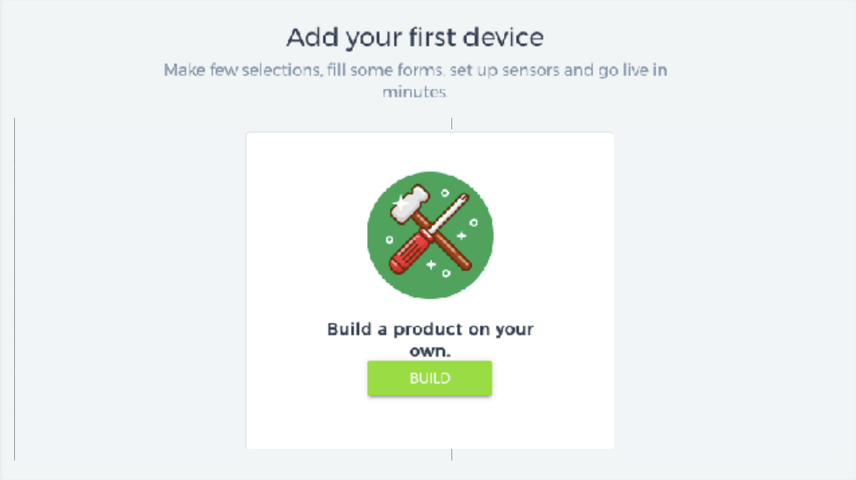
BOLT

Creating a Product

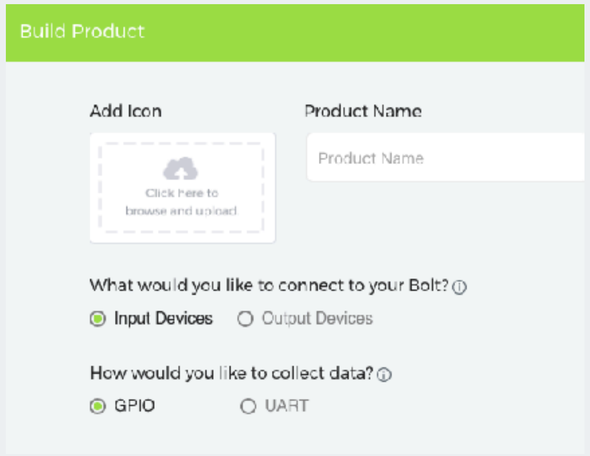
1. Once your Bolt WiFi module has been linked to your Bolt Cloud account, you should start building a product. For this click on the 'Products' tab.



2. Next, click on the 'BUILD' option.



3. Add product details and select correct options. If you are not sure what to choose then don't worry. You will learn about this more in detail when you build a project in next section.



BOLT

Creating a Product

4. In the ‘Products’ tab, you will notice 3 icons in a toolbar on top.

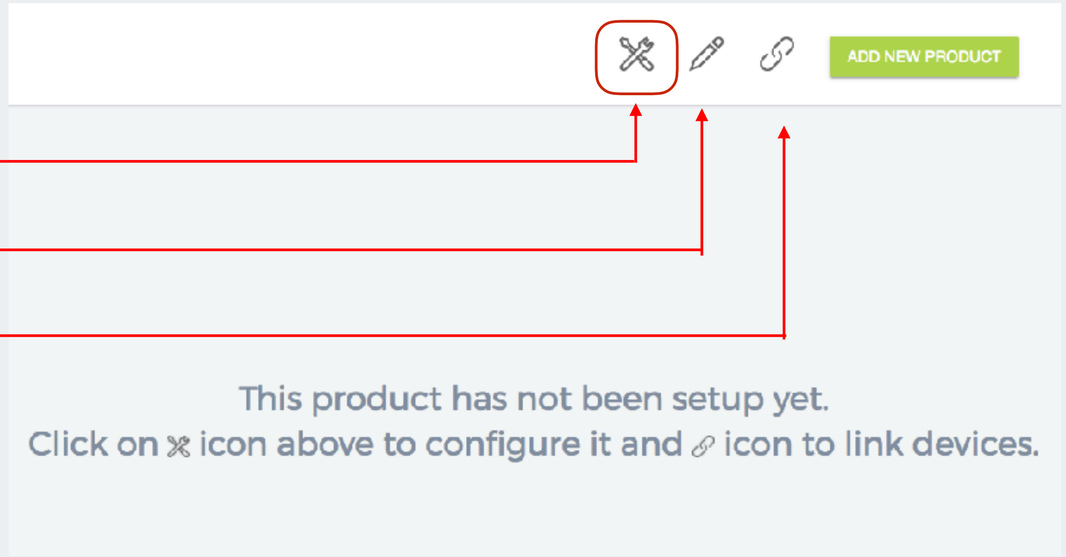
These tools let you :

A. Configure and code for a new product.

B. Edit an existing product.

C. Link it to one of your Bolt devices.

- Now, Click on the first icon i.e. ‘Configure this Product’ to proceed.

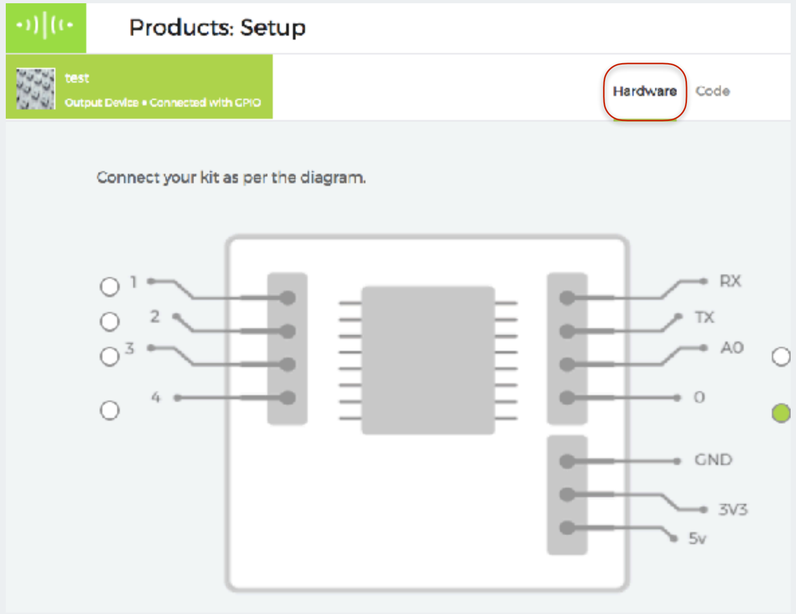


BOLT

Creating a Product

5. In the Hardware Tab, select the pins to which you will be connecting your sensors/actuators or other development boards like the Arduino. As an example click on the pin marked as '0'.

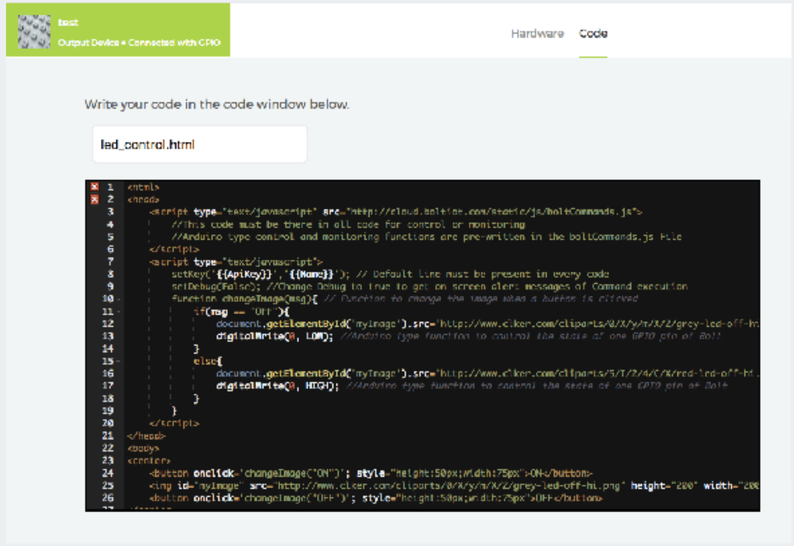
You will learn about this more in detail when you build a project in next section.



6. In the Code Tab, you can write the code to either visualise the data your sensors are collecting or to create a UI for controlling output devices.

To know more about the code you can write, check out the Docs section.

You will learn about this more in detail when you build a project in next section.

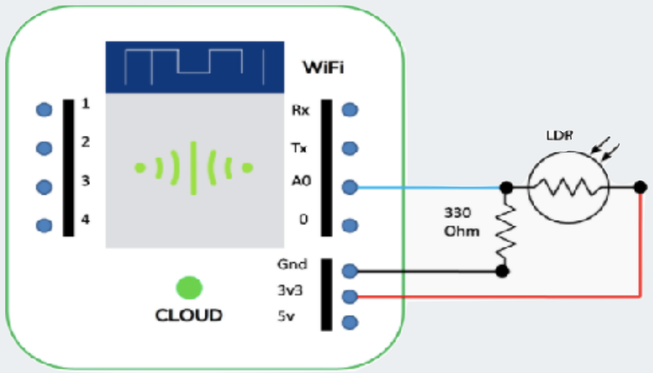


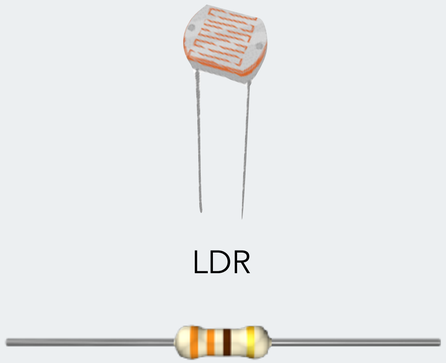
BOLT

Project 1: Light Monitoring System

1. Now let's try an experiment to view sensor data on a line graph.

A. We will take a Light Dependant Resistor (LDR) which is an analogue sensor for this experiment. You will also need a 330-ohm resistor.
B. Connect one terminal of the resistor to the LDR.
C. The other terminal of the LDR is connected to the 3.3v terminal of the Bolt and the other terminal of the Resistor is connected to GND.
D. The common terminal is connected to A0 of the Bolt.

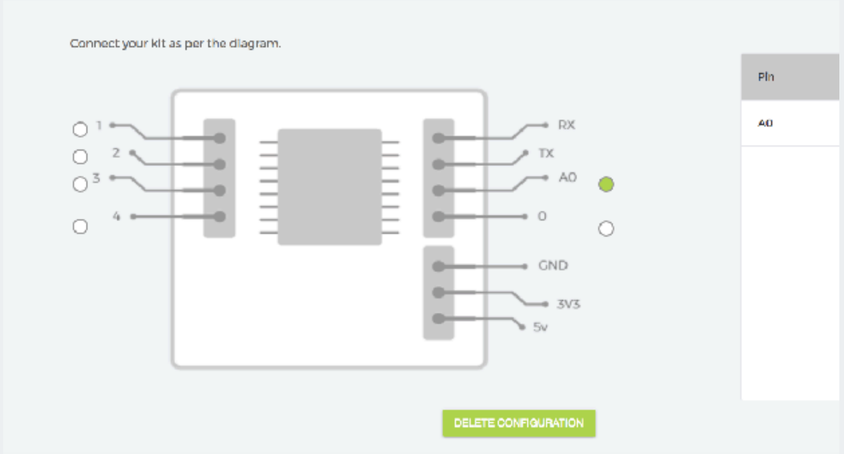




LDR

330 ohm resistor. Check the Orange, Orange, Brown, Gold bands to identify it.

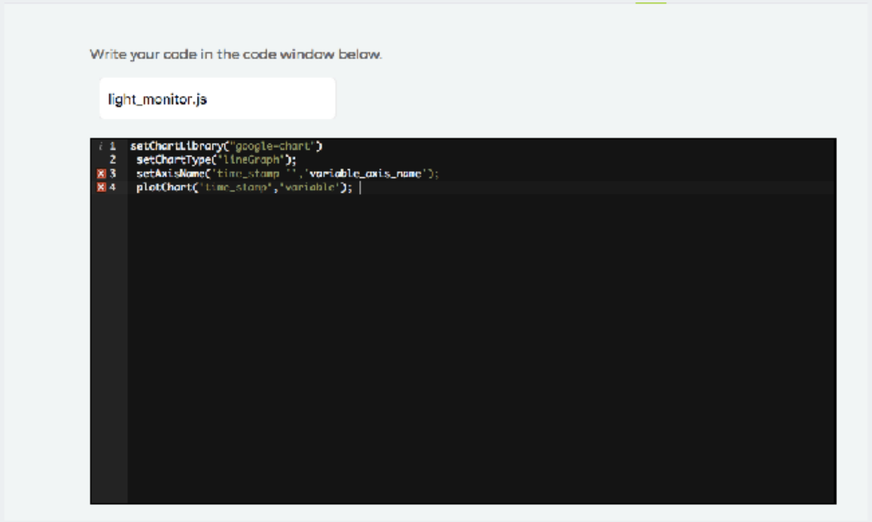
2. Once this is done, create a new product and select the A0 pin in hardware configuration. We are choosing A0 since it is the only pin with ADC converter. Pin A0 works with voltages from 0V to 1V. Give a suitable variable name to the data collected by this pin.



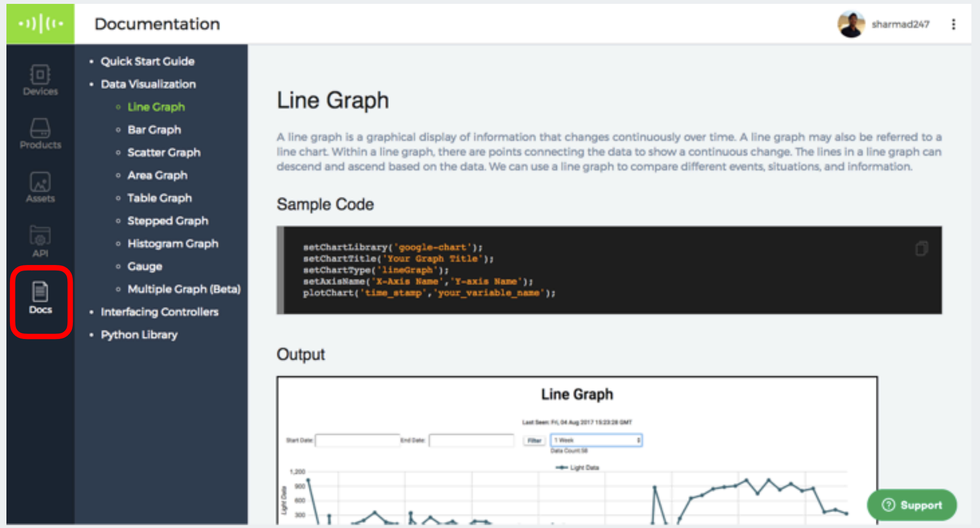
BOLT

Project 1: Light Monitoring System

3. You can now write a software code in the code editor to collect the data from the LDR. Make sure you save your file as .js since the code you have written is in Javascript.



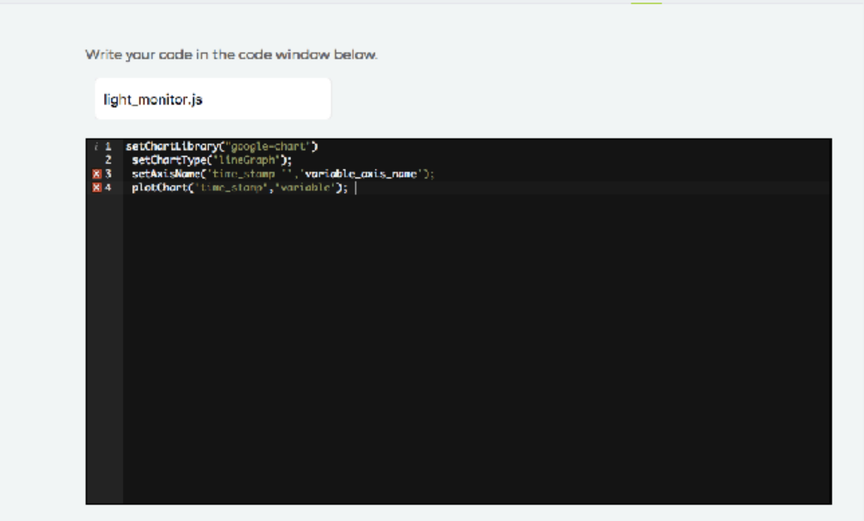
4. You can find this code under Docs -> Data Visualisation -> Line Graph.



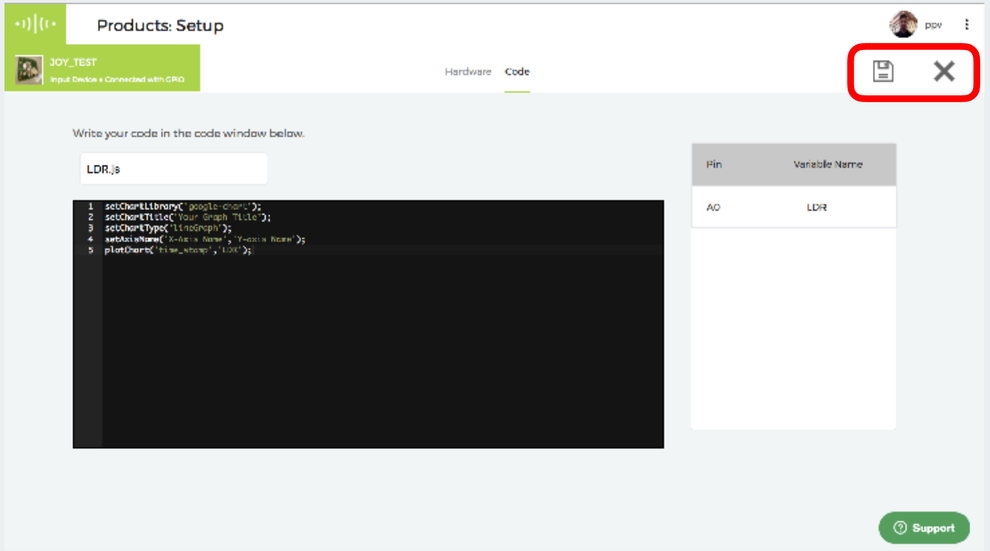
BOLT

Project 1: Light Monitoring System

5. In the code, make sure that you replace your_variable_name with the variable name you used for pin A0 at the time of product configuration.



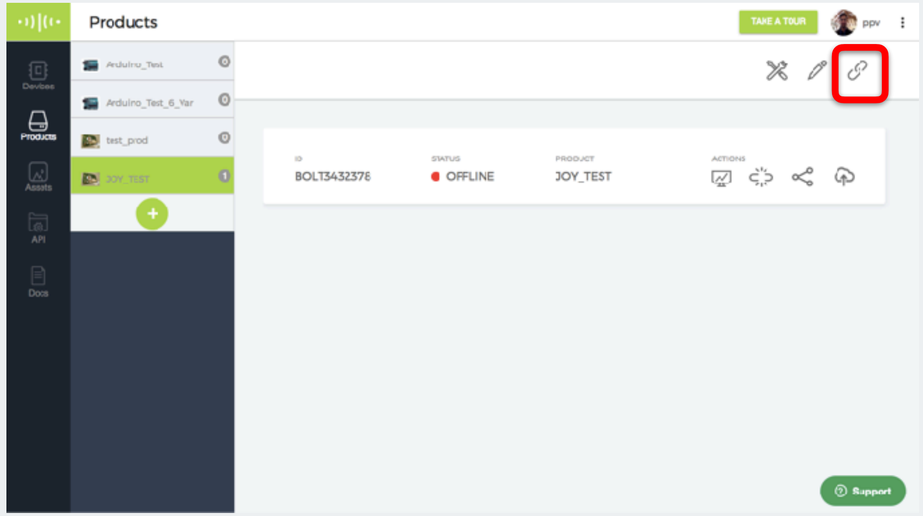
6. Click on the Save button to save the configuration followed by the close button the exit this screen.



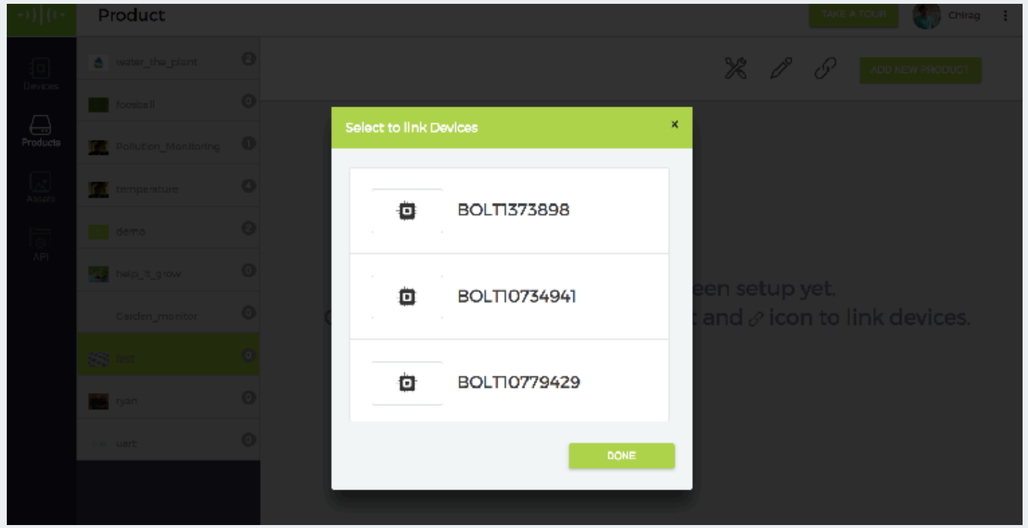
BOLT

Project 1: Light Monitoring System

7. Click on the link button to link the configuration you just created to a particular Bolt WiFi module.

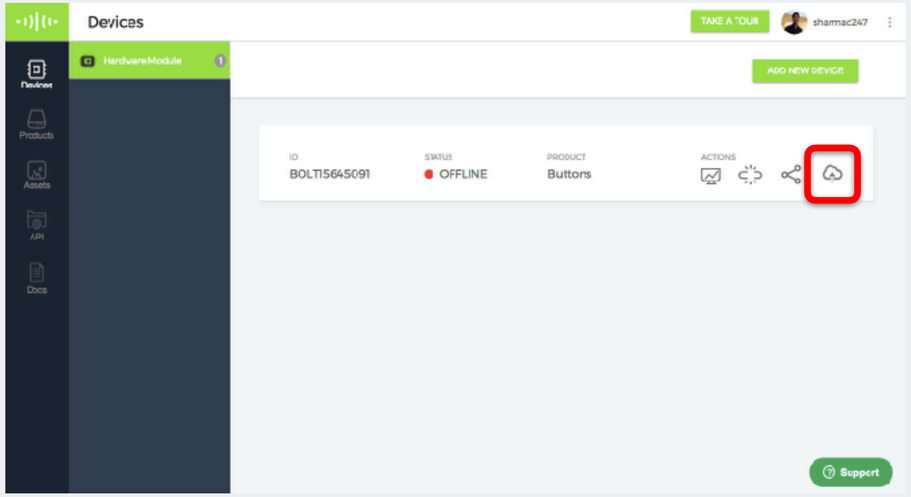


8. Choose a suitable Bolt WiFi module to which you want to link the configuration, select the same and click on ‘Done’.

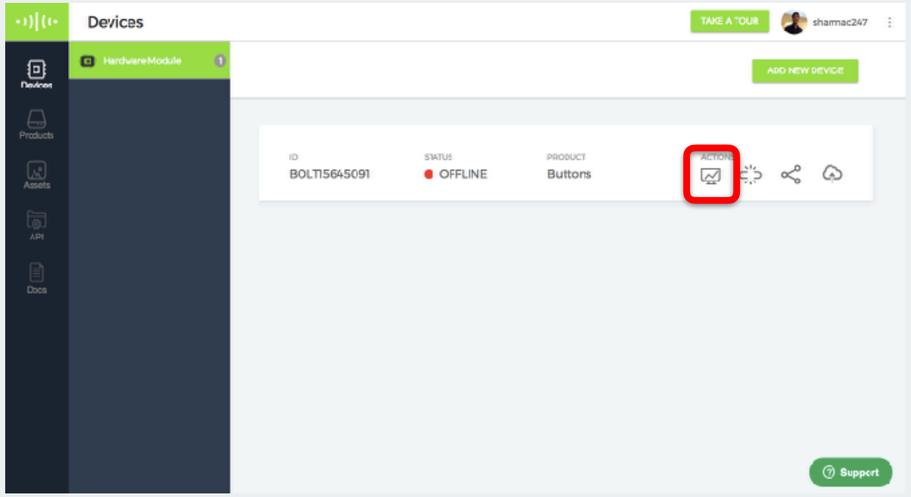


Project 1: Light Monitoring System

9. Now we are almost done. Next, go to the homepage and click on the 'Deploy configuration' button to push the configuration you created to the 'Bolt WiFi module' you linked.



10. Now wait for some time and let the data be collected. After a few minutes, click on 'View this device' button to open the UI of the device.



BOLT

Project 1: Light Monitoring System

11. Now you will now see a graph showing the data collected by Bolt.
Please note that it may take a few minutes for a suitable number of data points to be collected. We suggest you keep the device on for few hours to get a good graph.

12. Troubleshooting:
If you see graph axis but not data points

A. Click on the 'Deploy configuration' button again.
B. Go back to the code Product -> Configuration -> Code and see if you have correctly added the variable name in your code.
C. Keep the system on and wait for few minutes. Let the data be collected.

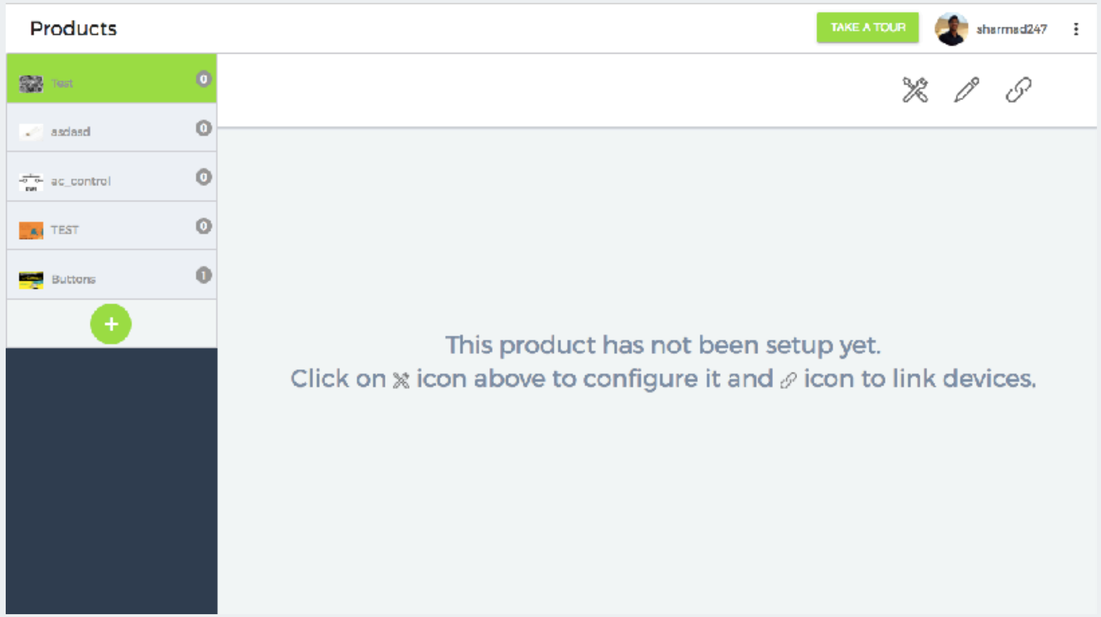
In case you don't see anything on the screen then check the code you have written

If the problem persists, check out forum.boltiot.com or write to us on support@boltiot.com

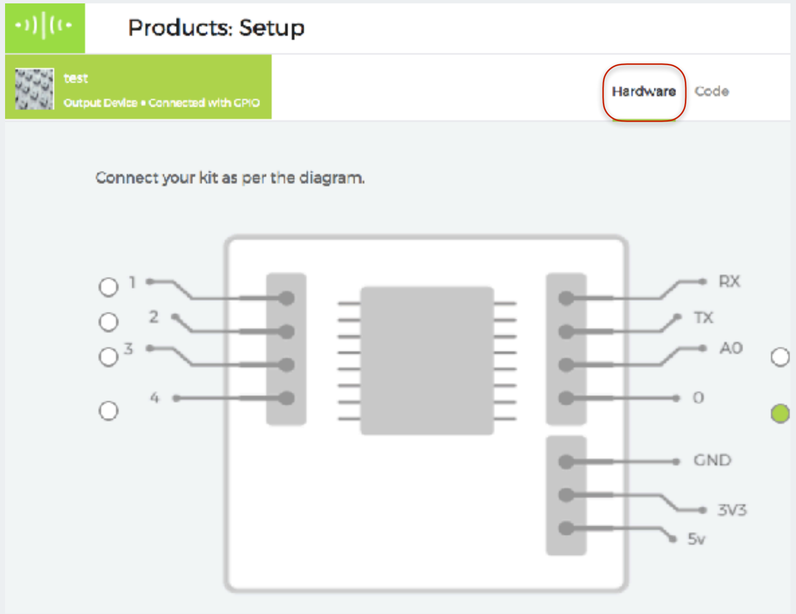
BOLT

Project 2: LED Control

1. Start with the same process of adding a new product by clicking on the + button below the list of already created products, add details like the name of the product.
2. Select ‘Output Devices’ under the type of connection and ‘GPIO’ as the channel.



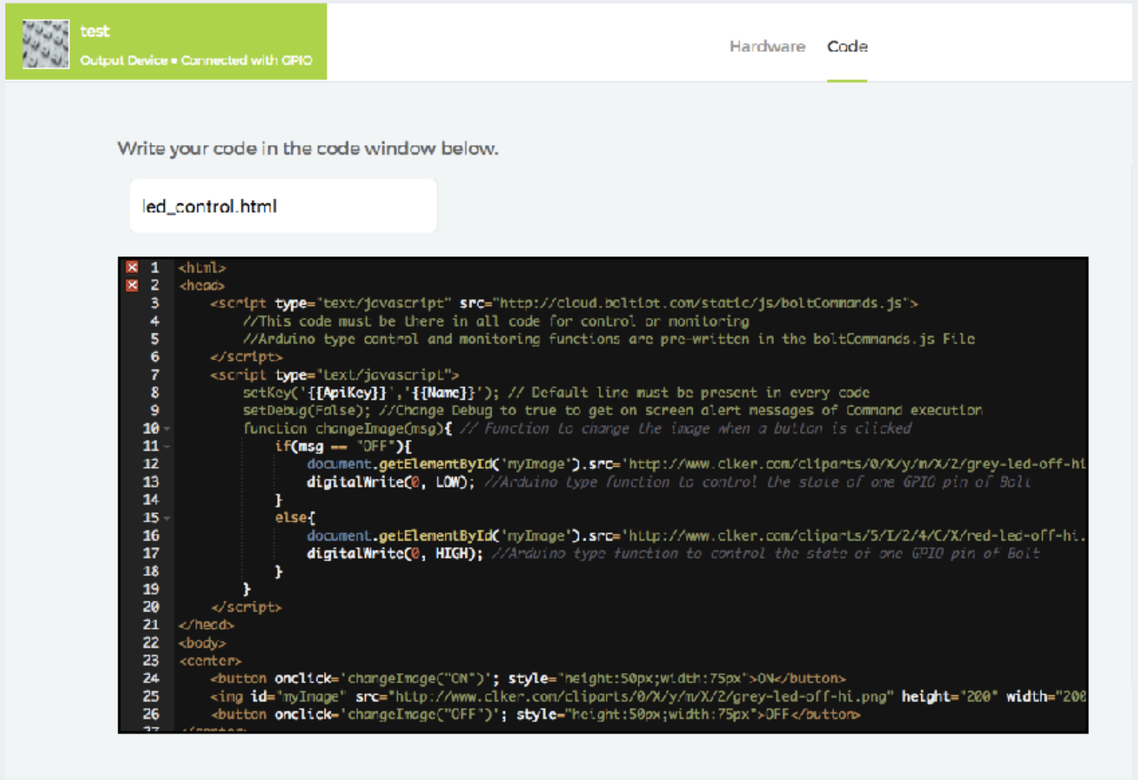
2. In the Hardware Tab, select any one of the Digital pins from 0-5. As an example, we will select the 0 digital pin and add a variable named ‘LED’. We will be connecting our LED to this pin.



BOLT

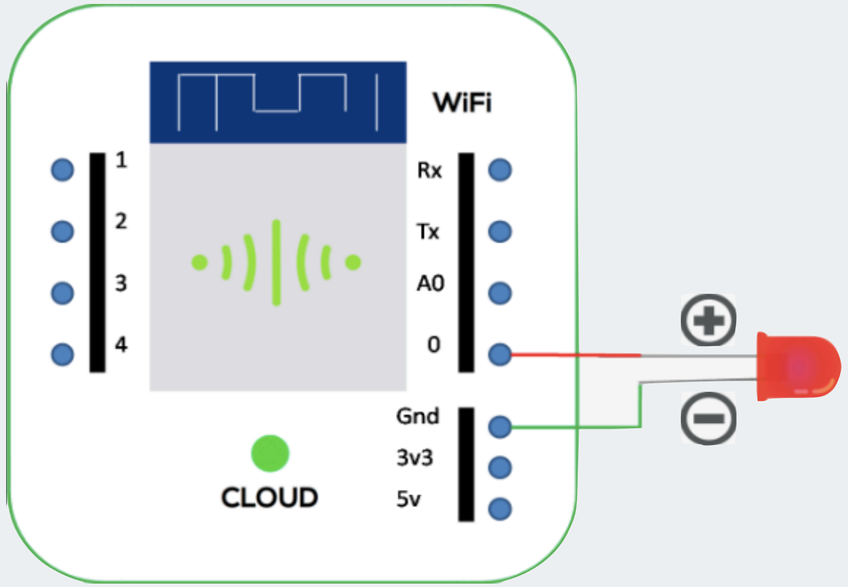
Project 2: LED Control

3. We will then go to the code editor section. You can find the code to be copied in this section named ‘LED.html’ in the GitHub link given here - https://github.com/Inventrom/ui-templates




```
<html>
<head>
    <script type="text/javascript" src="http://cloud.boltiot.com/static/js/boltCommands.js">
        //This code must be there in all code for control or monitoring
        //Arduino type control and monitoring functions are pre-written in the boltCommands.js File
    </script>
    <script type="text/javascript">
        setKey('{{ApiKey}}','{{Name}}'); // Default line must be present in every code
        setDebug(False); //Change Debug to true to get on screen alert messages of Command execution
        function changeImage(msg){ // Function to change the image when a button is clicked
            if(msg == "OFF"){
                document.getElementById('myImage').src='http://www.clker.com/cliparts/0/X/y/m/X/2/grey-led-off-hi
                digitalWrite(0, LOW); //Arduino type function to control the state of one GPIO pin of Bolt
            }
            else{
                document.getElementById('myImage').src='http://www.clker.com/cliparts/5/I/2/4/C/X/red-led-off-hi.
                digitalWrite(0, HIGH); //Arduino type function to control the state of one GPIO pin of Bolt
            }
        }
    </script>
</head>
<body>
<center>
    <button onclick='changeImage("ON")'; style="height:50px;width:75px">ON</button>
    <img id="myImage" src="http://www.clker.com/cliparts/0/X/y/m/X/2/grey-led-off-hi.png" height="200" width="200
    <button onclick='changeImage("OFF")'; style="height:50px;width:75px">OFF</button>
```

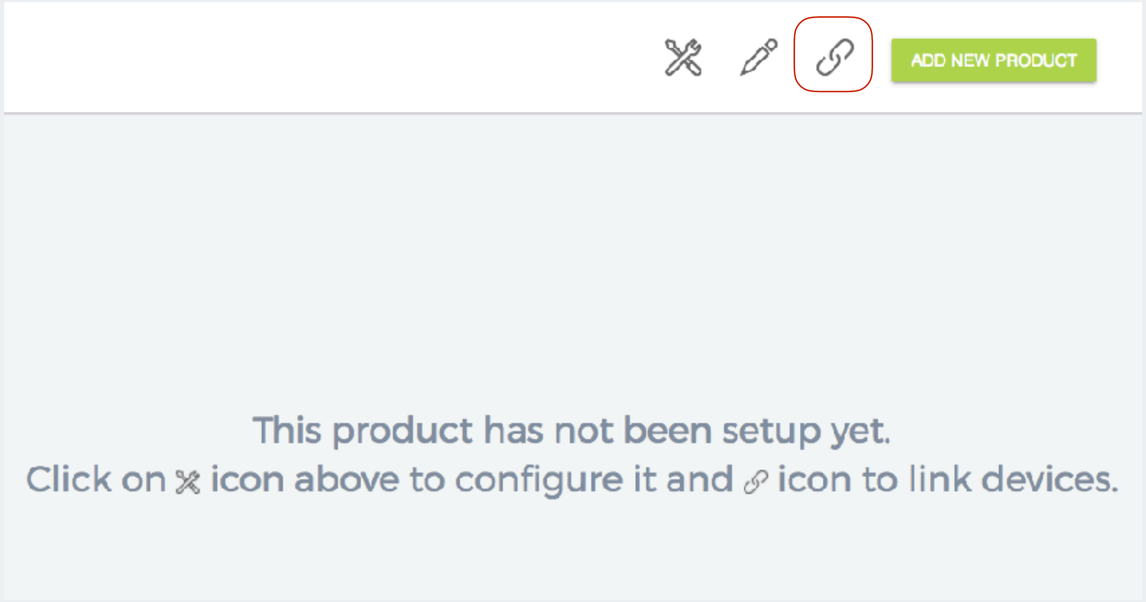
4. Connect your LED to the Bolt as shown in the Image. The smaller pin of the LED is -ve (Connected to Ground) and the larger one is +ve (Connected to Pin 0).



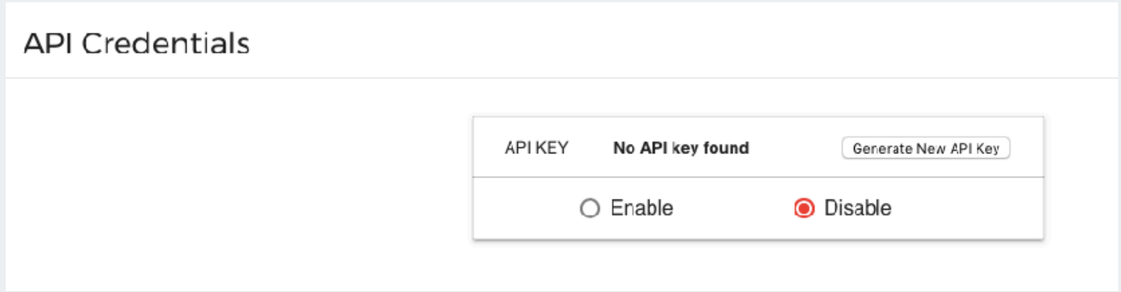
BOLT

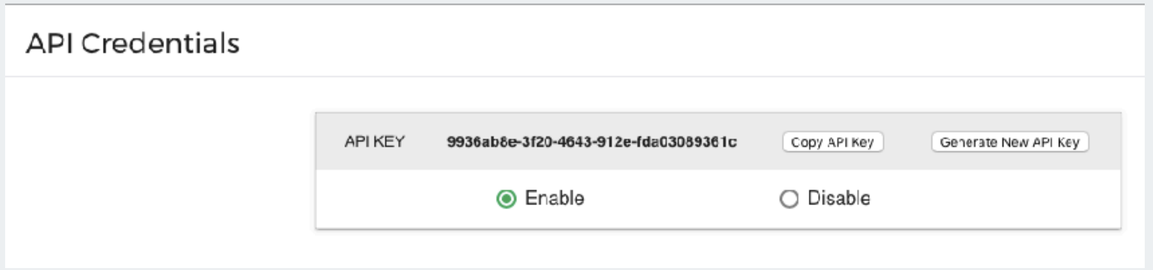
Project 2: LED Control

5. Now click on the ‘X’ - Exit button which will take you to the ‘Products’ page. Once there, click on the ‘Link’ button as shown in the image, which will allow you to link the code to your Bolt device.You will get a popup to select your Bolt device for linking.



6. Now go to the home page and click on the ‘API’ tab to 1. Generate API key and 2. Enable the API key which allows you to securely access the Bolt for controlling the pins. You can copy the API key from here to be used in the code.

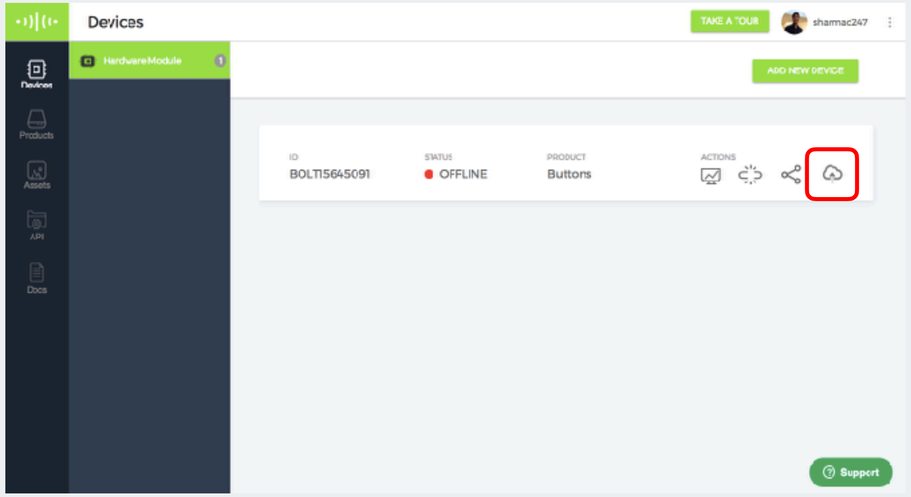




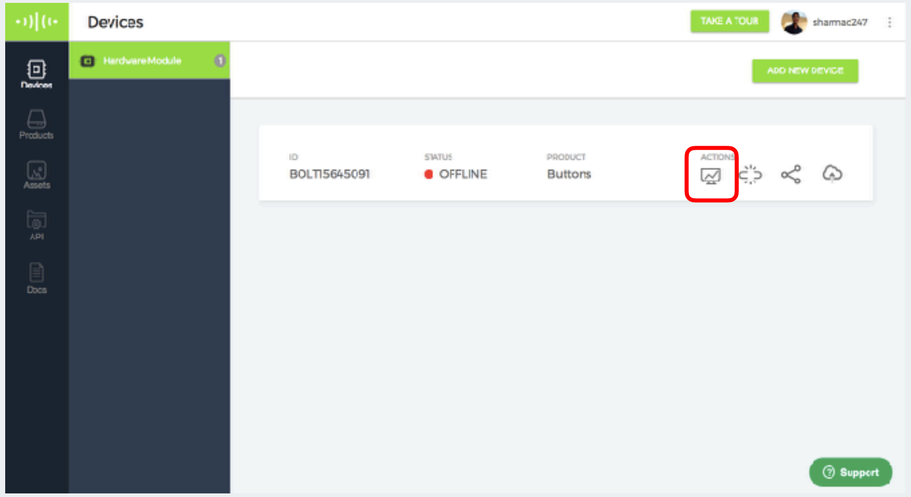
BOLT

Project 2: LED Control

7. Now we are almost done. Next, go to the homepage and click on the 'Deploy configuration' button to push the configuration you created to the 'Bolt WiFi module' you linked.



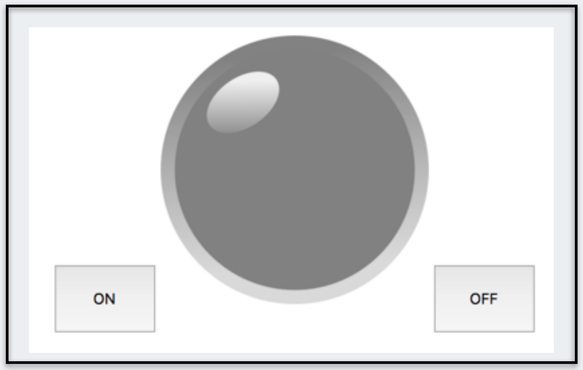
8. Now, click on the 'View this Device' Tab in the list of actions.

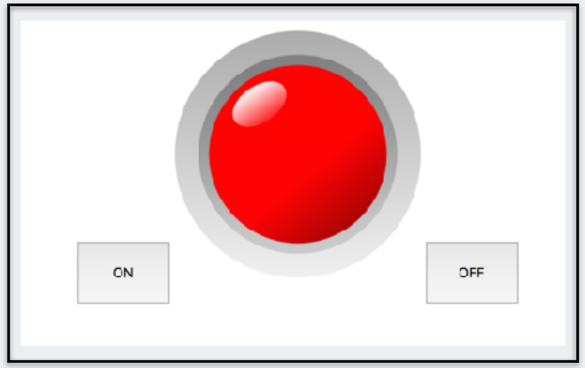


BOLT

Project 2: LED Control

9. You will now be able to see a UI which lets you switch an LED on or off via the cloud.





10. Troubleshooting:

Check the code you have written

If the problem persists, check out forum.boltiot.com or write to us on support@boltiot.com

BOLT

For more codes visit the ‘Docs’ section in the Bolt Cloud
cloud.boltiot.com/documentation

For Support :
Post a query on forum.boltiot.com
Send an email to support@boltiot.com

BOLT