Version 3 ▾

Cloud, APIs and Alerts > Bolt Python Library   ▾

Controlling LED using Bolt Python Library

If you are reading this section, you probably already know **Controlling LED over Bolt Cloud**. But here's a quick summary -

Keep the Bolt Device turned off until the led is connected to avoid accidentally shorting any components.

The LED has 2 legs. The longer leg is always connected to any GPIO pin and the shorter leg is always connected to ground.

After connection, power on your Bolt device and connects it to the internet-enabled wifi network and log in to your ubuntu server(Digital Ocean droplet) and create a Python file.

Type the below command to create a Python file.

```
sudo nano led_control.py
```

and type the below code in your file and then we will understand the code one by one.

```
from boltiot import Bolt
api_key = "XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX"
device_id  = "BOLTXXXXX"
mybolt = Bolt(api_key, device_id)
response = mybolt.digitalWrite('0', 'HIGH')
print (response)
```

In the first line, we are importing the Bolt class from the boltiot module and then we assigning the api_key which you will get on Bolt cloud https://cloud.boltiot.com/api_credentials (https://cloud.boltiot.com/api_credentials). This API key is unique for every user and keeps it safe and in third line, you need to assign the device_id. The Device ID can be found on your Cloud Dashboard (http://cloud.boltiot.com) and will be something like BOLTXXXXX where XXXXX are numbers.

In the fourth line, we are passing api_key and device_id to Bolt class as constructor arguments and it will return an instance, I have named it as **mybolt** and in the fifth line, we are calling the digitalWrite function and passing the GPIO pin number and Value of GPIO. Here HIGH means **ON** meaning it will switch on the led on pin 0. You can connect led to any GPIO pin but you have to pass the used pin number in digitalWrite function.

Save the above file using and run it in the terminal.

```
sudo python3 led_control.py
```

and if you want to switch off the led then change the HIGH to LOW in digitalWrite functions in your previous code and your code will look like this -

```
from boltiot import Bolt
api_key = "XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX"
device_id  = "BOLTXXXXX"
mybolt = Bolt(api_key, device_id)
response = mybolt.digitalWrite('0', 'LOW')
```

Save the above file using and run it in the terminal.

```
sudo python3 led_control.py
```

and the above command will switch off the LED.

holla! We have learned about controlling led using Bolt Python library. Now you can add your own logic/condition to switch on and off the led. In the next section, we will learn about the controlling the intensity of the LED.

<table>
<tr><td>PREV</td><td>NEXT</td></tr>
</table>

Forum

| Type your query here | SEARCH |

Q. While executing sudo python3 filename.py command.it is showing that pythn3:can't find the filename.py and there is no such file

Well, it could mean any of the following:
1. You never created the file.
2. You tried to create but did not save the file.
3. You created a file with a different file name than the one you are trying to open right now.
For all these cases, I suggest you perform the steps starting from creating the file again. Do not skip any step.
Note: You have to replace the word filename with the name of the file you have created

see more ()

Q. How check if the boltiot python library is installed in my ubuntu?

To check whether the boltiot python library is installed in ubuntu type the following command:

```
sudo pip freeze
```

This command will output the list of all python libraries installed. Check if the name `boltiot` is present in the list. If it is

see more ()

Q. Why don't we need the IP address for Ubuntu on VirtualBox but need the IP address to access DigitalOcean server?

Every time we need to connect to any server on the Internet we need to put the IP address of the server. The IP address uniquely identifies the server on the Internet. However, in the case of VirtualBox, the virtual machine is created on your computer. Hence when you start the virtual machine, the VirtualBox assigns the IP address to that virtual machine and hence knows the IP address already. Hence it doesn't request you to enter the IP address but tells you to enter the login username and password.

Q. sudo python -m pip install boltiot
on writing this its telling me:
/usr/bin/python: No module named pip

please help me ..i have already ran this command also: sudo apt-get install python3-pip

I think aliases setup is not done properly.
If you type below command

```
sudo python3 —m pip install boltiot
```

see more ()

Q. I am getting an ImportError (No module named 'boltiot') when i run the device status code, how can i solve it?

Please try the commands in the following order:
1. Run the command for setting Pytho3 as your default

```
sudo echo "alias python=python3" >> ~/.bashrc
```

see more ()

View more

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