

ASSIGNMENT 4

Name- Pratul Maurya

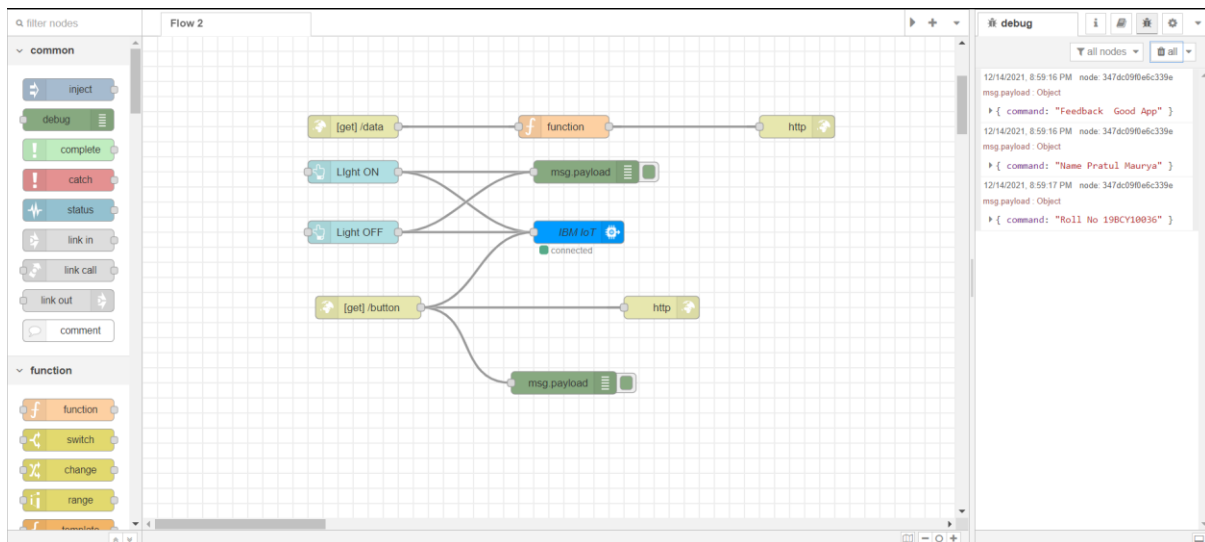
Reg. No- 19BCY10036

Question - Develop a mobile application that takes the user input and sends it to IoT device (python code). print the received data in python shell.

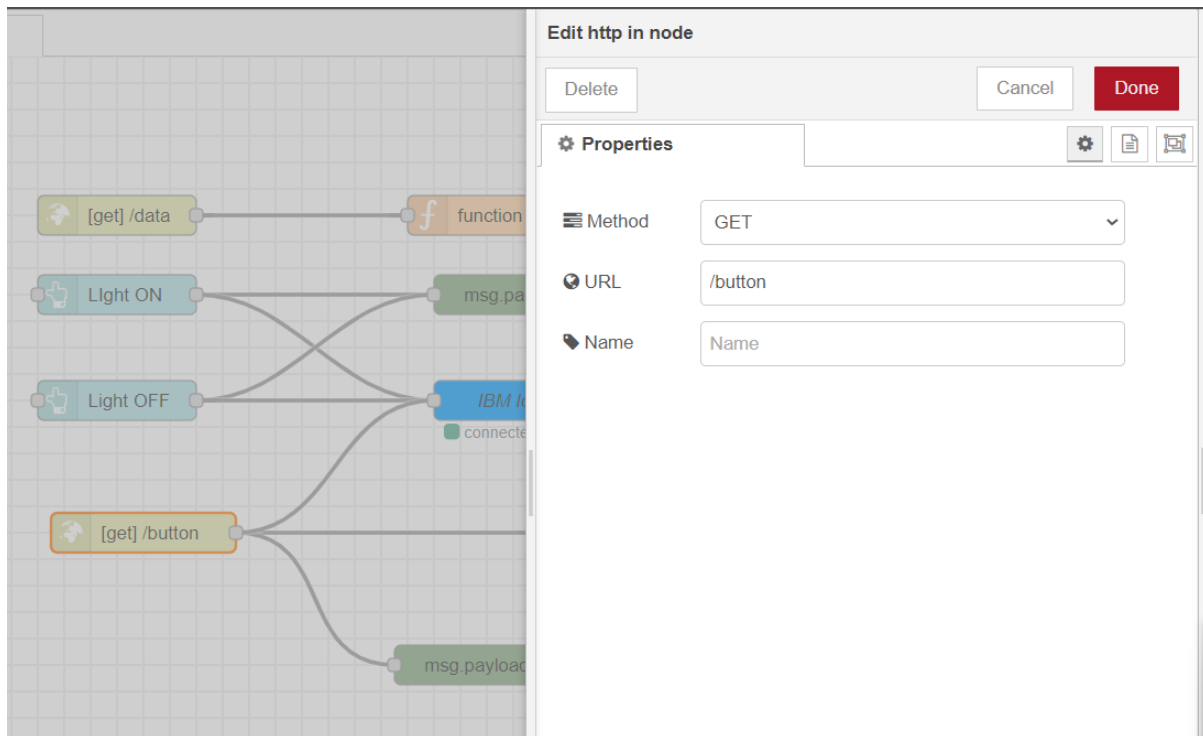
Keep a text box to accept the user input.integrate a submit button. Whenever user enters the text input in text box and clicks the button the data should be sent to IBM cloud using URL (HTTP API).

Solution: -

Step 1- Create your flow on Node-Red app and connect IBM IoT to it.



Step 2- Create HTTP get node and configure it to send data.



Step 3- Edit the python program with your device details along with the Auth Token. Execute the program to send data to the IBM Cloud.

The screenshot shows the Visual Studio Code editor with a Python script named 'ibm_iot.py'. The script is for connecting to the IBM IoT Platform and sending data. The code includes a configuration section with 'orgId', 'typeId', 'deviceId', and 'auth' (token). It defines a 'myCommandCallback' function to handle incoming commands like 'Light ON' and 'Light OFF'. The main part of the script is a 'while True' loop that generates random data (temp, hum, gas) and publishes it to the IBM IoT Platform. The terminal at the bottom shows the output of the script, including the command 'Name Pratul Maurya' and the roll number 'Roll No 19BCY10036'.

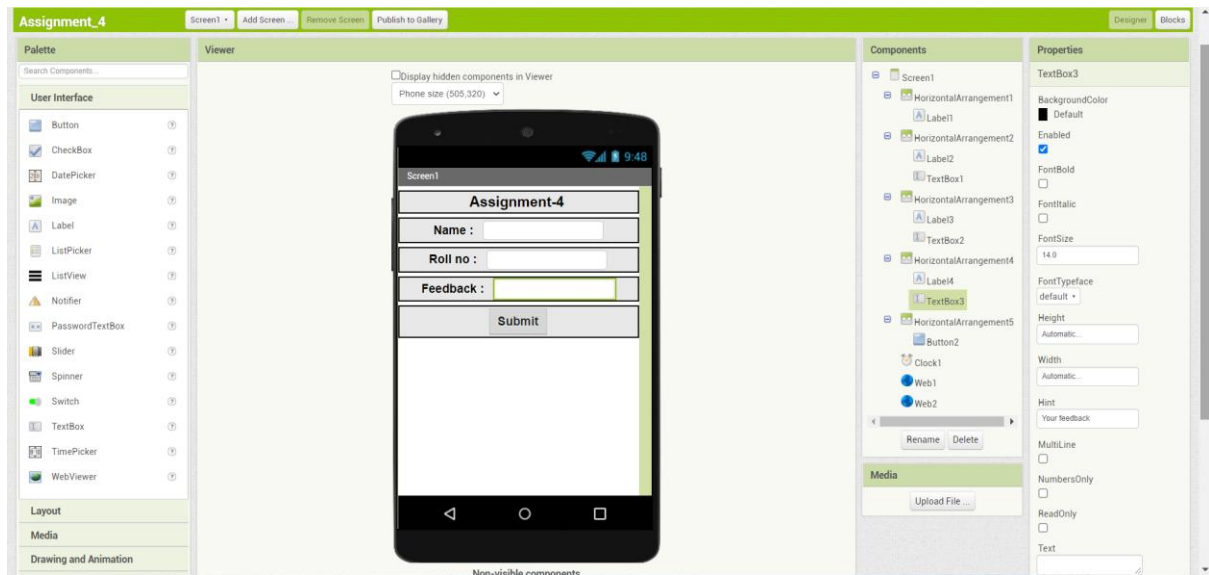
```

4 myConfig = {
5     "orgId": "079100",
6     "typeId": "Device",
7     "deviceId": "1234",
8 },
9 },
10 "auth": {
11     "token": "maurya5799"
12 }
13 }
14
15 def myCommandCallback(cmd):
16     print("Message received from IBM IoT Platform: %s" % cmd.data)
17     s=cmd.data['command']
18     print(s)
19     if s == "Lighton":
20         print("Light is switched ON")
21     elif s == "Lightoff":
22         print("Light is switched OFF")
23
24 client = mqtt.Client("maurya5799")
25 client.connect()
26
27 while True:
28     temp=random.randint(20,125)
29     hum=random.randint(0,100)
30     gas=random.randint(0,100)
31     myData={"temperature":temp, "humidity":hum, "gas":gas}
32     #client.publish(eventId="status", msgformat="json", data=myData, qos=0, onPublish=None)
33     #print("Published data Successfully: %s", myData)
34     client.commandCallback = myCommandCallback
35     #sleep(2)
36     client.disconnect()

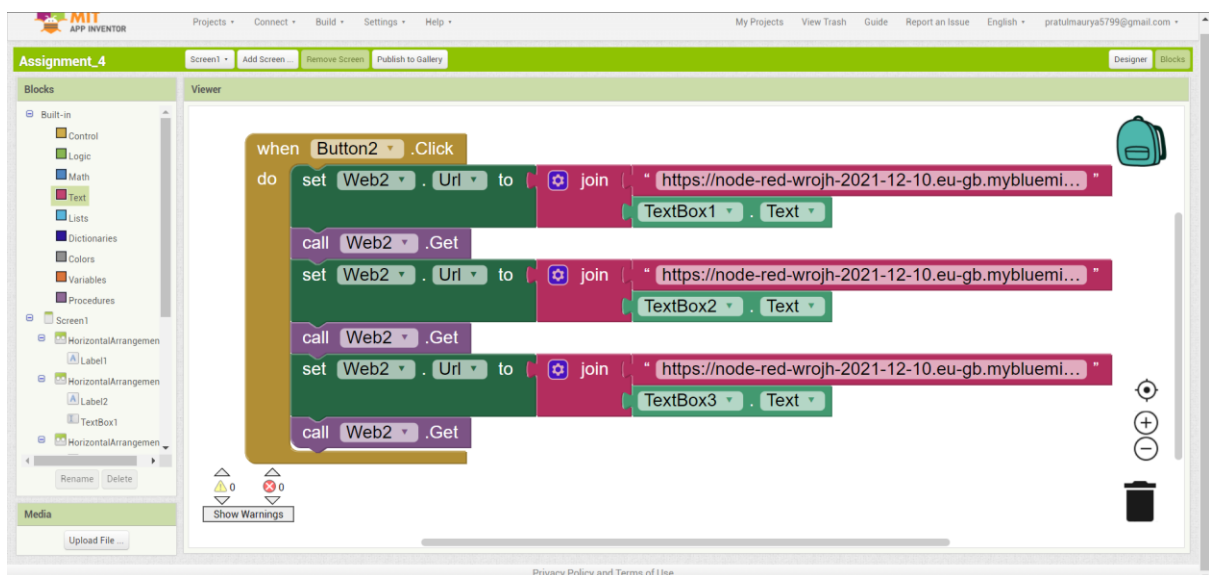
```

Feedback Good App
Message received from IBM IoT Platform: {'command': 'Name Pratul Maurya'}
Name Pratul Maurya
Message received from IBM IoT Platform: {'command': 'Roll No 19BCY10036'}
Roll No 19BCY10036

Step 4- Now in MIT app inventor adds the labels and text boxes in designer view and format them according to you.



Step 5- Then in the blocks view set your condition to send data to the IBM cloud.



Working Screenshots-

Screen1

Assignment-4

Name :

Roll no :

Feedback :

Screen1

Assignment-4

Name :

Roll no :

Feedback :

> App Application Appreciate

1 2 3 4 5 6 7 8 9 0

q w e r t y u i o p

a s d f g h j k l

↑ z x c v b n m ↵

?123 , . HG • EN ✓

⌨

```
zeroday@zeroday-PM:~/IBM_externship$ /bin/python3 /home/zeroday/IBM_externship/ibm_iot.py
2021-12-14 21:14:06,931 - wiotp.sdk.device.client.DeviceClient INFO Connected successfully: d:o79180:Device:1234
Message received from IBM IoT Platform: {'command': 'Roll No 19BCY0036'}
Roll No 19BCY0036
Message received from IBM IoT Platform: {'command': 'Feedback Good App'}
Feedback Good App
Message received from IBM IoT Platform: {'command': 'Name Pratul Maurya'}
Name Pratul Maurya
```

21:19 61%

Screen1

Assignment-4

Name : Saransh Khan

Roll no : 19BCY10035

Feedback : nice

Submit

nice niceee

1 2 3 4 5 6 7 8 9 0

q w e r t y u i o p

a s d f g h j k l

?123 , . HG • EN

```
Message received from IBM IoT Platform: {'command': 'Name Saransh Khan'}
Name Saransh Khan
Message received from IBM IoT Platform: {'command': 'Roll No 19BCY0035'}
Roll No 19BCY0035
Message received from IBM IoT Platform: {'command': 'Feedback nice'}
Feedback nice
```

21:18 62%

Screen1

Assignment-4

Name : Viplove

Roll no : 19BAI10076

Feedback : Exquisite

Submit

pleasures dress beauty

1 2 3 4 5 6 7 8 9 0

q w e r t y u i o p

a s d f g h j k l

?123 , . HG • EN

```
Message received from IBM IoT Platform: {'command': 'Roll No 19BAI10076'}
Roll No 19BAI10076
Message received from IBM IoT Platform: {'command': 'Feedback Exquisite'}
Feedback Exquisite
Message received from IBM IoT Platform: {'command': 'Name Viplove'}
Name Viplove
```