

## ASSIGNMENT-4

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Application id: SPS\_APL\_20210012611

**Aim** - 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).

**Requirement** –

1. IBM cloud service
2. MIT app developer
3. Python
4. MIT AI companion app

**Working** - Here we use the IOT device(python code) to send the home status like room temperature, humidity , fan status , light status to the mobile app. Based on the data we use 4 buttons to send the data back to the IOT device to change the status of light and fan. Which will also be reflected on the app. We also use a text box to take some random message input from the user and send it to the IOT device when a button is pressed which is printed on the python shell .

### Python Code:

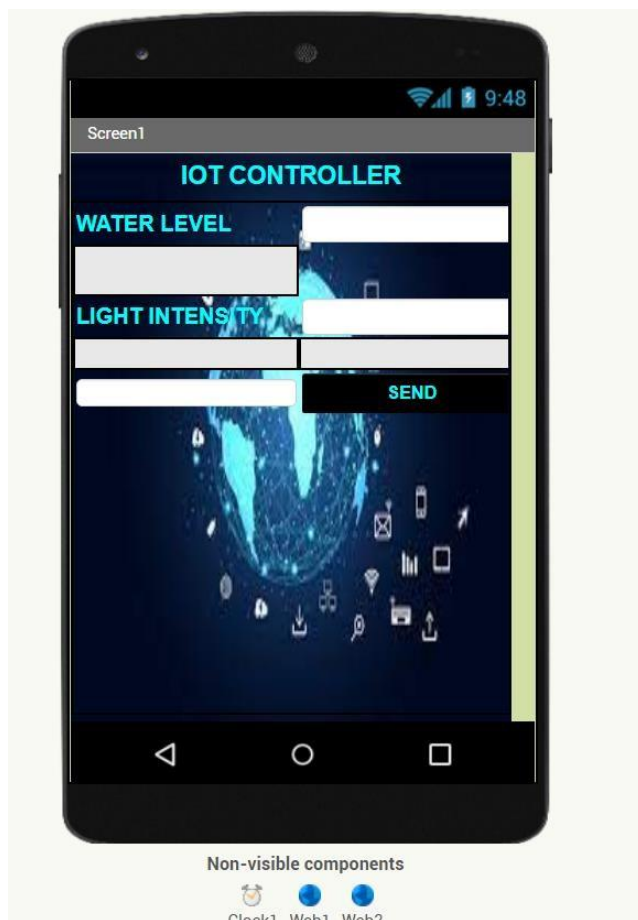
```
import wiotp.sdk.device
import time
import random
myConfig = {
    "identity": {
        "orgId": "z457uu",
        "typeId": "VITDevice",
        "deviceId": "12345"
    },
    "auth": {
        "token": "qdK@12FID3yOE)r7Iz"
    }
}

def myCommandCallback(cmd):
```

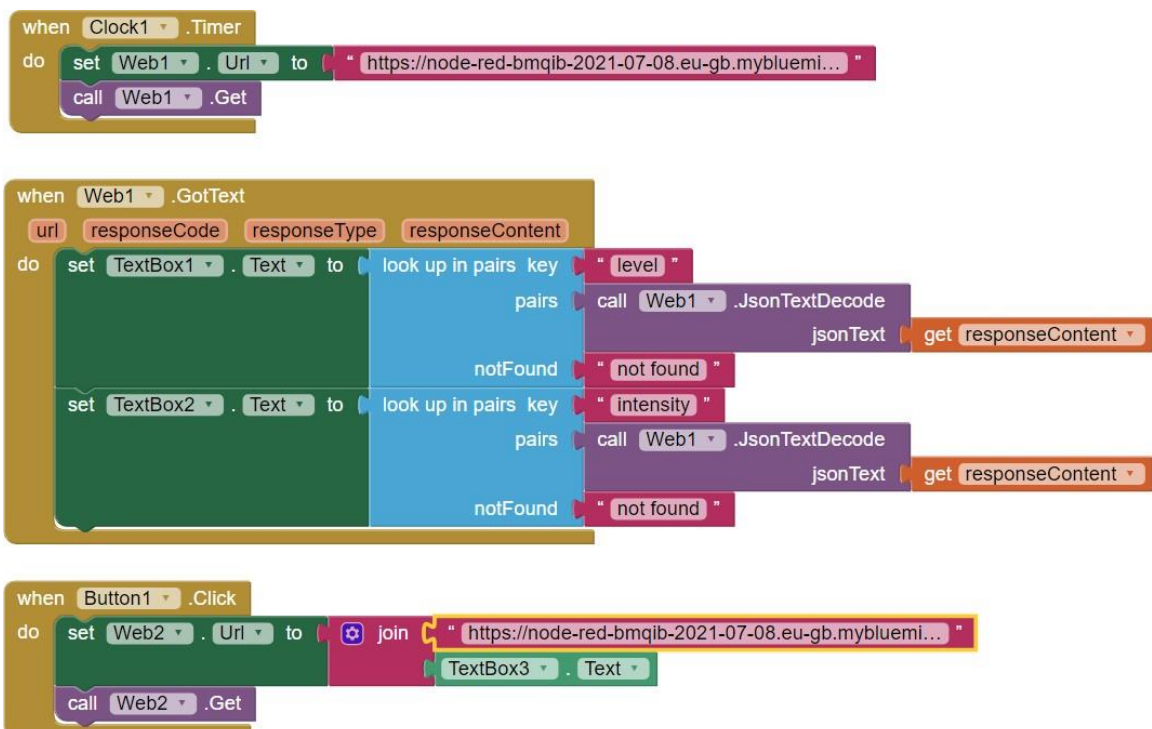
```
    print("Message received from IBM IoT Platform: %s" %  
cmd.data['command'])
```

```
client = wiotp.sdk.device.DeviceClient(config=myConfig, logHandlers=None)  
client.connect()  
while True:  
    waterLevel=random.randint(0,100)  
    lightIntensity=random.randint(0,100)  
    myData={'level':waterLevel, 'intensity':lightIntensity}  
    client.publishEvent(eventId="status", msgFormat="json", data=myData,  
qos=0, onPublish=None)  
    print("Published data Successfully: %s", myData)  
    client.commandCallback = myCommandCallback  
    time.sleep(2)  
  
client.disconnect()
```

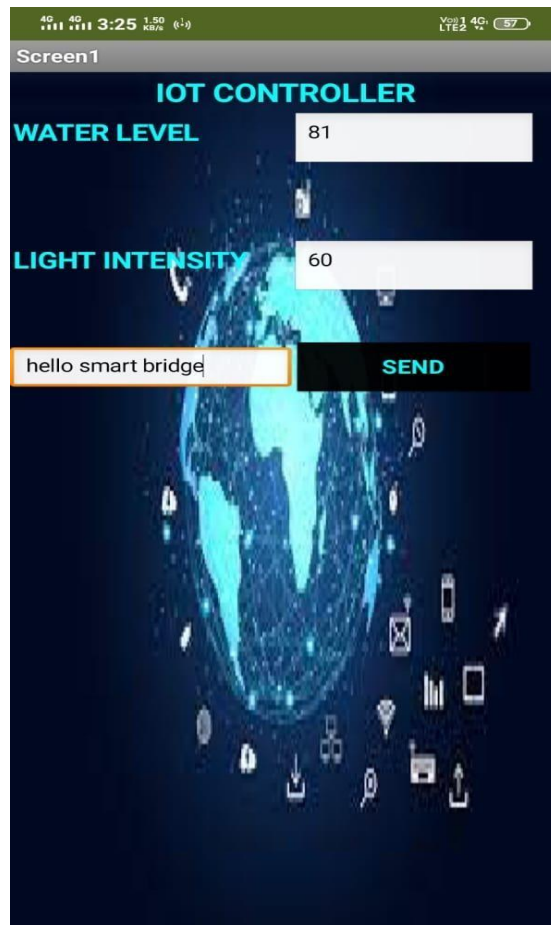
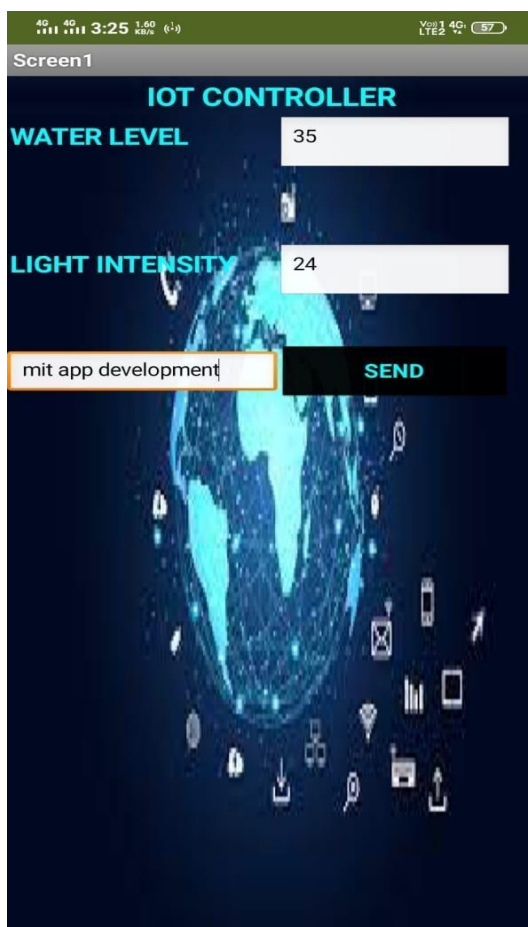
## Front End :



## BACK END:



## MOBILE OUTPUTS:



## PYTHON SHELL:

```
Python 3.9.6 (tags/v3.9.6:db3ff76, Jun 28 2021, 15:26:21) [MSC v.1929 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:\Users\Hp\AppData\Local\Programs\Python\Python39\ibmiot.py =====
2021-07-18 15:24:08,924 wiotp.sdk.device.client.DeviceClient INFO Connected successfully: d:z457uu:VITDevice:12345
Published data Successfully: %s {'level': 84, 'intensity': 16}
Published data Successfully: %s {'level': 57, 'intensity': 4}
Published data Successfully: %s {'level': 24, 'intensity': 36}
Published data Successfully: %s {'level': 3, 'intensity': 1}
Published data Successfully: %s {'level': 14, 'intensity': 91}
Published data Successfully: %s {'level': 81, 'intensity': 66}
Published data Successfully: %s {'level': 31, 'intensity': 32}
Published data Successfully: %s {'level': 67, 'intensity': 23}
Message received from IBM IoT Platform: hello smart bridge
Published data Successfully: %s {'level': 50, 'intensity': 16}
Published data Successfully: %s {'level': 19, 'intensity': 8}
Published data Successfully: %s {'level': 31, 'intensity': 74}
Published data Successfully: %s {'level': 18, 'intensity': 20}
Published data Successfully: %s {'level': 54, 'intensity': 66}
Message received from IBM IoT Platform: mit app development
Published data Successfully: %s {'level': 67, 'intensity': 52}
Published data Successfully: %s {'level': 64, 'intensity': 41}
Published data Successfully: %s {'level': 68, 'intensity': 55}
Published data Successfully: %s {'level': 37, 'intensity': 81}
Published data Successfully: %s {'level': 38, 'intensity': 67}
Published data Successfully: %s {'level': 98, 'intensity': 89}
Published data Successfully: %s {'level': 78, 'intensity': 62}
```