

PROJECT DEVELOPMENT PHASE

SPRINT-4

Date	19 th November 2022
Team ID	PNT2022TMID35857
Project Name	Real-Time River Water Quality Monitoring and Control System

1.SMS module in python using twilio

```
import os
from twilio.rest import Client

account_sid = 'ACb4d033465895822c34e656bf6be69384'
auth_token = '6916b3bf66a451937068378db5a9692a'
client = Client(account_sid, auth_token)

def send_sms():
    message = client.messages.create(
        messaging_service_sid='MG3d02a8b50e684c345993182610957703',
        body='Alert the water is not in good quality!',
        from_='+16294006922',
        to='+919442130329'
    )

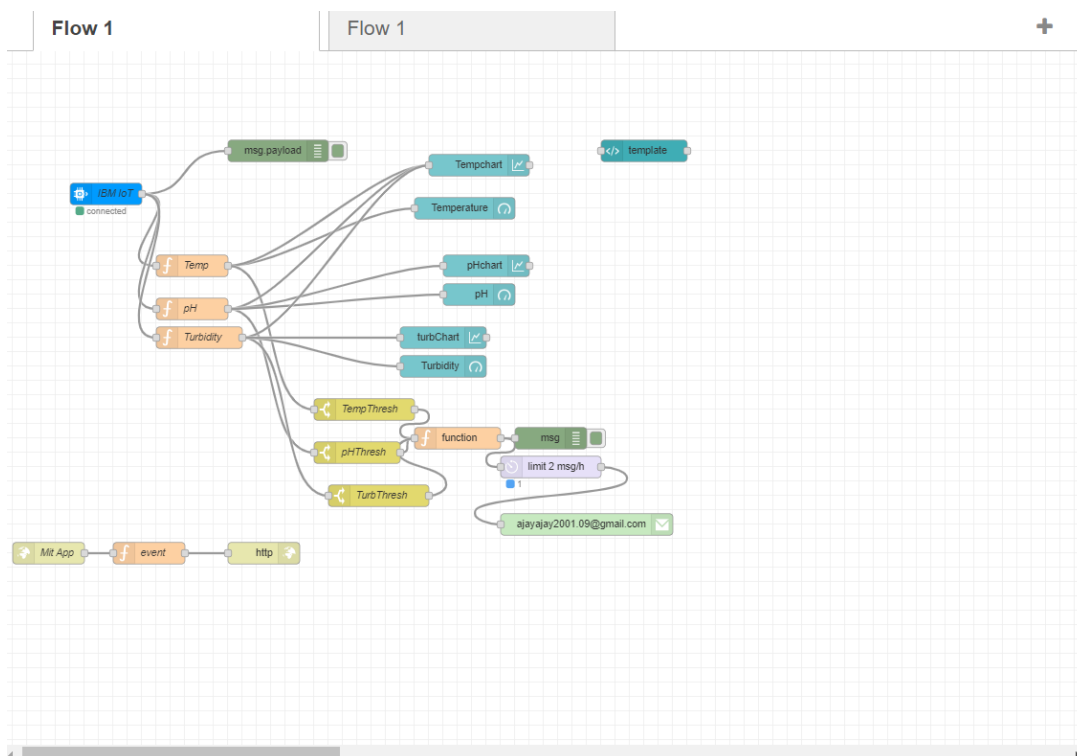
    print(message.sid)
```

2. Python code execution output:


```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL  JUPYTER

WATER IN BAD QUALITY,SMS SEND SUCCESSFULLY!
Published
Temp: 98.60 F / 37.0 C    pH: 8.0  Turbidity:0.08NTU
SMa2772d50b2e020d4d5c1f1a89c812380
WATER IN BAD QUALITY,SMS SEND SUCCESSFULLY!
Published
Temp: 93.20 F / 34.0 C    pH: 2.0  Turbidity:0.96NTU
SMc6b58ac3d74880c0a77b975b7be4caee
WATER IN BAD QUALITY,SMS SEND SUCCESSFULLY!
Published
Temp: 102.20 F / 39.0 C    pH: 8.0  Turbidity:1.98NTU
SMc87f70deb7c6de5a9ef5f54b318a20e
WATER IN BAD QUALITY,SMS SEND SUCCESSFULLY!
Published
Temp: 93.20 F / 34.0 C    pH: 8.0  Turbidity:0.67NTU
Published
Temp: 87.80 F / 31.0 C    pH: 10.0  Turbidity:0.70NTU
SMa58e129329ef9851c9b40b4f3086a266
WATER IN BAD QUALITY,SMS SEND SUCCESSFULLY!
Published
Temp: 104.00 F / 40.0 C    pH: 12.0  Turbidity:0.86NTU
SMfac4d8a9169895e99a219dcb93234bbb
WATER IN BAD QUALITY,SMS SEND SUCCESSFULLY!
```

3. Node-Red implementation for alert:



4.Mail send to notify the authorities:

 **ibm772472@gmail.c...** 2 days ago
to me ^

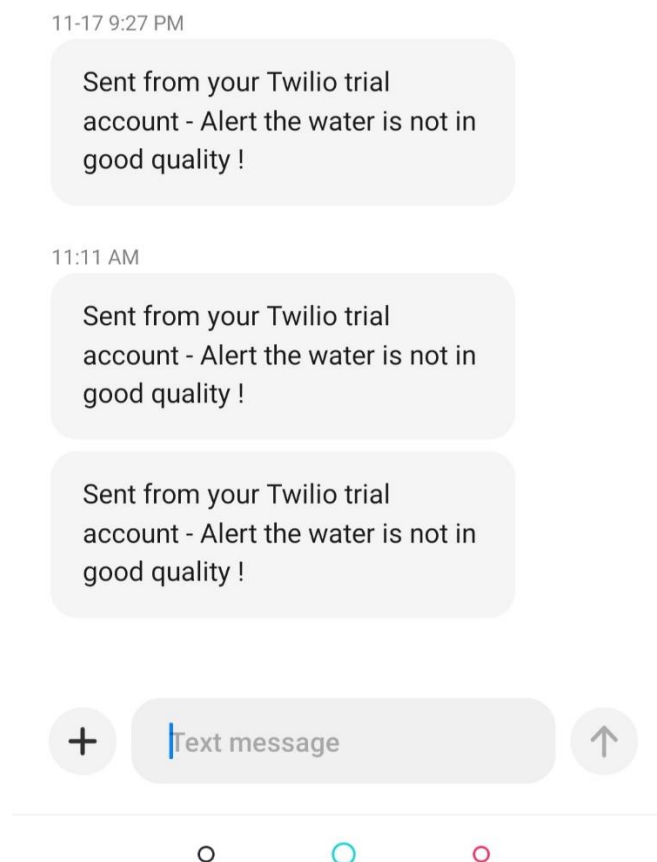
From ibm772472@gmail.com
To ajayajay2001.09@gmail.com
Date 16 Nov 2022, 6:09 pm
 Standard encryption (TLS).
[See security details](#)

AlertTurbidity:25

 **ibm772472@gmail.com** Yesterday
to me v

Alert the water is not in good quality!
Temp:32
pH:8
Turbidity:0.66

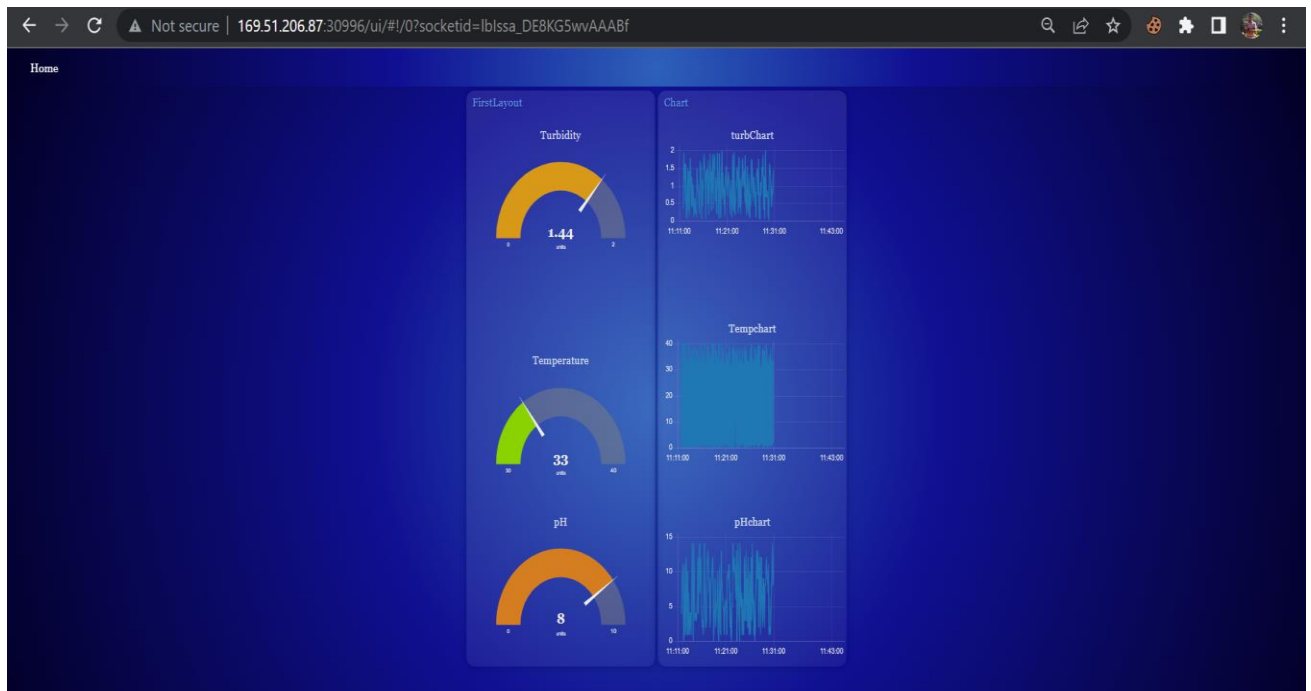
5.SMS send using SMS module in python when water parameters cross the threshold:



6.Data received in IBM Watson cloud platform:

Identity	Device Information	Recent Events	State	Logs	
The recent events listed show the live stream of data that is coming and going from this device.					
Event	Value	Format	Last Received		
motor	{"motor":"off"}	json	a few seconds ago		
motor	{"motor":"on"}	json	a few seconds ago		
motor	{}	json	7 minutes ago		
temp	{"temp":33,"pH":8,"turb":1.44}	json	7 minutes ago		

7.Web UI dashboard:



8.Mobile-UI to receive the water parameters:

