

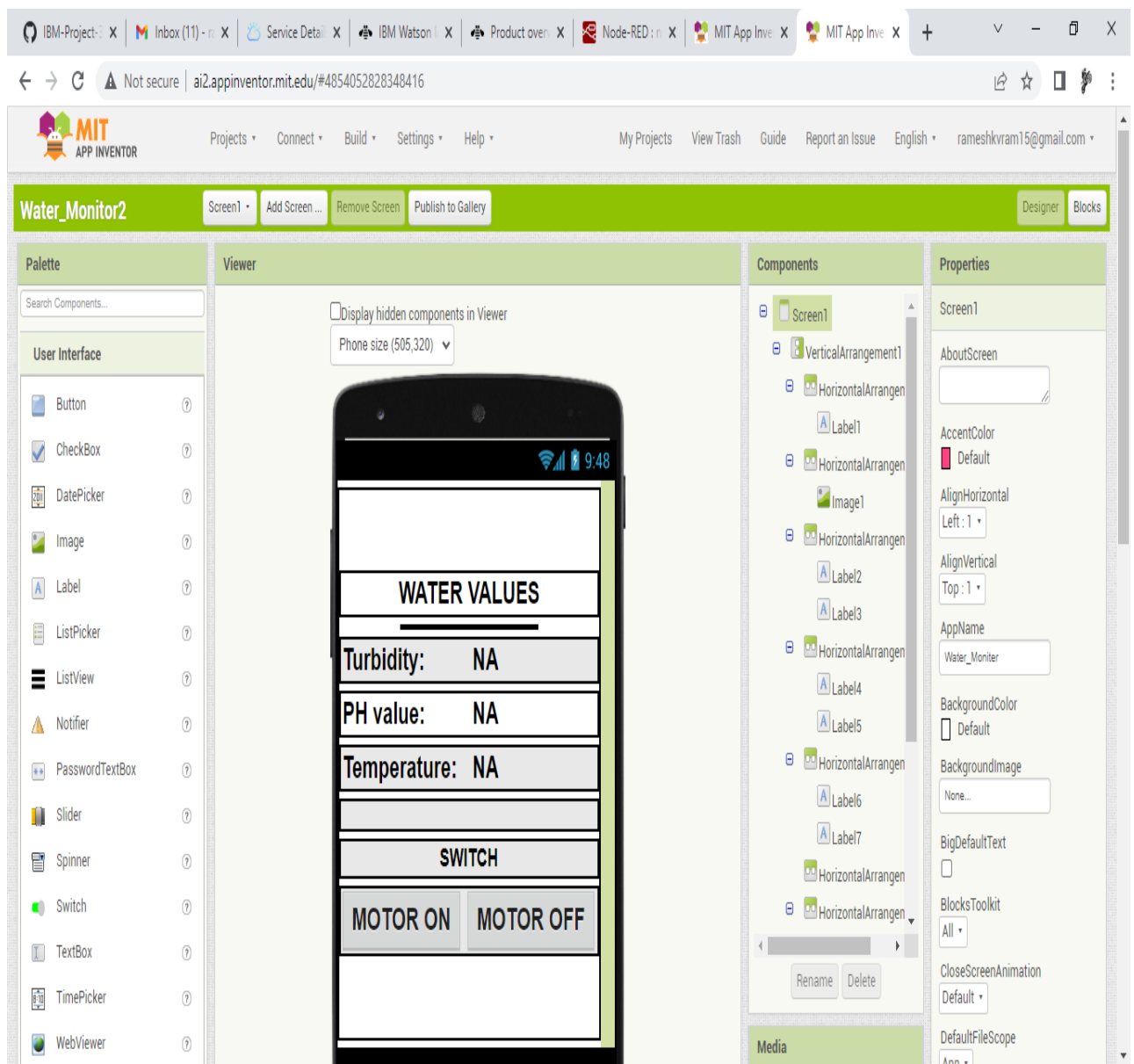
Project Development phase

Sprint-3

Date	12 November 2022
Team ID	PNT2022TMID48312
Project Name	Real-time river water quality monitoring and control system

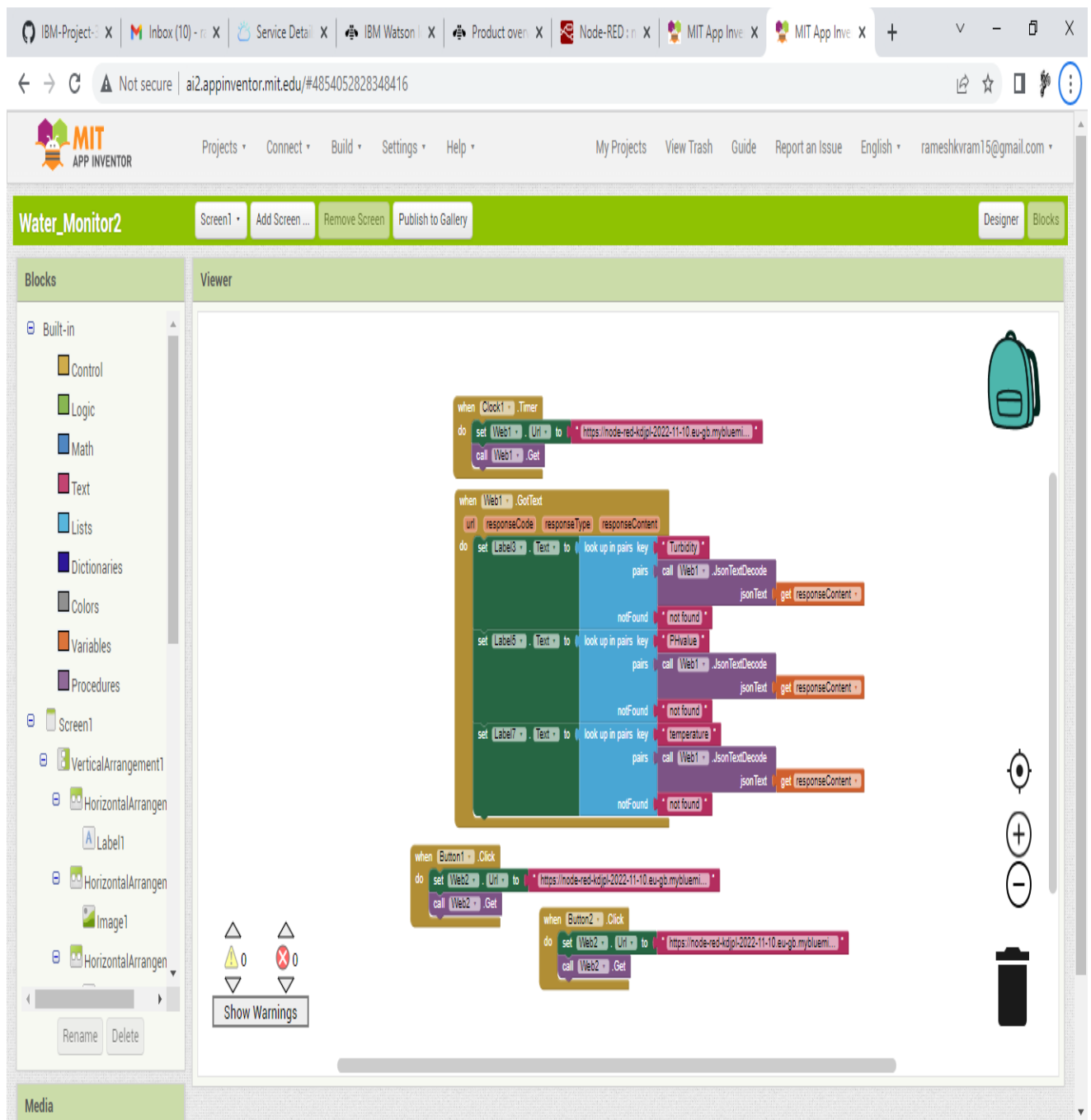
USN-10

As a user, I can design the front end in MIT app inventor



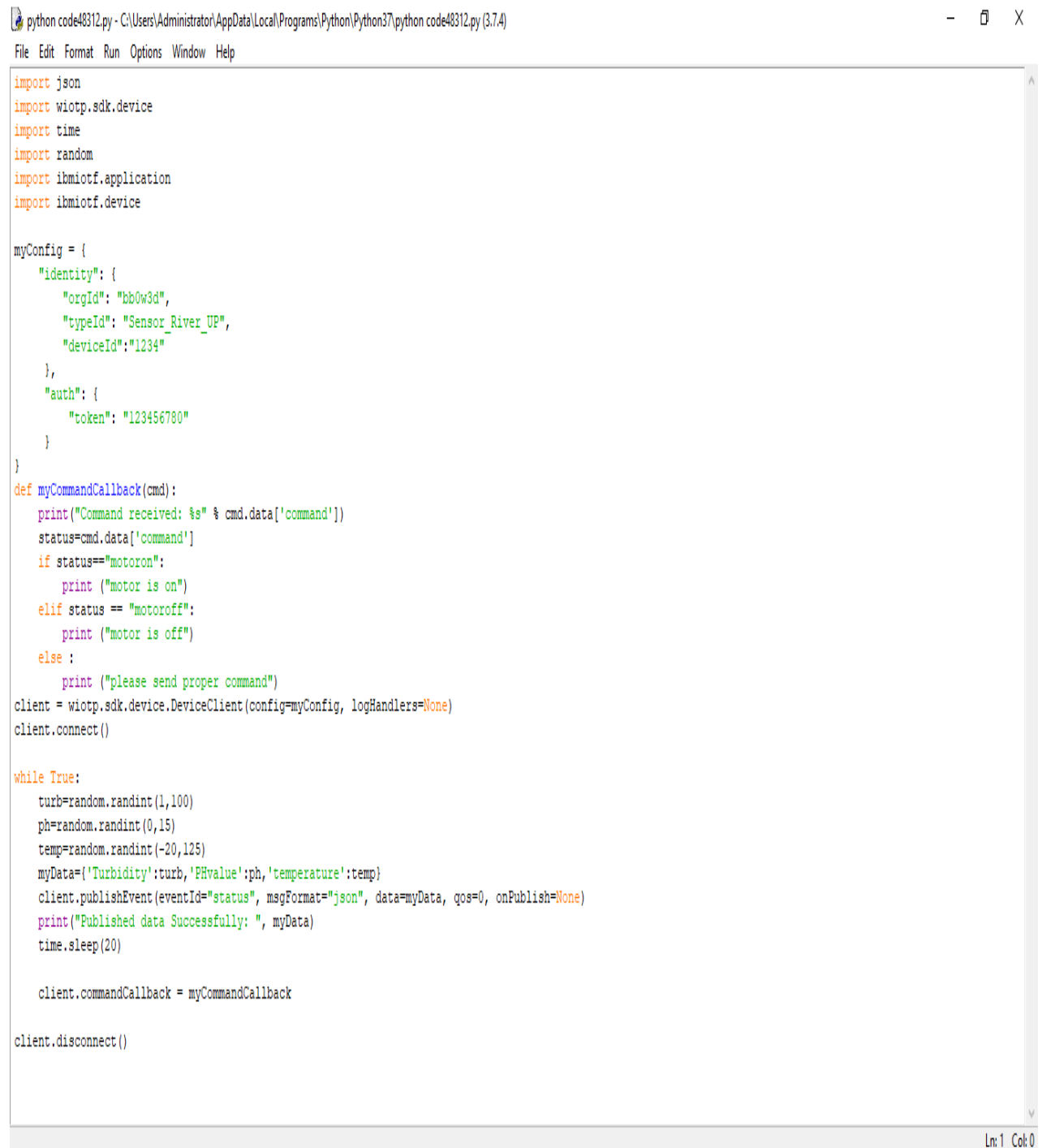
USN-11

As a user, I can design the back end (blocks) in MIT app inventor



USN-12

As a user, I can develop the python script



The screenshot shows a Python IDE window titled "python code48312.py - C:\Users\Administrator\AppData\Local\Programs\Python\Python37\python code48312.py (3.7.4)". The menu bar includes File, Edit, Format, Run, Options, Window, and Help. The code is as follows:

```
import json
import wiotp.sdk.device
import time
import random
import ibmiotf.application
import ibmiotf.device

myConfig = {
    "identity": {
        "orgId": "bb0w3d",
        "typeId": "Sensor_River_UP",
        "deviceId": "1234"
    },
    "auth": {
        "token": "123456780"
    }
}

def myCommandCallback(cmd):
    print("Command received: %s" % cmd.data['command'])
    status=cmd.data['command']
    if status=="motoron":
        print ("motor is on")
    elif status == "motoroff":
        print ("motor is off")
    else :
        print ("please send proper command")

client = wiotp.sdk.device.DeviceClient(config=myConfig, logHandlers=None)
client.connect()

while True:
    turb=random.randint(1,100)
    ph=random.randint(0,15)
    temp=random.randint(-20,125)
    myData={'Turbidity':turb,'PHvalue':ph,'temperature':temp}
    client.publishEvent(eventId="status", msgFormat="json", data=myData, qos=0, onPublish=None)
    print("Published data Successfully: ", myData)
    time.sleep(20)

    client.commandCallback = myCommandCallback

client.disconnect()
```

The status bar at the bottom right indicates "Ln: 1 Col: 0".

USN-13

As a user, I can get the output of the program with the parameters



```
Python 3.7.4 Shell
File Edit Shell Debug Options Window Help
Published data Successfully: {'Turbidity': 13, 'PHvalue': 2, 'temperature': 111}
Published data Successfully: {'Turbidity': 52, 'PHvalue': 14, 'temperature': 57}
Published data Successfully: {'Turbidity': 46, 'PHvalue': 0, 'temperature': -8}
Published data Successfully: {'Turbidity': 41, 'PHvalue': 2, 'temperature': 121}
Published data Successfully: {'Turbidity': 81, 'PHvalue': 6, 'temperature': 97}
Published data Successfully: {'Turbidity': 32, 'PHvalue': 1, 'temperature': 2}
Published data Successfully: {'Turbidity': 60, 'PHvalue': 11, 'temperature': 43}
Published data Successfully: {'Turbidity': 97, 'PHvalue': 4, 'temperature': 55}
Published data Successfully: {'Turbidity': 71, 'PHvalue': 1, 'temperature': 116}
Published data Successfully: {'Turbidity': 42, 'PHvalue': 13, 'temperature': 71}
Published data Successfully: {'Turbidity': 61, 'PHvalue': 12, 'temperature': 59}
Published data Successfully: {'Turbidity': 81, 'PHvalue': 6, 'temperature': -15}
Published data Successfully: {'Turbidity': 52, 'PHvalue': 5, 'temperature': 69}
Published data Successfully: {'Turbidity': 29, 'PHvalue': 4, 'temperature': 12}
Published data Successfully: {'Turbidity': 26, 'PHvalue': 6, 'temperature': 14}
Published data Successfully: {'Turbidity': 88, 'PHvalue': 15, 'temperature': 23}
Published data Successfully: {'Turbidity': 22, 'PHvalue': 15, 'temperature': 27}
Published data Successfully: {'Turbidity': 50, 'PHvalue': 15, 'temperature': 9}
Published data Successfully: {'Turbidity': 9, 'PHvalue': 6, 'temperature': -8}
Published data Successfully: {'Turbidity': 54, 'PHvalue': 9, 'temperature': 96}
Published data Successfully: {'Turbidity': 56, 'PHvalue': 6, 'temperature': 71}
Published data Successfully: {'Turbidity': 64, 'PHvalue': 4, 'temperature': 52}
Published data Successfully: {'Turbidity': 94, 'PHvalue': 0, 'temperature': 101}
Published data Successfully: {'Turbidity': 89, 'PHvalue': 14, 'temperature': 49}
Published data Successfully: {'Turbidity': 72, 'PHvalue': 14, 'temperature': 110}
Published data Successfully: {'Turbidity': 21, 'PHvalue': 14, 'temperature': 12}
Published data Successfully: {'Turbidity': 36, 'PHvalue': 8, 'temperature': 70}
Published data Successfully: {'Turbidity': 93, 'PHvalue': 5, 'temperature': 92}
Published data Successfully: {'Turbidity': 93, 'PHvalue': 1, 'temperature': 52}
Published data Successfully: {'Turbidity': 91, 'PHvalue': 13, 'temperature': 3}
Published data Successfully: {'Turbidity': 4, 'PHvalue': 10, 'temperature': -20}
Published data Successfully: {'Turbidity': 88, 'PHvalue': 4, 'temperature': 84}
Published data Successfully: {'Turbidity': 27, 'PHvalue': 9, 'temperature': 110}
Published data Successfully: {'Turbidity': 54, 'PHvalue': 10, 'temperature': 35}
Published data Successfully: {'Turbidity': 83, 'PHvalue': 11, 'temperature': 125}
Published data Successfully: {'Turbidity': 85, 'PHvalue': 0, 'temperature': 11}
Published data Successfully: {'Turbidity': 47, 'PHvalue': 5, 'temperature': 110}
Published data Successfully: {'Turbidity': 48, 'PHvalue': 9, 'temperature': 95}
Published data Successfully: {'Turbidity': 1, 'PHvalue': 13, 'temperature': 19}
Published data Successfully: {'Turbidity': 100, 'PHvalue': 13, 'temperature': 13}
Published data Successfully: {'Turbidity': 78, 'PHvalue': 8, 'temperature': 122}
Published data Successfully: {'Turbidity': 38, 'PHvalue': 11, 'temperature': 65}
Published data Successfully: {'Turbidity': 15, 'PHvalue': 8, 'temperature': 62}
```

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USN-14

As a user, I can download MIT AI2 companion app in my mobile



MIT AI2 Companion

MIT App Inventor

Uninstall

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