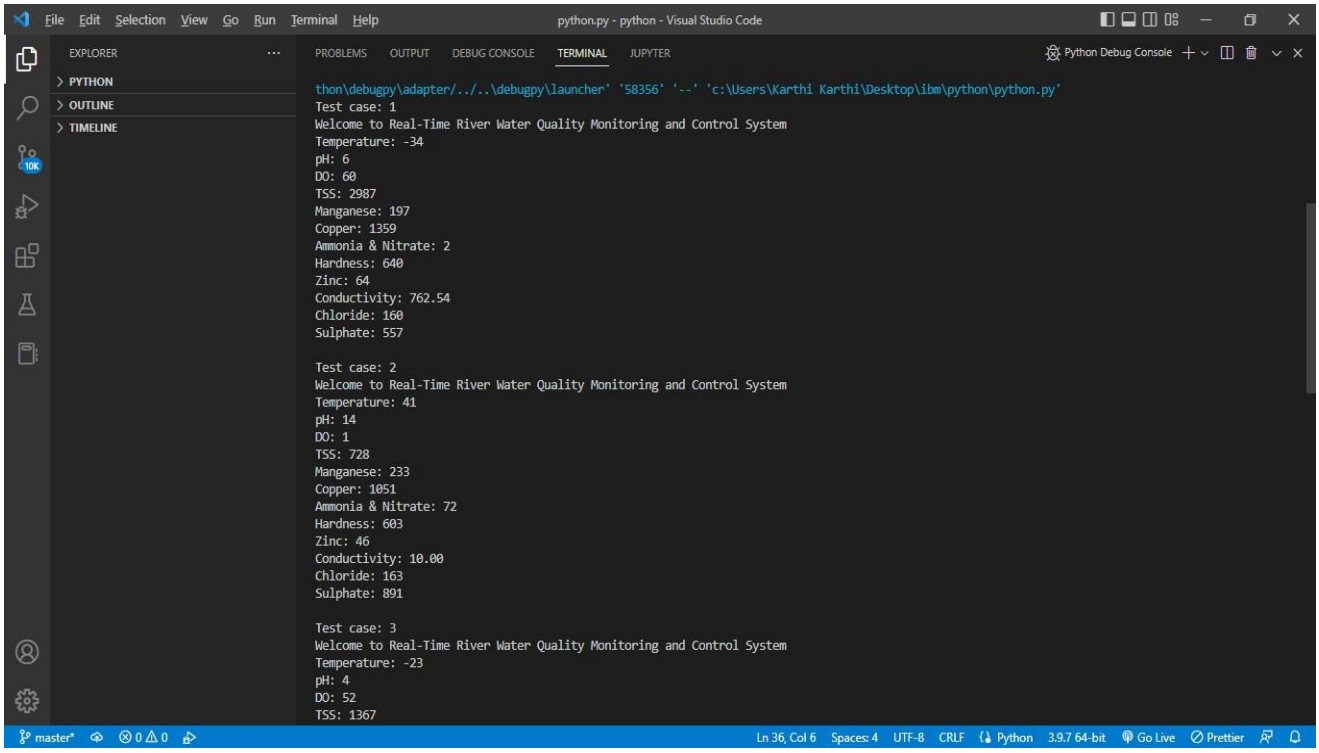
SPRINT-3

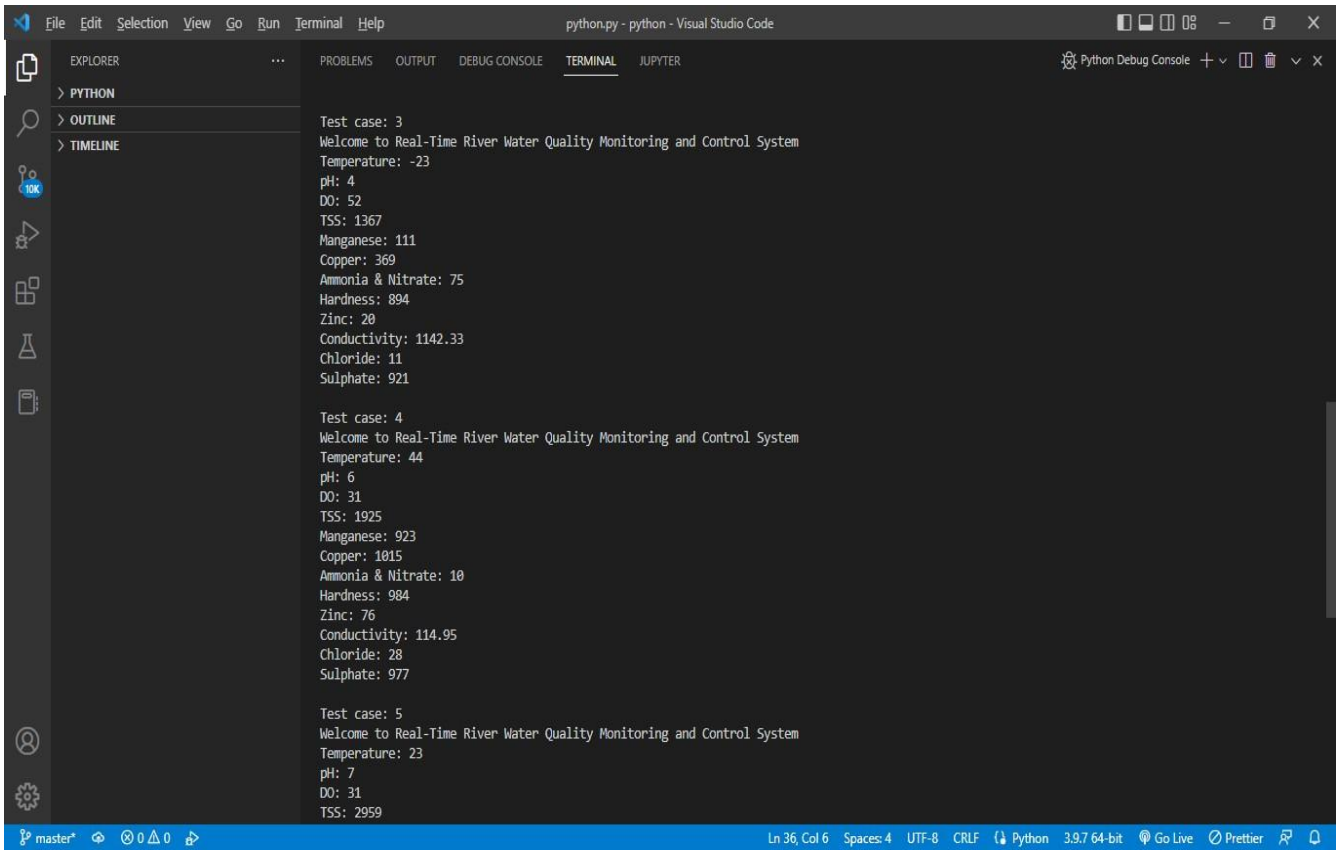
PYTHON CODE:

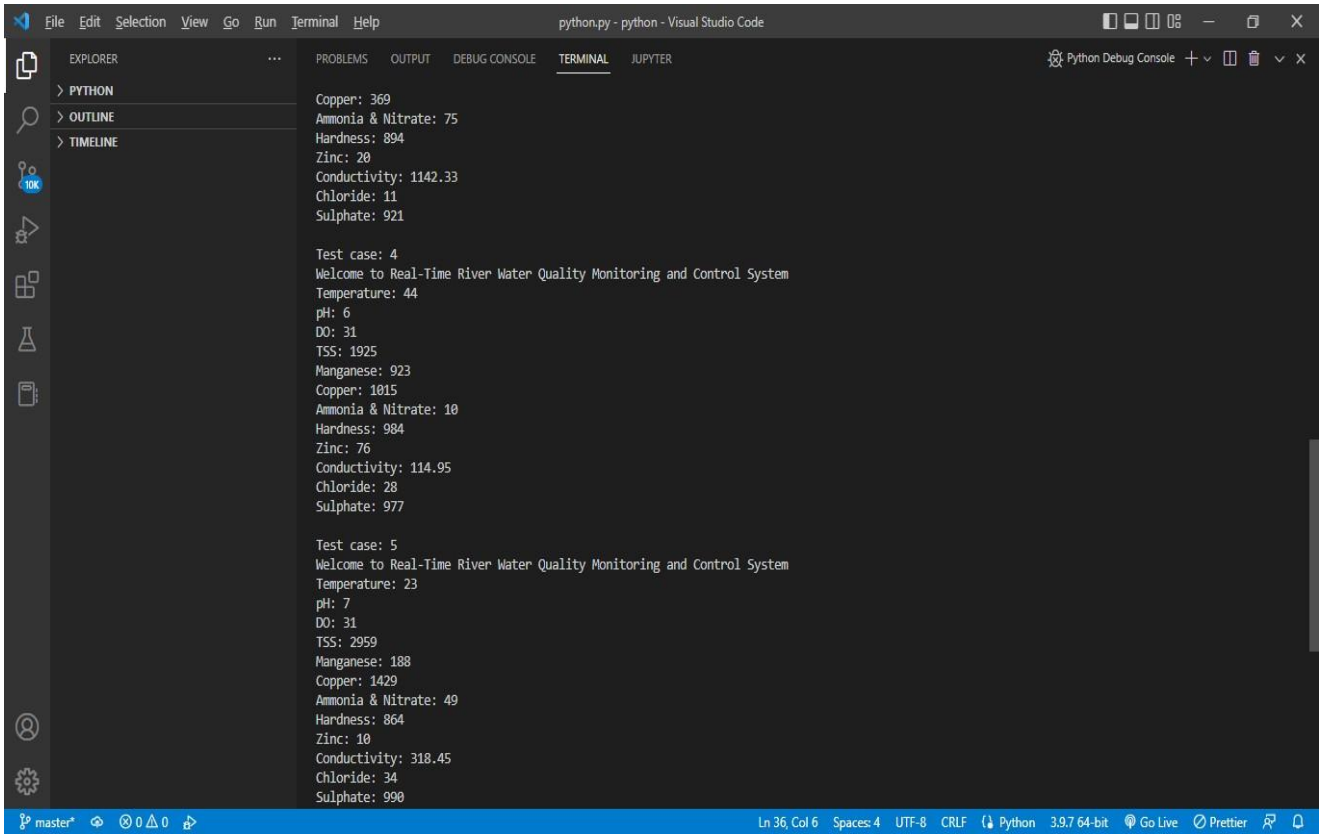
```
#importing Random function to generate the value
import random as rand


for i in range(5):
    print("Test case:",i+1)
    print("Welcome to Real-Time River Water Quality Monitoring and Control
System")
    temperature = int(rand.randint(-40,125))
    pH = int(rand.randint(0,14))
    DO = int(rand.randint(0,100))
    TSS = int(rand.randint(0,3700))
    Manganese = int(rand.randint(0,1000))
    Copper = int(rand.randint(0,2000))
    ammonia_Nitrate = int(rand.randint(0,100))
    Hardness = int(rand.randint(0,1000))
    Zinc =  int(rand.randint(0,100))
    Conductivity =  f"{float(rand.uniform(0.001,2000)):.2f}"
    Chloride = int(rand.randint(0,200))
    Sulphate = int(rand.randint(0,1000))
    #These variables store value of ramdom data to be shared to the cloud

    #printing the values
    print(
        "Temperature:", temperature,
        "\npH:", pH,
```

```
        "\nDO:", DO,
        "\nTSS:", TSS,
        "\nManganese:", Manganese,
        "\nCopper:", Copper,
        "\nAmmonia & Nitrate:",ammonia_Nitrate,
        "\nHardness:",Hardness,
        "\nZinc:", Zinc,
        "\nConductivity:", Conductivity,
        "\nChloride:", Chloride,
        "\nSulphate:", Sulphate, "\n"
    )
```

OUTPUT:


File Edit Selection View Go Run Terminal Help
python.py - python - Visual Studio Code
EXPLORER
PYTHON
OUTLINE
TIMELINE
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL JUPYTER
Python Debug Console
thon\debugpy\adapter/../..\debugpy\launcher' '58356' '--' 'c:\Users\Karthi Karthi\Desktop\ibm\python\python.py'
Test case: 1
Welcome to Real-Time River Water Quality Monitoring and Control System
Temperature: -34
pH: 6
DO: 60
TSS: 2987
Manganese: 197
Copper: 1359
Ammonia & Nitrate: 2
Hardness: 640
Zinc: 64
Conductivity: 762.54
Chloride: 160
Sulphate: 557
Test case: 2
Welcome to Real-Time River Water Quality Monitoring and Control System
Temperature: 41
pH: 14
DO: 1
TSS: 728
Manganese: 233
Copper: 1051
Ammonia & Nitrate: 72
Hardness: 603
Zinc: 46
Conductivity: 10.00
Chloride: 163
Sulphate: 891
Test case: 3
Welcome to Real-Time River Water Quality Monitoring and Control System
Temperature: -23
pH: 4
DO: 52
TSS: 1367
master*
Ln 36, Col 6 Spaces: 4 UTF-8 CRLF Python 3.9.7 64-bit Go Live Prettier


File Edit Selection View Go Run Terminal Help
python.py - python - Visual Studio Code
EXPLORER
PYTHON
OUTLINE
TIMELINE
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL JUPYTER
Python Debug Console
Test case: 3
Welcome to Real-Time River Water Quality Monitoring and Control System
Temperature: -23
pH: 4
DO: 52
TSS: 1367
Manganese: 111
Copper: 369
Ammonia & Nitrate: 75
Hardness: 894
Zinc: 20
Conductivity: 1142.33
Chloride: 11
Sulphate: 921
Test case: 4
Welcome to Real-Time River Water Quality Monitoring and Control System
Temperature: 44
pH: 6
DO: 31
TSS: 1925
Manganese: 923
Copper: 1015
Ammonia & Nitrate: 10
Hardness: 984
Zinc: 76
Conductivity: 114.95
Chloride: 28
Sulphate: 977
Test case: 5
Welcome to Real-Time River Water Quality Monitoring and Control System
Temperature: 23
pH: 7
DO: 31
TSS: 2959
master*
Ln 36, Col 6 Spaces: 4 UTF-8 CRLF Python 3.9.7 64-bit Go Live Prettier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python.py - python - Visual Studio Code
EXPLORER
PYTHON
OUTLINE
TIMELINE
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL JUPYTER
Python Debug Console
Copper: 369
Ammonia & Nitrate: 75
Hardness: 894
Zinc: 20
Conductivity: 1142.33
Chloride: 11
Sulphate: 921
Test case: 4
Welcome to Real-Time River Water Quality Monitoring and Control System
Temperature: 44
pH: 6
DO: 31
TSS: 1925
Manganese: 923
Copper: 1015
Ammonia & Nitrate: 10
Hardness: 984
Zinc: 76
Conductivity: 114.95
Chloride: 28
Sulphate: 977
Test case: 5
Welcome to Real-Time River Water Quality Monitoring and Control System
Temperature: 23
pH: 7
DO: 31
TSS: 2959
Manganese: 188
Copper: 1429
Ammonia & Nitrate: 49
Hardness: 864
Zinc: 10
Conductivity: 318.45
Chloride: 34
Sulphate: 990
master*
Ln 36, Col 6 Spaces: 4 UTF-8 CRLF Python 3.9.7 64-bit Go Live Prettier