

### SPRINT-3

Team ID	PNT2022TMID16068
Project Name	Real-Time River Water Quality Monitoring and Control System

#### 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 random 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:**

Test case: 1

Welcome to Real-Time River Water Quality Monitoring and Control System

Temperature: 106

pH: 14

DO: 66

TSS: 3671

Manganese: 527

Copper: 897

Ammonia & Nitrate: 36

Hardness: 906

Zinc: 83

Conductivity: 9.31

Chloride: 180

Sulphate: 829

Test case: 2

Welcome to Real-Time River Water Quality Monitoring and Control System

Temperature: 68

pH: 14

DO: 9

TSS: 945

Manganese: 664

Copper: 129

Ammonia & Nitrate: 58

Hardness: 299

Zinc: 9

Conductivity: 1396.60

Chloride: 109

Sulphate: 636

Test case: 3

Welcome to Real-Time River Water Quality Monitoring and Control System

Temperature: 96

pH: 3

DO: 12

TSS: 2028

Manganese: 712

Copper: 162

Ammonia & Nitrate: 48

Hardness: 680

Zinc: 86

Conductivity: 1386.56

Chloride: 57

Sulphate: 527

Test case: 4

Welcome to Real-Time River Water Quality Monitoring and Control System

Temperature: 8

pH: 6

DO: 3

TSS: 2628

Manganese: 744

Copper: 415

Ammonia & Nitrate: 89

Hardness: 283

Zinc: 61

Conductivity: 1735.73

Chloride: 3

Sulphate: 18

Test case: 5

Welcome to Real-Time River Water Quality Monitoring and Control System

Temperature: 14

pH: 0

DO: 30

TSS: 2521

Manganese: 618

Copper: 498

Ammonia & Nitrate: 54

Hardness: 415

Zinc: 64

Conductivity: 1046.15

Chloride: 138

Sulphate: 653