

## SPRINT-3

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|--------------|---|
| Team ID      | PNT2022TMID41673  |
| 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 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:**

```
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