

DEVELOPMENT PHASE - SPRINT 3

Date	10 November 2022
Team ID	PNT2022TMID15074
Project Name	IOT Based Real – time River Water Quality Monitoring and Control System

```
Test case: 1
Welcome to Real-Time River Water Quality Monitoring and Control System
Temperature: 80
pH: 6
DO: 5
TSS: 2881
Manganese: 499
Copper: 1057
Ammonia & Nitrate: 84
Hardness: 253
Zinc: 92
Conductivity: 434.60
Chloride: 162
Sulphate: 987
```

```
Test case: 2
Welcome to Real-Time River Water Quality Monitoring and Control System
Temperature: -3
pH: 13
DO: 38
TSS: 620
Manganese: 578
Copper: 1250
Ammonia & Nitrate: 95
Hardness: 380
Zinc: 81
Conductivity: 812.55
Chloride: 0
Sulphate: 225
```

```
Test case: 3
Welcome to Real-Time River Water Qual
Temperature: 21
pH: 7
DO: 53
TSS: 3023
Manganese: 131
Copper: 1797
Ammonia & Nitrate: 52
Hardness: 95
Zinc: 29
Conductivity: 1194.98
Chloride: 200
Sulphate: 16
```

```
Test case: 4
Welcome to Real-Time River Water Qua
Temperature: 118
pH: 2
DO: 9
TSS: 2330
Manganese: 699
Copper: 461
Ammonia & Nitrate: 44
Hardness: 431
Zinc: 96
Conductivity: 1892.43
Chloride: 128
Sulphate: 900
```

```
Test case: 5
Welcome to Real-Time River Water Qual
Temperature: -9
pH: 0
DO: 89
TSS: 3694
Manganese: 482
Copper: 976
Ammonia & Nitrate: 85
Hardness: 774
Zinc: 12
Conductivity: 1690.35
Chloride: 120
Sulphate: 260
```

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"
)
```