Sprint-3

Date	8 November 2022
Team ID	PNT2022TMID07524
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:


Python 3.7.0 Shell
File Edit Shell Debug Options Window Help
Conductivity: 464.26
Chloride: 63
Sulphate: 248
Test case: 3
Welcome to Real-Time River Water Quality Monitoring and Control System
Temperature: 123
pH: 0
DO: 13
TSS: 1210
Manganese: 200
Copper: 1666
Ammonia & Nitrate: 80
Hardness: 110
Zinc: 13
Conductivity: 766.77
Chloride: 254
Sulphate: 715
Test case: 4
Welcome to Real-Time River Water Quality Monitoring and Control System
Temperature: -10
pH: 1
DO: 74
TSS: 124
Manganese: 274
Copper: 959
Ammonia & Nitrate: 62
Hardness: 372
Zinc: 22
Conductivity: 224.14
Chloride: 26
Sulphate: 248
Test case: 5
Welcome to Real-Time River Water Quality Monitoring and Control System
Temperature: 76
pH: 5
DO: 43
TSS: 2894
Manganese: 68
Copper: 913
Ammonia & Nitrate: 61
Hardness: 476
Zinc: 6
Conductivity: 376.56
Chloride: 29
Sulphate: 354
>>>


Python 3.7.0 Shell
File Edit Shell Debug Options Window Help
Python 3.7.0 (v3.7.0:1bf9cc5093, Jun 27 2018, 04:59:51) [MSC v.1914 64 bit (AMD64)] on win32
Type "copyright", "credits" or "license()" for more information.
>>>
RESTART: C:/Users/AK/AppData/Local/Programs/Python/Python37/python sprint.py
Test case: 1
Welcome to Real-Time River Water Quality Monitoring and Control System
Temperature: 85
pH: 8
DO: 5
TSS: 572
Manganese: 134
Copper: 1917
Ammonia & Nitrate: 67
Hardness: 804
Zinc: 45
Conductivity: 1992.93
Chloride: 290
Sulphate: 130
Test case: 2
Welcome to Real-Time River Water Quality Monitoring and Control System
Temperature: -1
pH: 0
DO: 77
TSS: 2517
Manganese: 313
Copper: 927
Ammonia & Nitrate: 33
Hardness: 693
Zinc: 16
Conductivity: 1922.86
Chloride: 101
Sulphate: 850
Test case: 3
Welcome to Real-Time River Water Quality Monitoring and Control System
Temperature: 119
pH: 10
DO: 81
TSS: 1782
Manganese: 389
Copper: 1871
Ammonia & Nitrate: 41
Hardness: 818
Zinc: 4
Conductivity: 340.40
Chloride: 132
Sulphate: 635
Test case: 4