**SPRINT-3**

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| Team ID | PNT2022TMID46761 |
| Project Name | Real-Time River Water Quality Monitoring and Control System |

**PYTHON CODE:**

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| #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:**

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| 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 |

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| 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 |