OBJECTIVE:-

1. **Retrieve all data for water samples that are marked as potable.**
2. **Find the average Hardness of all water samples.**
3. **Get the count of potable and non-potable water samples.**
4. **Retrieve all data for samples where ph is between 7.0 and 8.0 (inclusive).**
5. **Find the ph and Conductivity of the sample with the lowest Organic_carbon value.**
6. **Retrieve the ph, Hardness, and Solids for samples where Potability is 1, and Chloramines is below the overall average Chloramines for potable samples.**
7. **Find the ph of samples that have Sulfate concentration within two standard deviations of the mean Sulfate concentration (assuming standard deviation calculation is available or can be approximated).**
8. **Determine the number of non-potable samples where Turbidity is greater than 4 and Organic_carbon is less than 10.**
9. **List ph, Hardness, and Potability for samples that have Conductivity greater than 500 OR Organic_carbon greater than 20, but are NOT potable.**
10. **For each distinct Potability status, find the sample with the minimum Solids value.**
11. **Calculate the percentage of potable water samples in the dataset.**
12. **Find the ph and Chloramines of samples that have a Conductivity greater than the overall average Conductivity AND are potable.**
13. **Identify the ph values of samples where the Hardness is greater than the average Hardness for samples with ph values between 6.5 and 7.5.**
14. **Calculate the variance of Conductivity for all samples.**

15. **Retrieve ph and Potability for samples where Organic_carbon is within 10% of the maximum Organic_carbon value, and Turbidity is less than the overall average Turbidity.**
16. **Find the ph of samples where Conductivity is an outlier, defined as being more than 3 standard deviations away from the mean Conductivity.**
17. **Count the number of non-potable samples that have a ph value outside the ideal range (6.5 to 8.5) and a Chloramines concentration greater than 5.**