PROJECT DEVELOPMENT PHASE

SPRINT-4 TESTCASES

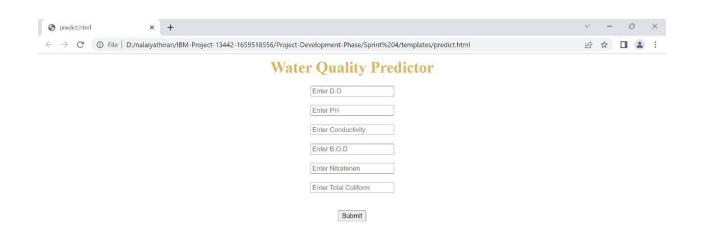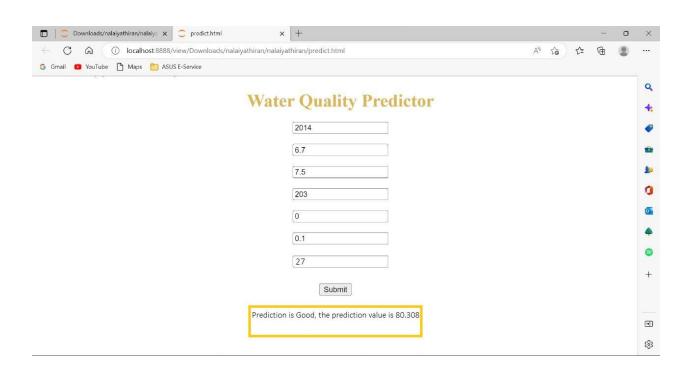|	
Date	18 November 2022
Team ID	PNT2022TMID15978
Project Name	Efficient Water Quality Analysis and Prediction Using Machine Learning
Maximum Marks	8 Marks

HOME PAGE:

INFO PAGE:

WATER IS DRIVING FORCE OF ALL NATURE

pH Value And Its Impact on Water Quality

pH is a measure of how acidic or basic a water sample is.
The range goes from 0 to 14.

- pH level with less than 7 is acidic.
- pH level with greater than 7 is basic.
- pH value equal to 7 is neutral.

Nitrate Value And Its Impact on Water Quality

Nitrate occurs naturally and at safe and healthy levels in some foods.
Other sources of nitrate includes Discharge from Sewage systems and animal wastes,etc.

- Water Level with less than 6 mg/L can be used for drinking.
- Health concern occurs with Nitrate levels over 7 mg/L.

Dissolved Oxygen Value And Its Impact on Water Quality

Dissolved Oxygen (DO) is essential for the survival of fish and other aquatic organisms.
Oxygen is also introduced as a byproduct of aquatic plant photosynthesis.

- The Colder water is, the more oxygen it can hold.
- The Warmer water is, the less oxygen can be dissolved in it.
- When oxygen levels are whiteuced there are chances of increase in bacteria or algae in water which causes adverse health effects.

Coliform Value And Its Impact on Water Quality

Coliform Bacteria in water indicates the disease causing organisms.
Types of Coliforms are Total Coliform, Fecal Coliform and E.coli.

- More the amount of Coliform, more the potential contamination sources in the water sample.
- Less the amount of Coliform, more purer the water sample is.

Conductivity Value And Its Impact on Water Quality

Conducitvity measures the water's ability to conduct electricity due to presence or absence of certain ions.

- Pure Water conducts electricity poorly and can be used for drinking.
- Water that has certain chemicals or elements in it, and at varying amount including sodium, magnesium, calcium and chloride is a better conductor of electricity.

PREDICTOR PAGE:

RESULT AND ANALYSIS PAGE:

Water Quality Predictor

Range of Quality of Water	Analysis Report
Value between 95 and 100	No purification or treatment of water is needed.It can be used fr drinking purposes as the water is pure.
Value between 89 and 94	Minor purification or treatment of water is needed.It can be used for drinking or cooking purposes.
Value between 80 and 88	Conventional purification or treatment of water is needed.It can be used only for cooking purposes.
Value between 65 and 79	Extensive purification or treatment of water is needed.It can be used for drinking or cooking purposes only if the various impurities are removed.
Value between 45 and 64	Doubtful in purifying and treating the water so as to get pure water.It can be used for irrigation purposes.
Value less than 44	The water is not fit for to be used for driking.It cannot be used for drinking and household purposes and can be used for gardening and irrigational purposes.

Your sample is in the range of 45 and 64 and it is in marginal range.