PHASE 1 : Problem Definition and Design Thinking

Problem Definition :

The project involves analyzing water quality data to assess the suitability of water for specific purposes, such as drinking. The objective is to identify potential issues or deviations from regulatory standards and determine water potability based on various parameters. This project includes defining analysis objectives, collecting water quality data, designing relevant visualizations, and building a predictive model.

DESIGN THINKING:

Analysis objective :

potability, identifying Analysis Objectives: Define specific objectives for analyzing water quality data, including assessing deviations from standards, and understanding parameter relationships.

Data collection :

Gather the provided water quality data containing parameters like pH, Hardness, Solids, etc.

Visualization Strategy :

Plan how to visualize parameter distributions, correlations, and potability using suitable tools.

Predictive Model : Artificial neural network

An artificial neural network is a computational model inspired by the structure and functioning of the human brain. It consists of interconnected nodes, or "neurons," organized into layers. These layers typically include an input layer, one or more hidden layers, and an output layer.

Neurons in ANNs process information by receiving inputs, applying mathematical operations to them, and passing the results to the next layer. The connections between neurons, known as weights, are learned from training data.