Project Design Phase-II
Solution Requirements (Functional & Non-functional)

Date	19 October 2022
Team ID	PNT2022TMID23758
Project Name	Project – Efficient Water Quality Analysis and Prediction using Machine Learning
Maximum Marks	4 Marks

Functional Requirements:

FR No.	Functional Requirement (Epic)	Sub Requirement (Story / Sub-Task)
FR-1	User Registration	Registration through Form Registration through Gmail Registration through LinkedIN
FR-2	User Confirmation	Confirmation via Email Confirmation via OTP
FR-3	Authorization level	A Security question will be displayed to the user to verify the details.
FR-4	Reporting	1.Result of the water quality analysis will be sent a message to the user. 2.The real-time water quality report is collected and the dataset is used to predict the water quality for future works.
FR-5	Business rules	Water Quality Index(WQI) formula will be used for the water quality analysis and prediction.

Non-functional Requirements:

FR No.	Non-Functional Requirement	Description
NFR-1	**Usability**	Allows users to identify missing data elements available in the water quality portal data.
NFR-2	**Security**	Authorization via Email.
NFR-3	**Reliability**	Our model will accurately report the uncertainty in the prediction.
NFR-4	**Performance**	The system effectively compares the input parameters given by the users with the dataset.
NFR-5	**Availability**	Our model will keep working and be available for work even if there is an infrastructure failure.
NFR-6	**Scalability**	High mineral levels are found in water as well as Water Quality Index (WQI) and Water Quality Classification (WQC) are accurately predicted.