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

Date	03 October 2022
Team ID	PNT2022TMID24172
Project Name	Essential Water Quality Analysis and Prediction using Machine learning
Maximum Marks	4 Marks

Functional Requirements:

Following are the functional requirements of the proposed solution.

FR No.	Functional Requirement (Epic)	Sub Requirement (Story / Sub-Task)
FR-1	User Registration	Registration through Form Registration through Gmail Registration through Facebook
FR-2	User Confirmation	Confirmation via Email
FR-3	Training	dataset to train the model
FR-4	Detection and Prediction	Selection of appropriate parameters Clustering based on similarity Classification as fit or unfit for usage
FR-5	test and output	Based on the parameters and the trained model, the result is displayed

Non-functional Requirements:

Following are the non-functional requirements of the proposed solution.

FR No.	Non-Functional Requirement	Description
NFR-1	**Usability**	Users should feel comfortable. All the pages on a website or mobile application should have the same look and feel. Navigations and UI should be simple and easy to use.
NFR-2	**Security**	The user credentials and their login information should be kept confidential.

NFR-4	**Performance**	Visitors expect a good-looking website that is easy to use and loads fast. Hence the application should accept several requests and respond in fraction of a second.
NFR-5	**Availability**	The system's monitoring and maintenance should be fundamentally focused. It should not be the case that there are too many jobs running on several machines, making it difficult to monitor if they are uninterrupted
NFR-6	**Scalability**	Maintaining multiple users data, accuracy of results, data transmission rate, and increase or decrease of storage are monitored.
NFR-3	**Reliability**	Our system needs to be operational at least 99.5% of the time in order to respond to requests from websites and mobile devices. Fault tolerance should be high.