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

Date	15 October 2022
Team ID	PNT2022TMID51603
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Project Name	Efficient Water Quality Analysis & 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 LinkedIN
FR-2	User Confirmation	Confirmation via Email Confirmation via OTP
FR-3	User Purchasing	Protect purchased
FR-4	User payment	Conform payment.

Non-functional Requirements:

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

FR No.	Non-Functional Requirement	Description
NFR-1	**Usability**	System has been made user friendly by developing a web application, so it's easy to use.
NFR-2	**Security**	Indicate the whether water can be used to drink or not.
NFR-3	**Reliability**	System should give reliable predicted results.
NFR-4	**Performance**	Our LSTM model will have improved performance because of the use of datasets with lowest time intervals and has high precession. For checking the accuracy we have shown the performance metrics using RMSE.
NFR-5	**Availability**	Activated carbon filter source, Bio-sand filter source, Domestic reverse osmosis filter system source.
NFR-6	**Scalability**	If more parameters are required, it can be added easily. Number of visualizations can be increased. Currently the system predicts for hourly manner this interval can be changed accordingly.