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

Date	08 November 2022
Team ID	PNT2022TMID20975
Project Name	REAL TIME WATER QUALITY MONITORING AND CONTROL SYSTEM
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	Ultrasonic generator	Periodically the waves are generated to destroy algae in the range of 25%,50%,100%
FR-4	Ph level detection	To observe the water quality, Ph sensor is used and the signals are conveyed to the Arduino.
FR-5	Turbidity detection	Turbidity sensor measures the purity of element or marshy utter in the water and the signals are delivered to Arduino

Non-functional Requirements:

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

FR No.	Non-Functional Requirement	Description
NFR-1	**Usability**	Monitors the flow and quality of ground water, and investigates surface- and ground-water interactions.
NFR-2	**Security**	The data and information are secured in the application by using the application firewall.
NFR-3	**Reliability**	The Real time sensor output values with future predicted data storage with output efficiency of 98%. It also gives certainty for aquaculture safety.
NFR-4	**Performance**	The performance of system has higher efficiency and environmental friendly.
NFR-5	**Availability**	It is available in the form of mobile UI 24 x 7 monitoring system.
NFR-6	**Scalability**	The system has high scalability. Able to be changed in size or scale to give the best output.
NFR-7	**Stability**	The ability of the system to bring itself back to its stable configuration. The stability is high.
NFR-8	**Efficiency**	The monitoring system is highly efficient, high mobility with consumption of power.