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

Date	15 October 2022
Team ID	PNT2022TMID43374
Project Name	Real Time River Water Quality Monitoring andControl 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 with GmailCreate an account By the Follow the instructions
FR-2	User Authentication	The credentials are accessible only to the authorized users to access the model.
FR-3	User Confirmation	Confirmation viaAlarm Conformation via SMS
FR-4	Interface sensor	Interface sensor-temperature sensor, turbidity sensor, etc. If contaminated water is present in the river, it gives alarm.
FR-5	Accessing datasets	Datasets are retrieved from Cloudant DB server
FR-6	Mobile application	Can see water is contaminated or not. Can control the motor to stop the flow of contaminated water.

Non-functional Requirements:

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

FR No.	Non-Functional Requirement	Description
NFR-1	**Usability**	The smart protection system defines that this project helps people to protect the drinking water andagriculture.
NFR-2	**Security**	We have designed this project to secure the waterfrom contaminated water or chemical or sewage.
NFR-3	**Reliability**	This project will help people's in protecting theirwater and save them from several diseases.
NFR-4	**Performance**	IOT devices and sensors are used to alert the station control person by a message when water in the river is contaminated and not suitable for drinking.
NFR-5	**Availability**	By developing and deploying resilient hardware and software we can protect the river from contamination chemicals, sewage etc.... and also thereby can alert the people about any contamination if happened and also can protect them from several diseases. This project can be implemented in every river across the country
NFR-6	**Scalability**	This project used to collect real time information inwater and measure quality.