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

Team ID	**PNT2022TMID36354**
Project Name	**Real-Time River Water Quality Monitoring and Control System**

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 registered credentials register confirmation e-mails
FR-2	**User Confirmation**	Confirmation via Email Confirmation via OTP/SMS
FR-3	**Log in to the System**	Enter the OTP Check the Credentials Check the Access/Server
FR-4	**Manage the Modules**	Manage the system Admins of user Manage and Monitor Details of System User Manage the User Roles Manage the User Accessibility and User Permission Manage User Details Privacy
FR-5	**Check Process Details**	Temperature Details PH Details Turbidity Details dissolved oxygen level in water presence of chemical substances in water
FR-6	**Log out**	Save the existing measurements Exit

Non-functional Requirements:

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

FR No.	Non-Functional Requirement	Description
NFR-1	**Usability**	Make Easier to Use ,More Efficiency to Use,Reduction of Errors While Using this Techniques
NFR-2	**Security**	end by end encrypted protocol in Data Authentication, Sensitive data protected personally identifiable information(PII) other information details of users and networks

NFR-3	**Re liability**	Provides the objective evidence necessary to make decisions on managing water quality today and in future also. This techniques make good communication between the user and the networks and it also achieves a better trade-off between costs and reliability
NFR-4	**Performance**	Implementing Monitoring River Water, by using sensing sensor to monitor the river water parameters making more useful for various environmental Usage.
NFR-5	**Availability**	PH Monitoring,Conductivity Analysis,CDOM(Dissolved Organic Matter),Measure of Carbonate and bicarbonate levels in water,this techniques made possible by linking information in water
NFR-6	**Scalability**	Automatic Water Sampler, PH testing, Recording the water temperature,chlorophyll fluorescence analysis measuring the dissolved oxygen levels.