

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

| | |
|---------------|--|
| Date | 03 October 2022 |
| Team ID | PNT2022TMID14819 |
| Project Name | Project -Real-Time River 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 Gmail Registration through website Registration through LinkedIn |
| FR-2 | User Confirmation | Confirmation via Email Confirmation via OTP |
| FR-3 | Historical Data | The data is stored in the cloud from the beginning stage till the update |
| FR-4 | pH detection | To monitor the water quality pH sensor is used |
| FR-5 | O ₂ Detection | The level of O ₂ in the water is constantly measured |

Non-functional Requirements:

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

| FR No. | Non-Functional Requirement | Description |
|--------|----------------------------|--|
| NFR-1 | Usability | It should be easy to monitor the data |
| NFR-2 | Security | Unauthorized users should not be allowed to access the data |
| NFR-3 | Reliability | If there is a sensor fault the message must be informed to the authority |
| NFR-4 | Performance | High quality sensor are used to maximize the performance |
| NFR-5 | Availability | The Data should be accessible 24/7 |
| NFR-6 | Scalability | The system must be compact and easily transported |
| NFR-7 | Efficiency | It should consume low power and provides highly accurate output |