# Project Design Phase-II

## Solution Requirements (Functional & Non-functional)

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|---|---|
| Team ID | PNT2022TMID42660 |
| Project Name | Real-Time River Water Quality Monitoring and Control System |

## Functional Requirements:

| FR No. | Functional Requirement (Epic) | Sub Requirement (Story / Sub-Task) |
|---|---|---|
| FR-1 | **User Registration** | Registration through Form Registration<br>through Gmail<br>Registration through LinkedIN |
| FR-2 | **User Confirmation** | Confirmation via Email Confirmation<br>via OTP |
| FR-3 | **Ph level detection** | Ph sensor is used to monitor the water quality and the signals are send to Arduino. |
| FR-4 | **Turbidity detection** | Turbidity sensor TS-300B measures the turbidity (counter of suspended matter) in the wash water andthe signals are send to Arduino. |
| FR-5 | **Ultrasonic generator** | Waves generated at regular interval times to clearalgae 25% ,50%, 100% |

## Non-functional Requirements:

| FR No. | Non-Functional Requirement | Description |
|---|---|---|
| NFR-1 | **Usability** | Efficient to use and has simple monitoring system. |
| NFR-2 | **Security** | Mobile application is secured with firewalls protection. |
| NFR-3 | **Reliability** | Real time sensor output values with future predicted data storage.98% efficient monitoring output . Assurance for aquaculture safety. |
| NFR-4 | **Performance** | Greater performance and environmental safe model. |
| NFR-5 | **Availability** | In form of mobile UI 24 x 7 monitoring system. |
| NFR-6 | **Scalability** | Highly Scalable .It is capable to produce a best final output. |
| NFR-7 | **Stability** | It is highly stable . |
| NFR-8 | **Efficiency** | It is highly efficient and it has simple monitoring system . |