**Project Design Phase-II**

**Solution Requirements (Functional & Non-functional)**

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| Date | 03 October 2022 |
| Team ID | PNT2022TMID33851 |
| Project Name | Real time river water quality monitoring and control system |
| Maximum Marks | 4 Marks |

**Functional Requirements:**

Following are the functional requirements of the proposed solution.

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| **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 | Objective | The objective is to obtain quantitative information on  the physical, chemical and biological characteristics  of water. |
| FR-4 | Testing | It is used for monitoring the water quality by determining  pH, turbidity, conductivity and temperature. |
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**Non-functional Requirements:**

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

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| **FR No.** | **Non-Functional Requirement** | **Description** |
| NFR-1 | **Usability** | The main aim is to develop a system for continuous  Monitoring of river water quality at remote places using wireless sensors networks with low power consumption, low cost and high  Detection accuracy. |
| NFR-2 | **Security** |  |
| NFR-3 | **Reliability** | The consequences of using poor quality data include faulty decisions, higher risk to the environment or human health,  Wasted resources and loss of credibility. |
| NFR-4 | **Performance** | The system consist of several sensors which is used to measure  Physical and chemical parameters of the water. It can be done  by using remote monitoring and Internet of Thin gs(IoT) |
| NFR-5 | **Availability** | Consideration is given to demands from human and ecosystem  Needs. Equitable apportionment of water among uses, and indicators of stress to the water resource. |
| NFR-6 | **Scalability** | It obtains quantitatitve information on the physical, chemical. And biological characteristics of water via secchi disks, probes, nets. Gauges and metres. |