Project Design Phase-I
Proposed Solution

Date	19 September 2022
Team ID	40579-1660631577
Project Name	Real-Time River Water Quality Monitoring and Control System
Maximum Marks	2 Marks

Proposed Solution :

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	Water is a finite resource that is necessary for agriculture, industry and the survival of all living things on the planet, including humans. Many people are unaware of the need of drinking adequate amounts of water on a daily basis. Many unregulated methods waste more water. Poor water allocation, inefficient consumption, lack of competent and integrated water management are all factors that contribute to this problem. Therefore, efficient use and water monitoring are potential constraint for home or office water management system
2.	Idea / Solution description	**The proposed WQM system consists of sensors, Field Programmable Gate Array (FPGA), Zigbee wireless communication protocol and personal computer**. The system is designed for monitoring water quality such as water temperature, water level, water pH, turbidity of water and Carbon dioxide on the surface of water.
3.	Novelty / Uniqueness	Using real-time monitoring, instant data **allows pre-cursors to potential issues (such as corrosion) to be flagged up and immediately be addressed before major issues occur**. The ability to make real-time decisions during critical moments can be vital in preventing expensive repairs and breakdown.
4.	Social Impact / Customer Satisfaction	• It gives the accurate measure • The rapid development of WSN technology provides a novel approach to real-time data acquisition, transmission, and processing. The clients can get ongoing water quality information from far away. **forest fire and early earthquake, reduce air population, monitor snow level, prevent landslide, and avalanche** etc

5.	Business Model (Revenue Model)	The section presents the system deployment strategy and focuses on the sensor probes, the calibration process, and the cloud-based web portal design used for reporting and analysing the data obtained from the deployment environment.
6.	Scalability of the Solution	• Well monitoring system with accurate indication. • Easy maintenance. • Reasonable cost