Project Design Phase-II
Technology Stack (Architecture & Stack)

Date	31 October 2022
Team ID	PNT2022TMID43902
Project Name	Project - Real-Time River Water Quality Monitoring and Control System

Technical Architecture:

The Deliverable shall include the architectural diagram as below and the information as per the table1 & table 2

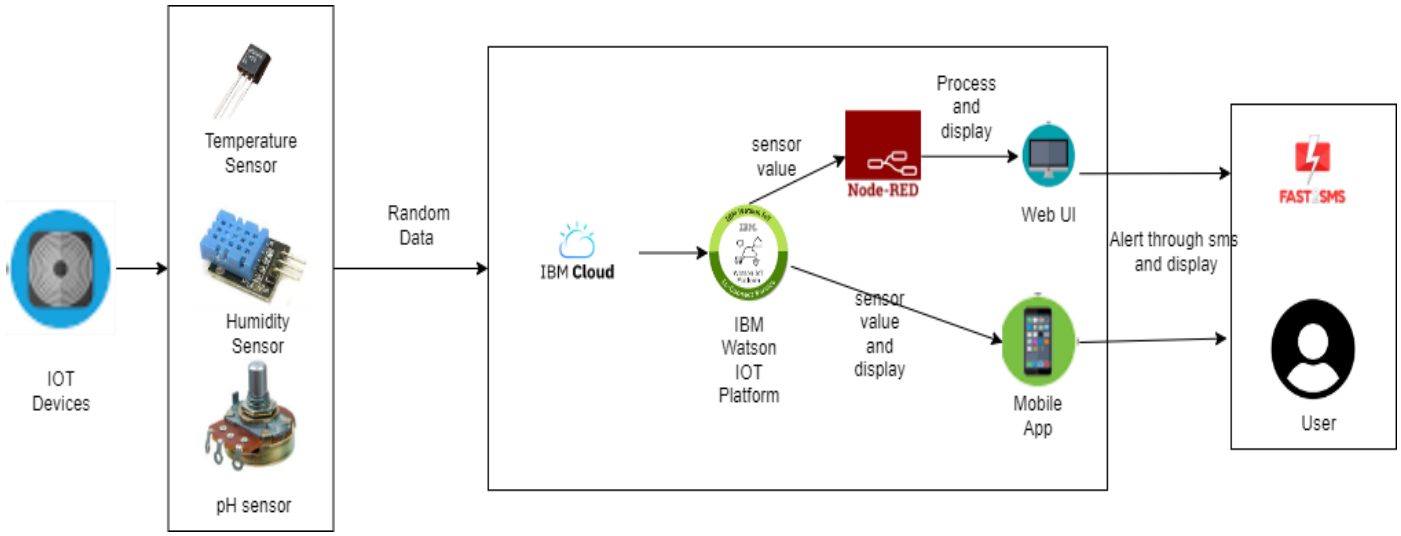

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	Web UI, Mobile App	Node – Red, Kubernetes, MIT mobile app inventor
2.	Application Logic-1	Generate random data	Python
3.	Application Logic-2	Generate random sensor data	IBM Watson IOT Platform
4.	Cloud Database	Database Service on Cloud	IBM DB2, IBM Cloudant,
5.	External API-1	Send SMS to customer	Fast SMS API
6.	Infrastructure (Server / Cloud)	Application Deployment on Cloud	Cloud Foundry, Kubernetes

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	open-source frameworks used to develop our project	Node – Red, IBM Cloudant, IBM Watson IOT Platform
2.	Security Implementations	Use of Login facility with username and password for individual user	Password protection in MIT App
3.	Scalable Architecture	Web Ui designed for use in Mobile and computer with adaptive screen size	Node – Red (Web UI)
4.	Availability	Available for the user in both web UI and Mobile App	Node – Red(Web UI), MIT App(Mobile App)
5.	Performance	Give accurate results and immediate alert in case of contamination of water	Node – Red(Web UI), MIT App(Mobile App)