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

Date	4th November 2022
Team ID	PNT2022TMID09930
Project Name	Real-Time River Water Quality Monitoring and Control System
Maximum Marks	4 Marks

Technical Architecture:

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

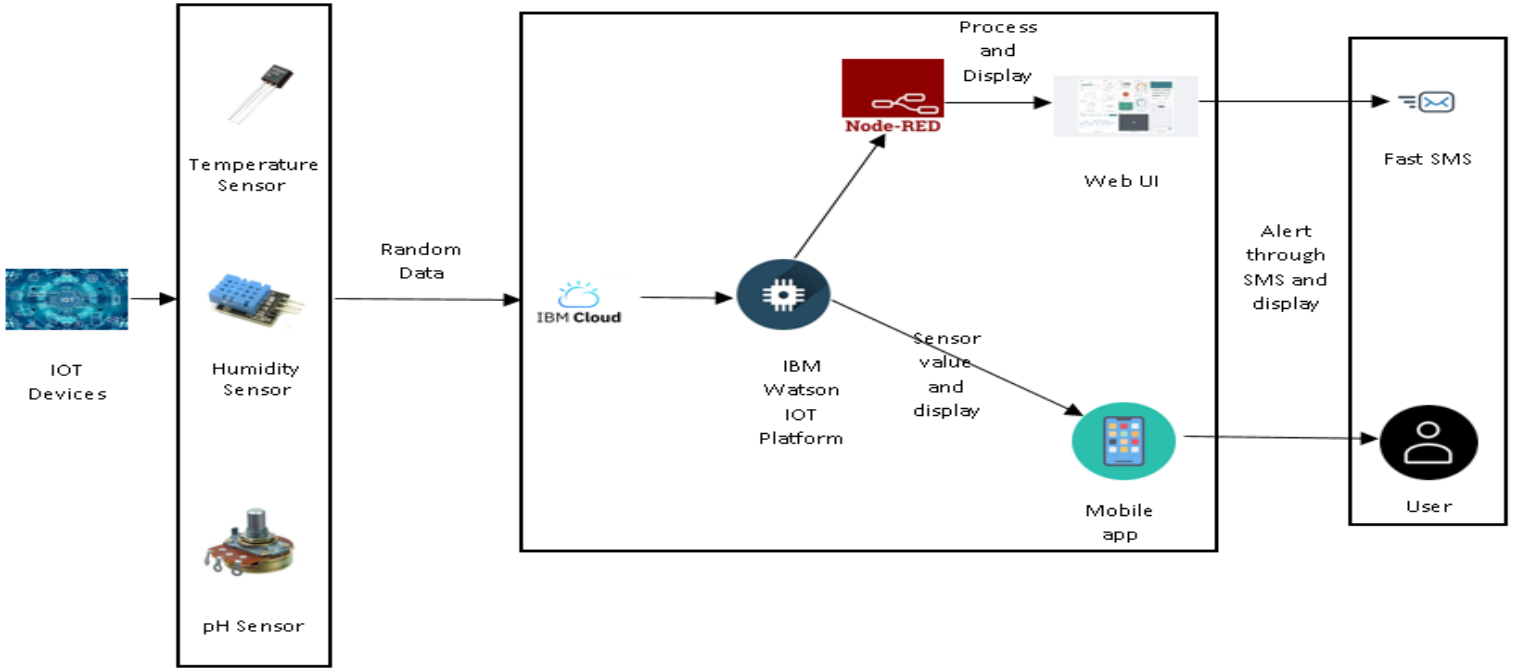

Table-1 : Components & Technologies:

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	the open-source tools we utilized to create our project	Node – Red, IBM Cloudant, IBM Watson IOT Platform
2.	Security Implementations	Use of a login page with a user's unique username and password on a web interface optimized for mobile devices and computers with adjustable screen sizes	Password protection in MIT App
3.	Scalable Architecture	optimized for mobile devices and computers with adjustable screen sizes	Node – Red (Web UI)
4.	Availability	accessible to users through both a web UI and a mobile app	Node – Red(Web UI), MIT App(Mobile App)
5.	Performance	Give precise results and a prompt warning in the event of water contamination	Node – Red(Web UI), MIT App(Mobile App)