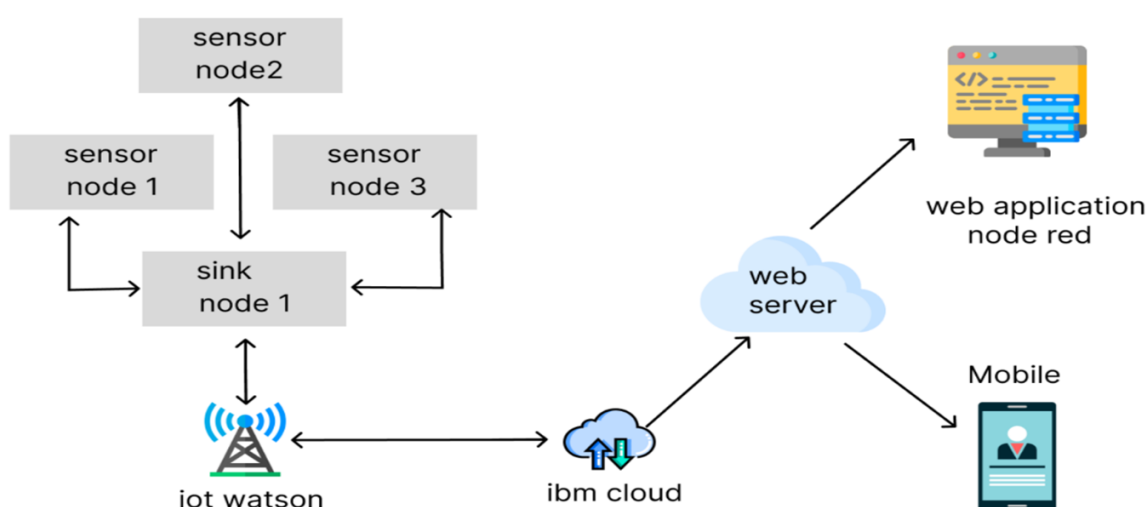


## Project Design Phase-II

### Technology Stack (Architecture & Stack)

Date	23 November 2022
Team ID	PNT2022TMID42599
Project Name	Project - Real Time Water Quality and Monitoring and Controlling for Domestic Use
Maximum Marks	4 Marks

### Technical Architecture:



- Feed the data received from the Sensor unit which are placed in the river sides.
- The collected data will be displayed on the Web page of the user.
- Then the collected details are sent to the database, where the collected data and the predefined data are checked and monitored. If any data exceeds the predefined data then the control signal will be sent to the Admin.
- The collected data will be stored in the IBM cloud storage.
- Later the data will be controlled by the admin via Web UI

### 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	Cloud Database Database Service on Cloud IBM	IBM DB2, IBM Cloudant etc.
5.	External API-1	Send SMS to customer	Fast SMS API
6.	External API-2	Send data to web	IBM cloudant service API.
7.	Infrastructure (Server / Cloud)	Application Deployment on Local System / Cloud Local Server Configuration: Cloud Server Configuration :	IBM Cloud platforms and services

**Table-2: Application Characteristics:**

S. No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Node red for web app development	json
2.	Security Implementations	Use of a login page with a user's unique username and password on a web interface optimised for mobile devices	Authentication token, passwords for secure access
3.	Scalable Architecture	Optimised 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 U and MIT app inventor (Mob App)
5.	Performance	Give precise results and a prompt warning in the event of water contamination	Node – Red(Web UI), MIT App inventor (Mobile App)