

REAL TIME RIVER WATER QUALITY MONITORING AND CONTROL SYSTEM USING IoT

Submitted by

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

Date	28 October 2022
Team ID	PNT2022TMID23523
Project Name	Project - Real-Time River Water Quality Monitoring and Control System
Maximum Marks	4 Marks

ARCHITECTURE:

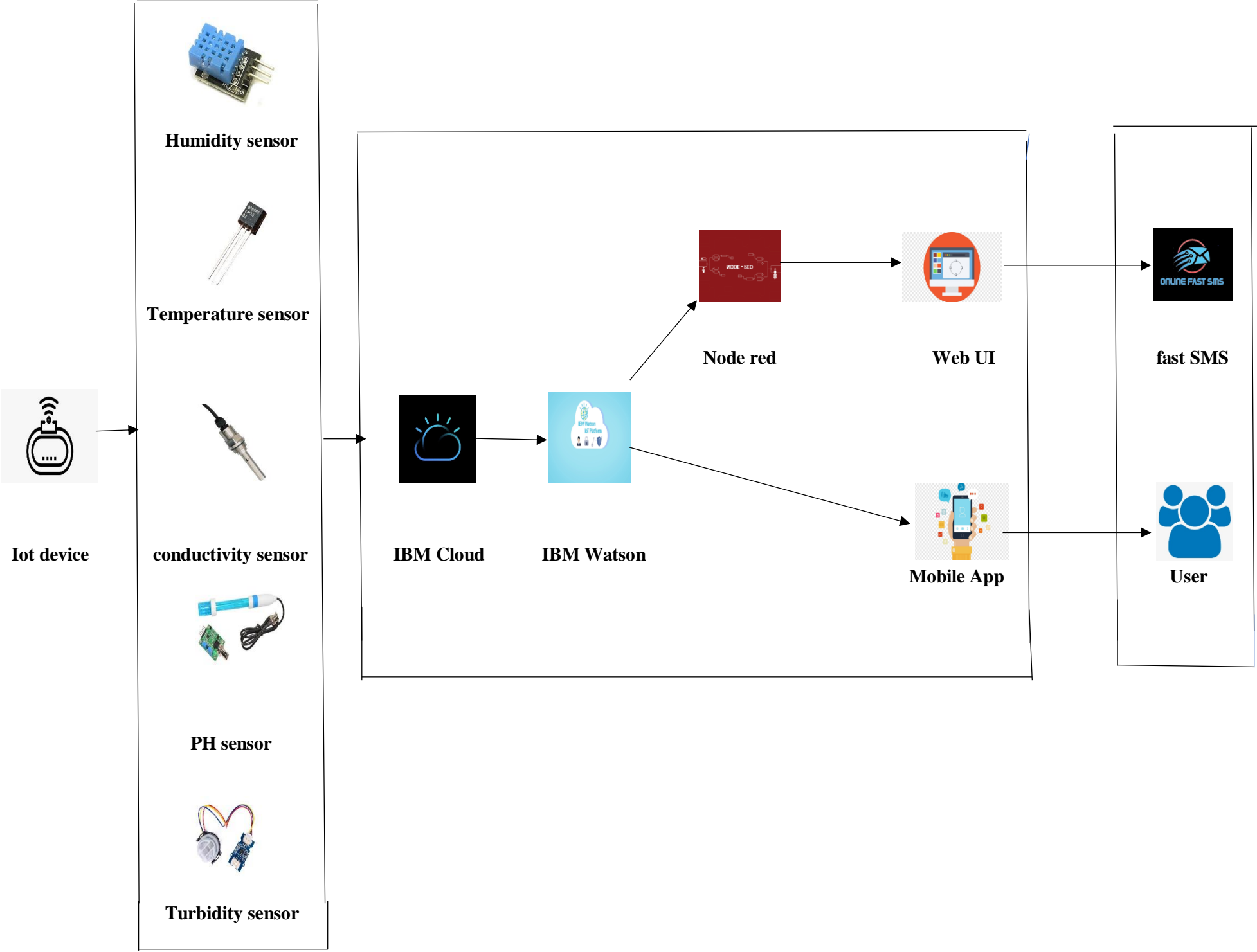


Table-1 : Components & Technologies:

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, IBMWatson 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 MobileApp	Node – Red(Web UI), MIT App(MobileApp)
5.	Performance	Give accurate results and immediate alert in case of contamination of water	Node – Red(Web UI), MIT App(MobileApp)