

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

Date	03 October 2022
Team ID	PNT2022TMID42484
Project Name	Project – Real Time River water monitor and control system
Maximum Marks	4 Marks

Technical Architecture:

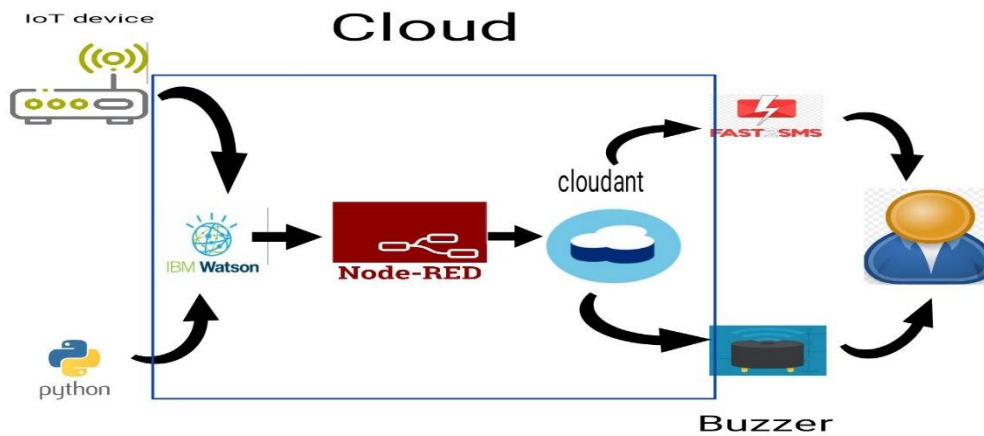


Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	It interact with user in the form of mobile app	Python
2.	Application Logic-1	Take readings from the device	Java / Python
3.	Application Logic-2	Compare the readings with the threshold value	IBM Watson STT service
4.	Application Logic-3	Alarm them when it exceeds the threshold value	IBM Watson Assistant
5.	Database	Connections for interface and SMS	Node red
6.	Cloud Database	Store all the readings in the cloud	IBM DB2, IBM Cloudant etc.
7.	File Storage	Only the exceeded value is noted here	IBM Block Storage or Other Storage Service or Local Filesystem
8.	External API-1	To check the temperature, PH etc	IBM temperature API
9.	External API-2	To check the water hardness	Water hardness API
10.	Machine Learning Model	To increase the processing speed	Object Recognition Model
11.	Infrastructure (Server / Cloud)	Application Deployment on Local System / Cloud Local Server Configuration: Pc 2022 csi Cloud Server Configuration : Pc 2022	Local, Cloud Foundry, Kubernetes

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Mobile app for interacting	App inventor
2.	Security Implementations	MQTT	MQTT encryption
3.	Scalable Architecture	2 – Tier micro architecture	Speed
4.	Availability	Has FIFO architecture	FIFO
5.	Performance	In a second it can respond to 100 users	MQTT