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

Date	03October 2022
Team ID:	PNT2022TMID52890
Project Name	Project – Real Time River Water Quality Monitoring 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	How user interacts with application e.g. Web UI, Mobile App, Chatbot etc.	HTML
2.	Application Logic-1	Logic for a process in the application	Python
3.	Application Logic-2	Logic for a process in the application	IBM Watson STT service
4.	Application Logic-3	Logic for a process in the application	IBM Watson Assistant
5.	Database	Data Type, Configurations etc.	Python
6.	Cloud Database	Database Service on Cloud	IBM Cloudant
7.	File Storage	File storage requirements	IBM Block Storage
8.	External API-1	Purpose of External API used in the application	IBM Weather API
9.	Infrastructure (Server / Cloud)	Application Deployment on Local System / Cloud	Cloud Foundry

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	List the open-source frameworks used	Node Red , MIT app inventor, Wowki
2.	Security Implementations	List all the security / access controls implemented, use of firewalls etc.	App-Login Credential
3.	Scalable Architecture	Justify the scalability of architecture (3 – tier, Micro-services)	IBM Weather API, IBM Cloudant . IBM Watson STT service,etc..
4.	Availability	Justify the availability of application (e.g. use of load balancers, distributed servers etc.)	Node Red , MIT app inventor, Wowki
5.	Performance	Design consideration for the performance of the application (number of requests per sec, use of Cache, use of CDN's) etc.	Number of requests per second is 2.