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

Date	06 May 2023
Team ID	NM2023TMID10894
Project Name	Assessing the safety of Municipal drinking water

Technical Architecture:

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

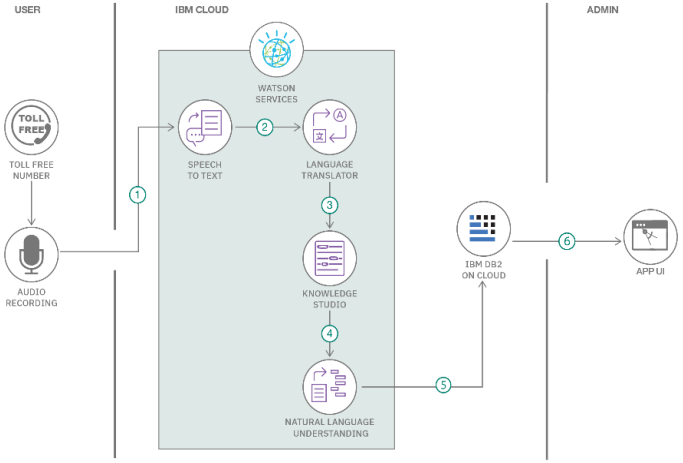

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	Water Sampling	Collecting representative water samples for analysis and testing	Grab Sampling, Composite Sampling, Automatic Water Samplers
2.	Water Quality analysis	Analysis of various parameters to assess water quality	Spectrophotometry, Chromatography,Mass Spectrometry, Atomic Absorption Spectroscopy
3.	Disinfection	Elimination of harmful microorganisms and pathogens	Chlorination, Ultraviolet (UV) Disinfection, Chlorine Dioxide Treatment
4.	Water Treatment	Processes for purifying water and removing contaminants	Coagulation and Flocculation, Activated Carbon Adsorption, Ion Exchange
5.	Monitoring Systems	Continuous monitoring of water quality parameters	Residual Disinfectant Monitors, Turbidity Meters, Remote Monitoring Systems

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Security Implementations	Measures and features implemented to ensure application security	SSL/TLS, Hashing Algorithms, Digital Signatures
2.	Scalable Architecture	Ability of the application to handle increasing workload by adding resources	Containerization: Docker, Kubernetes
3.	Availability	Ensuring the application is accessible and operational for users.	Replication, Clustering, High Availability
4.	Performance	Application's ability to deliver efficient and responsive services.	CDN (Content Delivery Network)