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

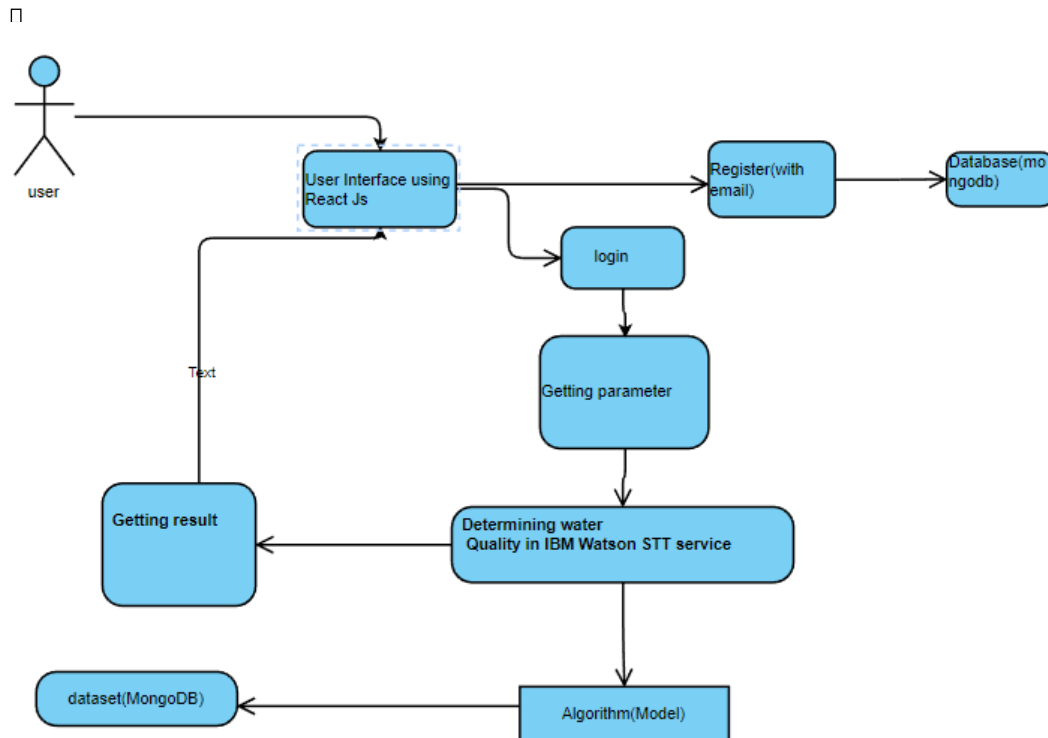| Date	03 October 2022
Team ID	PNT2022TMID52625
Project Name	Efficient Water Quality Analysis and Prediction Using Machine Learning
Maximum Marks	4 Marks

Technical Architecture

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	user interacts with web application	React Js
2.	Application Logic-1	Using python to get the results	Python
3.	Application Logic-2	Creating a model to classifying the given data	IBM Watson STT service
4.	Application Logic-3	Logic for a process in the application	IBM Watson Assistant
5.	Database	To store user details and dataset	NoSQL
6.	Cloud Database	Database Service on Cloud	mongoDB atlas
7.	File Storage	-	-
8.	External API-1	Encrypting the password and communication details	NPM package encryption
9.	External API-2	Purpose of External API used in the application	Aadhar API, etc.
10.	Machine Learning Model	Classifying that its enough to drink or not	Object Recognition Model
11.	Infrastructure	-	-

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Using open source for external packages	Technology of Opensource framework
2.	Security Implementations	For securing the details of the users	Packages for encrypting.
3.	Scalable Architecture	Hosting database in the cloud	Mongodb atlas , vercel hosting app

S.No	Characteristics	Description	Technology
4.	Availability	it's a web application	React js
5.	Performance	100 request per second for the database.	mongoDB atlas