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

Date	20 October 2022
Team ID	PNT2022TMID433518
Project Name	Project -Crude oil price prediction
Maximum Marks	4 Marks

Technical Architecture:

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

Example: Order processing during pandemics for offline mode

Reference: https://developer.ibm.com/patterns/ai-powered-backend-system-for-order-processing-during-pandemics/

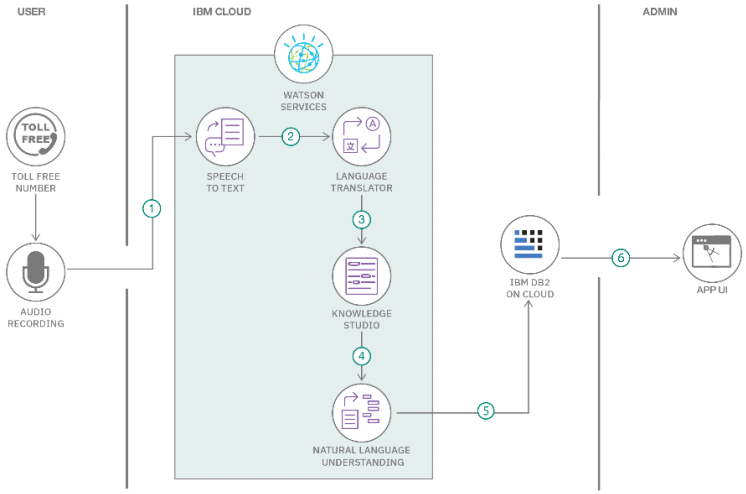

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
•	User Interface	How user interacts with application e.g. Web UI, Mobile App, Chatbot etc.	HTML, CSS, JavaScript / Angular Js / React Js etc.
•	Application Logic-1	Logic for a process in the application	Java / Python
•	Application Logic-2	Logic for a process in the application	IBM Watson STT service

•	Application Logic-3	Logic for a process in the application	IBM Watson Assistant
•	Database	Data Type, Configurations etc.	MySQL, NoSQL, etc.
•	Cloud Database	Database Service on Cloud	IBM DB2, IBM Cloudant etc.
•	File Storage	File storage requirements	IBM Block Storage or Other Storage Service or Local Filesystem
•	External API-1	Purpose of External API used in the application	IBM Weather API, etc.
•	External API-2	Purpose of External API used in the application	Aadhar API, etc.
•	Machine Learning Model	Purpose of Machine Learning Model	Object Recognition Model, etc.
•	Infrastructure (Server / Cloud)	Application Deployment on Local System / Cloud Local Server Configuration: Cloud Server Configuration :	Local, Cloud Foundry, Kubernetes, etc.

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
•	Open-Source Frameworks	List the open-source frameworks used	Technology of Opensource framework
•	Security Implementations	List all the security / access controls implemented, use of firewalls etc.	e.g. SHA-256, Encryptions, IAM Controls, OWASP etc.
•	Scalable Architecture	Justify the scalability of architecture (3 – tier, Micro-services)	Technology used
•	Availability	Justify the availability of application (e.g. use of load balancers, distributed servers etc.)	Technology used
•	Performance	Design consideration for the performance of the application (number of requests per sec, use of Cache, use of CDN's) etc.	Technology used

References:

https://c4model.com/

https://developer.ibm.com/patterns/online-order-processing-system-during-pandemic/

https://www.ibm.com/cloud/architecture

https://aws.amazon.com/architecture

https://medium.com/the-internal-startup/how-to-draw-useful-technical-architecture-diagrams-2d20c9fda90d