

CAPE INSTITUTE OF TECHNOLOGY

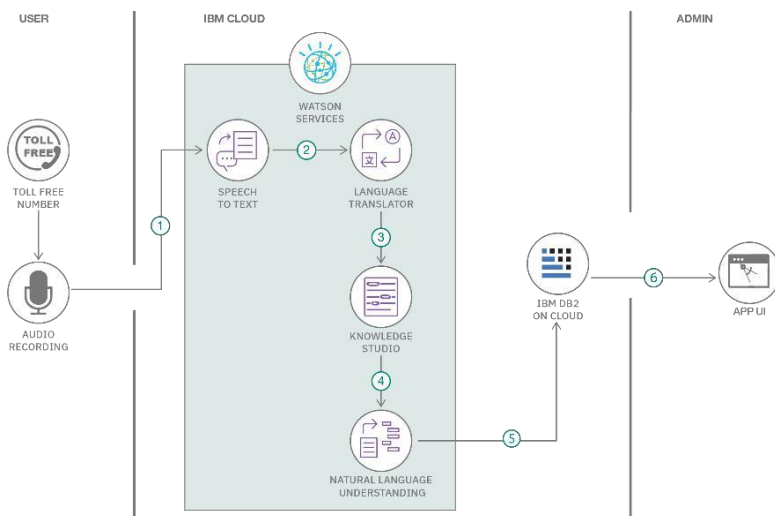
LEVINGIPURAM

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

IBM NALAIYA THIRAN

PROJECT DESIGN PHASE-II
TECHNOLOGYSTACK(ARCHITECTURE &STACK)

DATE	29 OCTOBER 2022
TEAMLEADERNAME	RAJI M
TEAM NUMBER	PNT2022TMID34365
TEAMMEMBERS	JEBA GNANA BENCY S PERIYA NAYAKI V THASHNI C
PROJECTNAME	PROJECT – SMART SOLUTION FOR RAILWAYS
MAXIMUMMARKS	2 MARKS



Technical Architecture:

The Deliverable shall include the architectural diagram as below and the information as per the table 1 & table 2

Example: Order processing during pandemics for offline mode

Reference: <https://developer.ibm.com/patterns/ai-powered-backend-system-for-orderprocessing-during-pandemics/>

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, CSS, JavaScript / Angular Js / React Js etc.
2.	Application Logic-1	Logic for a process in the application	Java / 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.	MySQL, NoSQL, etc.
6.	Cloud Database	Database Service on Cloud	IBM DB2, IBM Cloudant etc.
7.	File Storage	File storage requirements	IBM Block Storage or Other Storage Service or Local Filesystem
8.	External API-1	Purpose of External API used in the application	IBM Weather API, etc.
9.	External API-2	Purpose of External API used in the application	Aadhar API, etc.

10.	Machine Learning Model	Purpose of Machine Learning Model	Object Recognition Model, etc.
11.	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
1.	Open-Source Frameworks	List the open-source frameworks used	Technology of Opensource framework
2.	Security Implementations	List all the security / access controls implemented, use of firewalls etc.	e.g. SHA-256, Encryptions, IAM Controls, OWASP etc.
3.	Scalable Architecture	Justify the scalability of architecture (3 – tier, Microservices)	Technology used
4.	Availability	Justify the availability of application (e.g. use of load balancers, distributed servers etc.)	Technology used
5.	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-duringpandemic/> <https://www.ibm.com/cloud/architecture>

<https://aws.amazon.com/architecture>

<https://medium.com/the-internal-startup/how-to-draw-usefultechical-architecture-diagrams-2d20c9fda90d>