

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

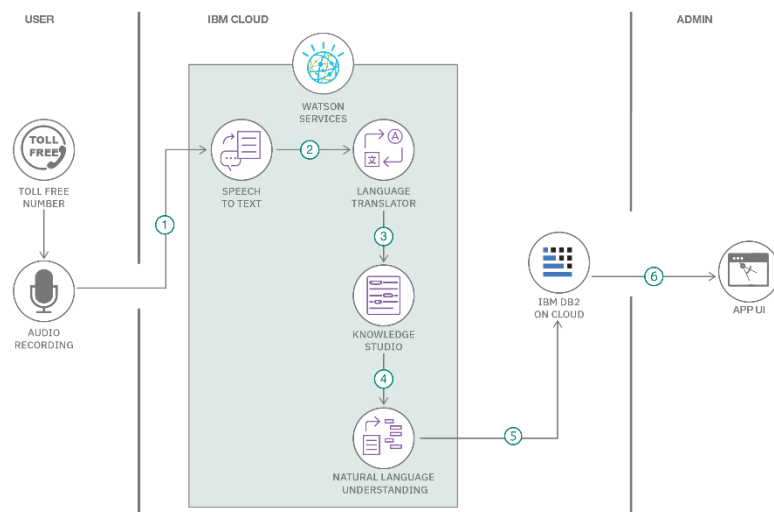
Date	03 October 2022
Team ID	PNT2022TMID23042
Project Name	Covid-19 Containment Zone Alerting Application
Maximum Marks	4 Marks

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/>



Guidelines:

1. Include all the processes (As an application logic / Technology Block)
2. Provide infrastructural demarcation (Local / Cloud)
3. Indicate external interfaces (third party API's etc.)
4. Indicate Data Storage components / services
5. Indicate interface to machine learning models (if applicable)

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	How user interacts with application e.g. Web UI, Mobile App .	HTML, CSS, JavaScript / Angular Js / React Js etc.
2.	Developing Interface	Developing Application for the task	Java / Python
3.	Geofencing	Location-based service in which an app or other software program uses radio frequency identification	Tile38,Geo(JavaScript) by Amazon Location Service (ALS)
4.	Alert Notifications	Broadcast of messages to user based on their location.	sendgrid
5.	Database	Data like location of user and containment zones are to be stored	MySQL, NoSQL, etc.
6.	Cloud Database	Database Service on Cloud for user information is stored.	IBM DB2, IBM Cloudant etc.
7.	File Storage	File storage requirements	IBM Block Storage or Other Storage Service or Local Filesystem
8.	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	frameworks used for application development	1. Flutter 2. React 3. Android studio
2.	Security Implementations	Using of python flask to cloud connect will provide security to the project. Database will be safely stored in DB2.	IBM DB2 and flask

S.No	Characteristics	Description	Technology
3.	Scalable Architecture	Increasing the storage space of database can increase the number of users. Add some features in future to make the webpage unique and attractive.	Ibm db and cloud.
4.	Availability	The application will be available to all users (network connectivity is necessary) at any given point of time.	RAID(redundant array of independent disks)
5.	Performance	Focus on loading the application as quickly as possible irrespective of the number of user/integrator traffic.	DRAM or flash memory

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>