Project Design Phase-II
Technology Stack (Architecture & Stack)
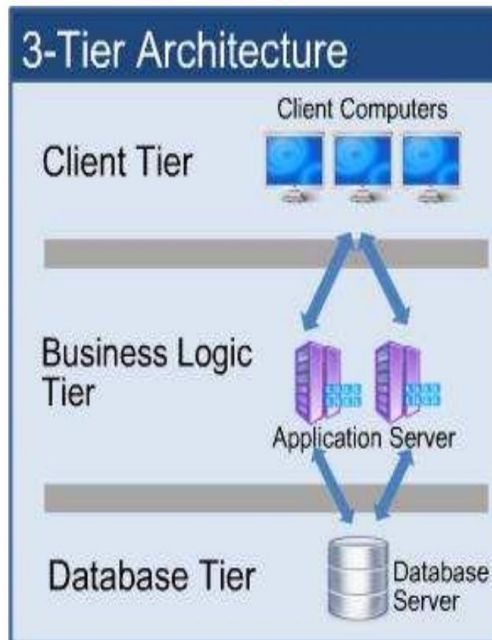
Date	03 October 2022
Team ID	PNT2022TMID50313
Project Name	Project – Retail store stock Inventory Analytics
Maximum Marks	4 Marks

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, Chatbot etc.	HTML, CSS, JavaScript ,Python
2.	Application Logic-1	Logic for a process in the application	Python
3.	Application Logic-2	Logic for a process in the application	IBM Cognos
4.	Application Logic-3	Logic for a process in the application	Anaconda software
5.	Database	Data Type, Configurations etc.	My SQL
6.	Cloud Database	Database Service on Cloud	IBM Cloud
7.	File Storage	File storage requirements	Local Filesystem
8.	External API-1	Purpose of External API used in the application	Barcode lookup API, etc.
9.	External API-2	Purpose of External API used in the application	Stock Id
10.	Machine Learning Model	Purpose of Machine Learning Model	Text recognition and predict value through history.
11.	Infrastructure (Server / Cloud)	Application Deployment on Local System / Cloud Local Server Configuration: Cloud Server Configuration :	Private cloud,database.

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	List the open-source frameworks used	IBM Cognos
2.	Security Implementations	List all the security / access controls implemented, use of firewalls etc.	Encryptions,mysql,SHA-256
3.	Scalable Architecture	Justify the scalability of architecture (3 – tier, Micro-services)	By this the ability to utilize new technologies as they become available.The application servers can deployed on many machines.database can connect with every client.

S.No	Characteristics	Description	Technology
4.	Availability	Justify the availability of application (e.g. use of load balancers, distributed servers etc.)	Microsoft SQL server
5.	Performance	Design consideration for the performance of the application (number of requests per sec, use of Cache, use of CDN's) etc.	Inventory management provide successful application where we can update,insert,delete the item.implement of this system will benefit the organization.

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