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

Date	31 January 3035
Team ID	LTVIP2025MID50263
Project Name	Heritage Treasures
Maximum Marks	4 Marks

Technical Architecture:

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

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

Example:

UNESCO Heritage Treasures - Technical Architecture EXTERNAL INTERFACES UNESCO API TOURIST DATA STORAGE DATA PROCESSONG ETL with Python UNESCO Dataset (*2019) **EDUCATROR** RESEARCHER WEB BROWSER (3 ML SERVICES **EDUCATOR** APP HOSTING (Prediction, Risk Models) (MOBILE/ DESKTOP) VISUALIZATION LAYER Tableau Server/ Tableau Online 0 GOOGLE MAPS API (optional) APP & DASHORD **EXTERNAL** CLOUD INFRASTRUCTURE INTERFACICES AWS / AZURE / GCP

Guidelines:

Show all key steps: data storage, processing, visualization, and access.

Separate IBM Cloud components from user and external tools.

Include external APIs like Google Maps or UNESCO API if used.

Mark where raw and cleaned data is stored (e.g., IBM Cloud Storage).

Label each layer: processing, visualization, user interface, etc.

Add user types like tourists, researchers, or policymakers.

Show machine learning if it's used or planned in the system.

Table-1: Technology Stack

S.no	Component	Description	Technology	
1.	User Interface	How user interacts with application e.g. Web UI, Mobile App, Chatbot etc.	Interface of Tableau	
2.	Application Logic-1	Logic for a process in the application	tableau public	
3.	Application Logic-2	Logic for a process in the application	tableau public	
4.	Application Logic-3	Logic for a process in the application	tableau public	
5.	Database	Data Type, Configurations etc.	My SQL	
6.	Cloud Database	Database Service on Cloud	-	
7.	File Storage	File storage requirements	-	
8.	External API-1	Purpose of External API used in the application	-	

9.	External API-2	Purpose of External API used in the application	-
10.	Machine Learning Model	Purpose of Machine Learning Model	-
11.	Infrastructure (Server / Cloud)	Application Deployment on Local System / Cloud Local Server Configuration: Cloud Server Configuration	-

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.	-
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-useful-technical-architecture-diagrams2d20c9fda90d