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

Date	03October 2022
Team ID	PNT2022TMID52536
Project Name	Project – SKILL AND JOB RECOMMENDER
Maximum Marks	4 Marks

Technical Architecture:

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

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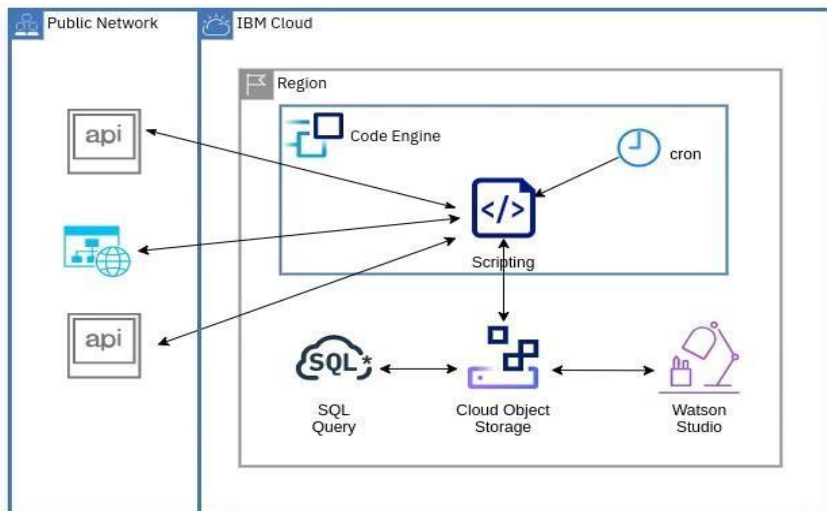
Guidelines:

1. Create a record of user's details (IBM db2).
2. Recommend job opening based on user's Skillset.
3. Automatic job alerts to the user's mail (SendGrid).
4. Develop chatbot to clarify user query (IBM Watson).

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/IBM Watson
2.	Application Logic-1	Create Chatbot to solve user query.	IBM Watson
3.	Application Logic-2	Store and maintain user details and credentials.	IBM db2
4.	Application Logic-3	Store and manage large file and images through cloud.	IBM Cloud Object Storage
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	Search API helps people find the job openings they are looking for usingkeywords and phrases.	IBM Search Engine
9.	Infrastructure (Server / Cloud)	Application Deployment on Local System / Cloud	Local, Cloud Foundry, Kubernetes, etc.

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Flask,Jinja2	Python
2.	Security Implementations	Authentication: Authentication is the act of determining the identity of a user. For example, User id and Password, Biometric Identification. Authorization: Authorization is the act of determining thelevel of access that an authorized user has to behaviour and data (use of firewalls).	e.g. SHA-256, Encryptions, IAM Controls, OWASP etc.
3.	Scalable Architecture	Databases are usually large and complex to start with. Synchronizing multiple databases in a distributed environment multiplies the challenge. Designing a scalable distributed database requires focus from your development team and is a foundational element for everything else you willdo on the path to creating a scalable application.	Micro services, Cloud Storage and use of cache
4.	Availability	High availability systems are important in many industries because they help ensure systems function correctly for a continuous period. Technology and networks occasionally fail, such as when there's a power outage or a server error. In some industries, it's essential that the networkremains functional at all times.	CDN's(Content DliveryNetwork) and use of cache.

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