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

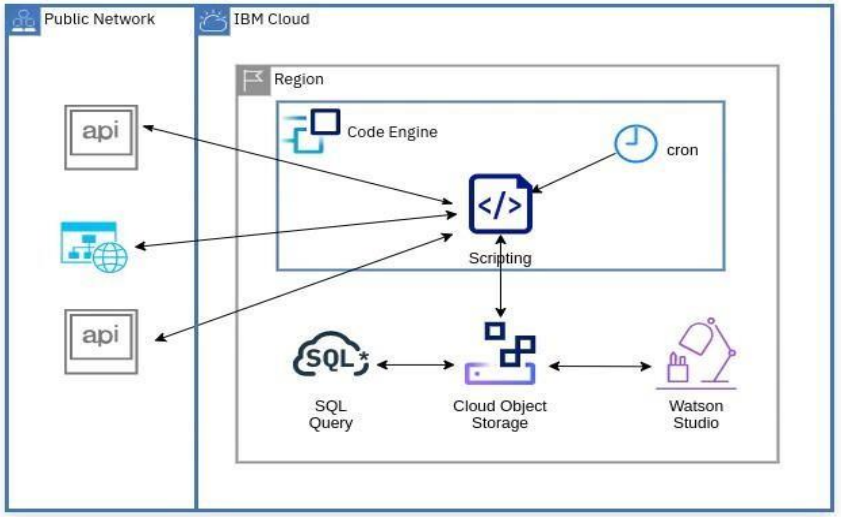
Team ID	PNT2022TMID33768
Project Name	Skill/Job Recommender Application
Maximum Marks	4 Marks

Skill/Job Recommender Application

Technical Architecture:

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

Reference: **https://www.ibm.com/cloud/blog/data-scraping-made-easy-thanks-to-ibm-code-engine-jobs**



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	User can interact with search API or Chatbot to get recommendation on jobs.	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	Search API helps people find the job openings they are looking for using keywords 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 the level 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 will do on the path to creating a scalable application.	Micro services, Cloud Storage and use of cache.
4.	Availability and Performance	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 network remains functional at all times. .	CDN's(Content Dlivery Network) and use of cache.

References:

https://c4model.com/

https://www.ibm.com/cloud/architecture

https://aws.amazon.com/architecture

https://www.ibm.com/cloud/blog/data-scraping-made-easy-thanks-to-ibm-code-engine-jobs