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

Date	17 October 2022
Team ID	PNT2022TMID22478
Project Name	Project - Skill/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

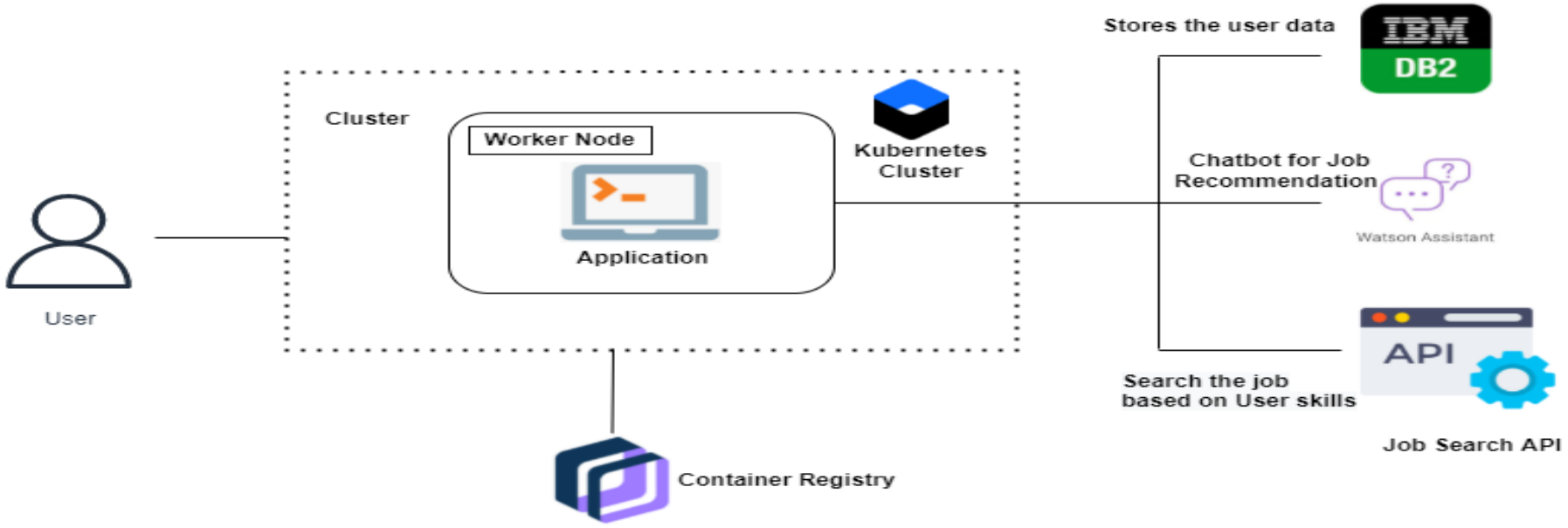

Table-1 : Components & Technologies:

S. No	Component	Description	Technology
1.	User Interface	The user interacts with web application frontend,	HTML, CSS, JavaScript,bootstrap,

		chatter bot, customer care, API, UI/UX	fontawesome,
2.	Application Logic-1	The application works with Python's flask framework includes inbuilt web libraries. All the backend logics are handled using flask. The request/ response are handled using Flask's WSGI.	Python - Flask Framework
3.	Application Logic-2	The user can interact using chatter bot which user websocket and end to end encryption	IBM Watson Assistant
4.	Application Logic-3	It is a Hybrid web application, which uses both public and private cloud service	Cloud service
5.	Database	Due to application complexity and uses,	MySQL, NoSQL, Postgresql etc.

		relational databases are used. So database management system can be handled easily	
6.	Cloud Database	On production online cloud database service is used, so it can be accessed through HTTP protocol	IBM DB2, IBM Cloudant etc.
7.	File Storage	All the required files that are saved in the web application are uploaded in an online file storage cloud service. So it can be accessed easily	IBM Block Storage or Other Storage Service or Local Filesystem
8.	External API-1	External Job API are used to provide job suggestions for the user in the application	Rapidapi
9.	External API-2	The identity of an individual can be referred using	Aadhar API, etc.

		external API provided by government	
10	Machine Learning Model	ML is used in chatterbot to provide a better experience to the user.	Neural Machine Translation, communication etc.
11	Infrastructure (Server / Cloud)	The application is used to run on a local server during the development phase. And it is deployed in online server during production	Local, Cloud Foundry, Kubernetes, Docker etc.

Table-2: Application Characteristics:

S. No	Characteristics	Description	Technology
1.	Open-Source Frameworks	This application uses python's Flask framework for development	Python language
2.	Security Implementations	Security, encryption are provided by flask security package such as session based authentication, password hashing, HTTP authentication , Token based authentication, JWT token authentication	Flask-security package
3.	Scalable Architecture	The python architecture is much scalable, so it can be developed further according to the needs in future	Flask Framework

S. No	Characteristics	Description	Technology
4.	Availability	This application is available from anywhere at anytime independent of IP, due to it’s server	IBM server
5.	Performance	This application uses good development architecture for performance, it is need to be developed in a way to have a good user experience such as using cookies, sessions, cache	Redis