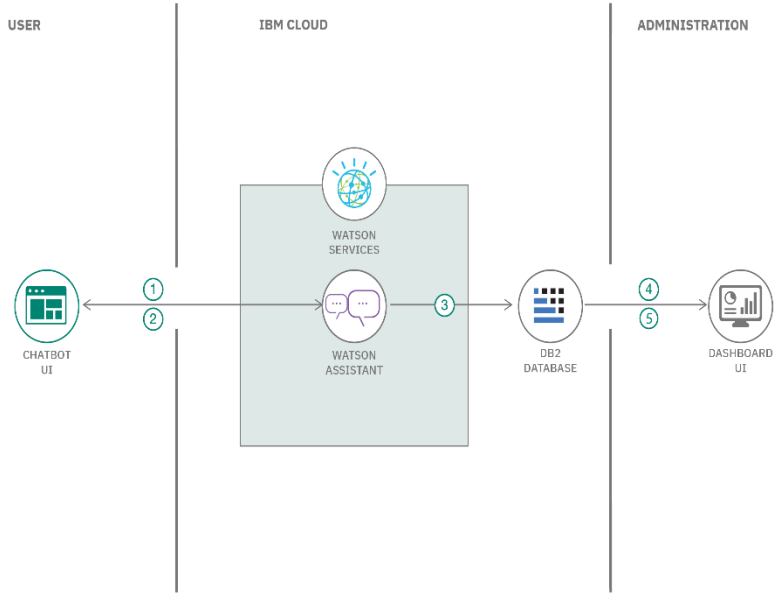
Project Design Phase-II
Technology Stack (Architecture & Stack)

Date	03 October 2022
Team ID	PNT2022TMID23604
Project Name	Project – Skill and Job Recommender
Maximum Marks	4 Marks

Technical Architecture:



1. Feed the data to the Watson Assistant service.
2. Convert the text into intents and entities, and enable the conversation.
3. Extract the order and customer details from the text.
4. The extracted attributes get stored on Db2 Database on IBM Cloud.
5. Visualize the order and customer details from the input text on a dashboard.

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	Web UI, Chatbot etc.	HTML, CSS, JavaScript / Angular Js / React Js etc.
2.	Application Logic-1	Kubernetes Algorithm	Python
3.	Application Logic-2	Get insights through accelerated data optimization capabilities	IBM Watson STT service
4.	Application Logic-3	Deploy Webchat in minutes, or use our fully extensible architecture	IBM Watson Assistant
5.	Database	Stores data efficiently	MySQL
6.	Cloud Database	Database Service on Cloud	IBM DB2, IBM Cloudant etc.
7.	File Storage	IBM Cloud object storage file access	IBM Block Storage or Other Storage Service or Local Filesystem
8.	External API-1	Using IBM Cloud monitoring	IBM Weather API, etc.
9.	External API-2	External API used in the application	Aadhar API, etc.
10.	Machine Learning Model	Best practices for running containers and Kubernetes in prediction	Object Recognition Model, etc.
11.	Infrastructure (Server / Cloud)	Flask,IBM DB2,IBM Object storage,IBM Watson assistant,IBM Cloud container register,IBM Cloud,Kubernetes	Local, Cloud Foundry, Kubernetes, etc.

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Flask	python
2.	Security Implementations	IBM Object storage and integration	SHA-256, Encryptions, IAM Controls, OWASP
3.	Scalable Architecture	3 – tier, Micro-services	IBM DB2, IBM Cloud storage
4.	Availability	Use of load balancers, distributed servers	IBM Cloud
5.	Performance	Design consideration for the performance of the application (number of requests per sec, use of Cache, use of CDN's) etc.	IBM Kubernetes

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