

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

Date	27 October 2023
Team ID	Team-591264
Project Name	Project - A comprehensive analysis of the IT sector salaries and roles
Maximum Marks	4 Marks

Technical Architecture:

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

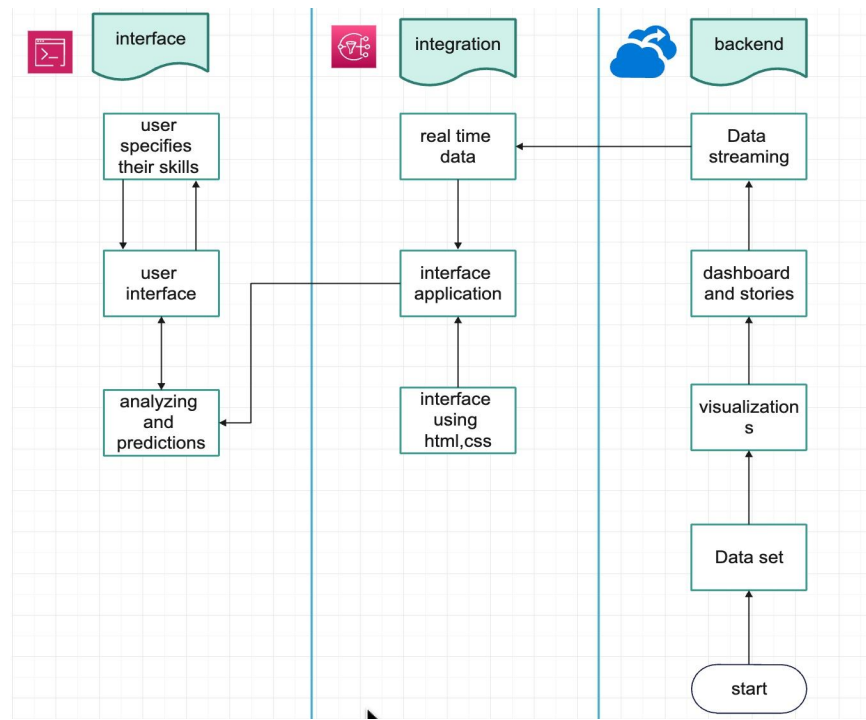


Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	Web Application and chatbot in it	HTML, CSS, JavaScript
2.	Application Logic-1	Logic for a process in the application	Java / Python
3.	Application Logic-2	Logic for a process in the application	IBM Watson STT service
4.	Application Logic-3	Logic for a process in the application	IBM Watson Assistant
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	For Data Retrival	GraphQL APIs
9.	External API-2	For chatbot for displaying the charts,visualizations regarding the user queries	IBM Watson Assistant
10	Infrastructure (Server / Cloud)	Application Deployment on Local System / Cloud Local Server Configuration: Cloud Server Configuration :	Local, IBM Cloud,Object Storage, Kubernetes, etc.

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	List the open-source frameworks used	Chart.js, IBM services
2.	Security Implementations	When building a web application for presenting IBM visualizations, it's crucial to implement various security and access controls to protect the application, data, and users.	TLS,Encryptions,API Keys,OWASP
3.	Scalable Architecture	Consider setting up load balancers and horizontal scaling to handle increased traffic.	Load Balancers , Horizontal Scalling
4.	Availability	Justify the availability of application (e.g. use of load balancers, distributed servers etc.)	Load Balancers, content delivery networks , redundant systems etc
5.	Performance	Design consideration for the performance of the application (number of requests per sec, use of Cache, use of CDN's) etc.	JavaScript, API's , CDNS

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>