Project Design Phase-II
Technology Stack (Architecture & Stack)
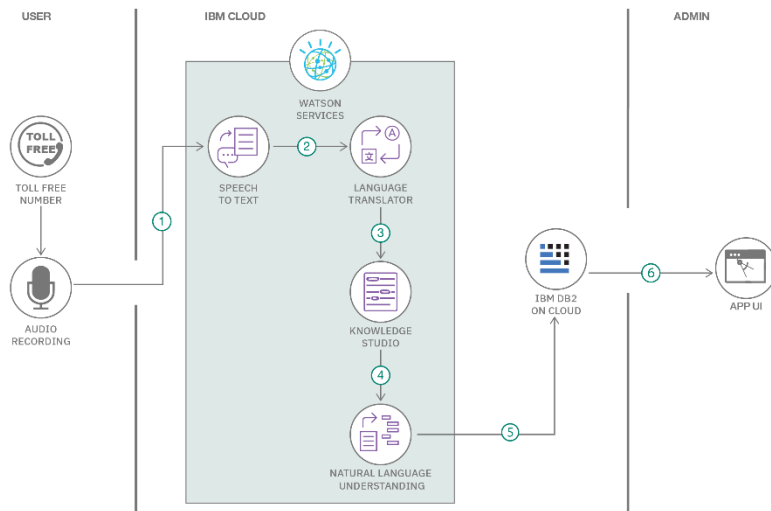
Date	27 june 3035
Team ID	LTVIP2025TMID58003
Project Name	FlightFinder: Navigate Your Air Travel Options
Maximum Marks	4 Marks

Technical Architecture:

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

Example: flight finder

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

Guidelines:

Include all the processes (As an application logic / Technology Block)
Provide infrastructural demarcation (Local / Cloud)
Indicate external interfaces (third party API's etc.)
Indicate Data Storage components / services
Indicate interface to machine learning models (if applicable)

S.No	Component	Description	Technology

1.	User Interface	Web-based flight booking system	HTML, CSS, React JS, Bootstrap
2.	Application Logic-1	Registration, login, search & booking	Node.js, Express.js
3.	Application Logic-2	Admin dashboard, booking history	Node.js, Express.js
4.	Database	Data storage for flights, users, bookings	MongoDB with Mongoose
5.	Cloud Database	Optional cloud hosting	MongoDB Atlas
6.	File Storage	Storing demo and video (if any)	GitHub, Local, Google Drive
7.	External API-1	Bootstrap CDN for UI styling	Bootstrap CDN
8.	Machine Learning Model	Purpose of Machine Learning Model	Object Recognition Model, etc.
9.	Infrastructure (Server / Cloud)	Project deployed locally during development	Localhost (Node, React) .

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	React, Node.js, Express, MongoDB, Bootstrap	Open-source
2.	Security Implementations	Password hashing with bcrypt, protected routes	bcrypt, React Router
3.	Scalable Architecture	Follows 3-tier architecture with reusable components	MERN stack
4.	Availability	Available locally, can be extended using Render or Vercel	Localhost + Cloud platforms
5.	Performance	Axios requests, MongoDB indexing, efficient state management	Axios, React Context, MongoDB

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