

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

Date	16 Feb 2026
Team ID	LTVIP2026TMIDS60082
Project Name	FlightFinder – Navigating 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

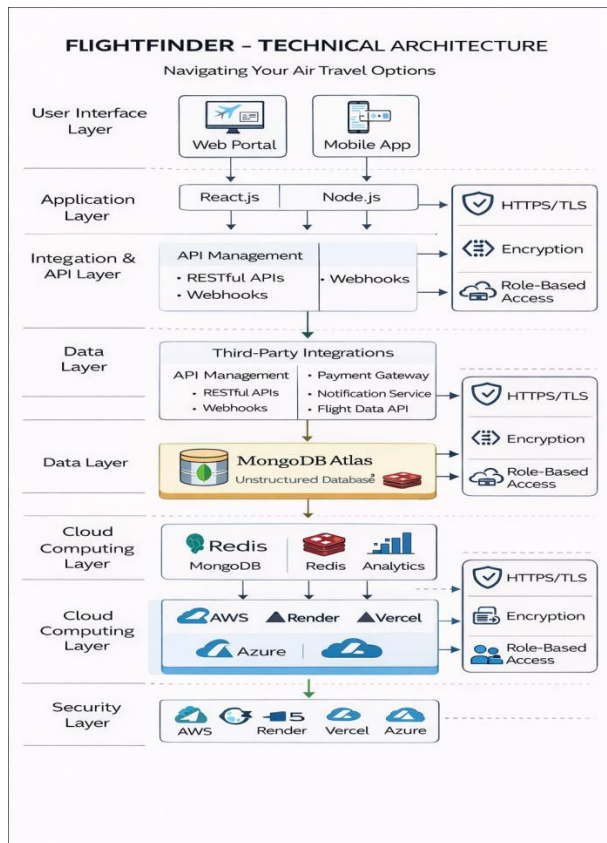


Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	Web interface where users search, compare, and book flights	HTML, CSS, JavaScript, React Js
2.	Application Logic-1	Flight search and filtering logic	Node.js / Express.js
3.	Application Logic-2	Booking management and passenger processing logic	Node.js Backend Services
4.	Application Logic-3	Payment processing and confirmation handling	Payment Gateway Integration (Razorpay / Stripe API)
5.	Database	Stores user data, flight details, booking history	MongoDB
6.	Cloud Database	Cloud-hosted database for scalability	MongoDB Atlas
7.	File Storage	Stores tickets, confirmation PDFs	Cloud Storage / Local File System
8.	External API-1	Fetch real-time flight data (if simulated or integrated)	Flight Data API (Amadeus API / Mock API)
9.	External API-2	Payment Gateway API for secure transactions	Razorpay / Stripe API
10.	Machine Learning Model	(Optional future enhancement) Flight recommendation system	Python ML Model (Optional Future Scope)
11.	Infrastructure (Server / Cloud)	Deployment of frontend and backend services	Local Server / Cloud (Render / AWS / Vercel)

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Frameworks used for frontend & backend development	React.js, Node.js, Express.js
2.	Security Implementations	Secure login, encrypted passwords, secure payments	JWT Authentication, Bcrypt, HTTPS, Payment Gateway Encryption

3.	Scalable Architecture	3-Tier Architecture (Frontend, Backend, Database)	MERN Stack
4.	Availability	24/7 availability through cloud deployment	Cloud Hosting (Render / AWS / Vercel)
5.	Performance	Fast response for flight search and booking	REST APIs, Optimized Queries, MongoDB Indexing