**Project Design Phase-II**

**Solution Requirements (Functional & Non-functional)**

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| Date | 24 June 2025 |
| Team ID | LTVIP2025TMID20428 |
| Project Name | FlightFinder |
| Mentor Name | Dr Shaik Salma Begum |
| Maximum Marks | 4 Marks |

**Functional Requirements:**

Following are the functional requirements of the proposed solution.

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| **FR No.** | **Functional Requirement (Epic)** | **Sub Requirement (Story / Sub-Task)** |
| FR-1 | User Registration | Registration through Form  Registration through Gmail  Registration through LinkedIN |
| FR-2 | User Confirmation | Confirmation via Email  Confirmation via OTP |
| FR-3 | Flight Browsing & Search | Browse Flights by Date & Route  Search by Airline or Flight No.  Filter by Price, Time, or Duration |
| FR-4 | Booking & Checkout | Select Flight & Seat  Add Passenger Details  Make Payment (e.g., Razorpay/Stripe)  Receive Booking Confirmation Email |
| FR-5 | Wishlist (Optional/Future Scope) | Add Flight to Wishlist  View Wishlist  Remove Flight from Wishlist |

**Non-functional Requirements:**

Following are the non-functional requirements of the proposed solution.

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| **FR No.** | **Non-Functional Requirement** | **Description** |
| NFR-1 | **Usability** | The platform will offer a responsive and intuitive interface using React-Bootstrap for both desktop and mobile devices to maximize ease of use and user satisfaction. |
| NFR-2 | **Security** | Authentication will be managed using JWT tokens; passwords are secured with bcrypt. HTTPS will be enforced, and API endpoints protected. File uploads (e.g., ID proofs) will be secured with Multer. |
| NFR-3 | **Reliability** | The system will provide stable performance with error handling, request retries, and MongoDB replica sets/backups to ensure data availability and durability. |
| NFR-4 | **Performance** | The application will support at least 500 concurrent users with response times under 2 seconds, leveraging backend optimizations, caching (Redis), and potential CDN for static assets. |
| NFR-5 | **Availability** | 99.9% uptime is ensured through proper server monitoring, health checks, and deployment across multiple availability zones. |
| NFR-6 | **Scalability** | The backend is built on a scalable Node.js + Express architecture, with MongoDB designed for horizontal scaling and service modularization. |

