

Project Design Phase-II
Solution Requirements (Functional & Non-functional)

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|---------------|----------------------------|
| Date | 26 th June 2025 |
| Team ID | LTVIP2025TMID53930 |
| Project Name | BookNest |
| Maximum Marks | 4 Marks |

Functional Requirements:

Following are the functional requirements of the proposed solution.

| 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 | Book Browsing & Search | Browse by Categories Search by Title/Author Filter by Price/Rating |
| FR-4 | Order & Checkout | Add to Cart Place Order Payment Integration (e.g., Razorpay/Stripe) Order Confirmation Email |
| FR-5 | Wishlist | Add Book to Wishlist View Wishlist Remove Book from Wishlist |
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Non-functional Requirements:

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

| FR No. | Non-Functional Requirement | Description |
|--------|----------------------------|---|
| NFR-1 | Usability | The application will have an intuitive and user-friendly interface for both desktop and mobile users to enhance user experience. |
| NFR-2 | Security | Secure authentication via JWT tokens, password hashing using bcrypt, HTTPS communication, and secure file uploads using Multer. |
| NFR-3 | Reliability | The system should ensure minimal downtime, with proper error handling, retry logic, and database backups to ensure data integrity. |
| NFR-4 | Performance | The application should support up to 500 concurrent users with optimal load time under 2 seconds using caching and CDN integration. |

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|-------|---------------------|---|
| 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. |