**Project Design Phase-II**

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

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| --- | --- |
| Date | 26-06-2025 |
| Team ID | LTVIP2025TMID19414 |
| Project Name | BookNest |
| Maximum Marks | 4 Marks |

**Functional Requirements:**

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| --- | --- | --- |
| **FR No.** | **Functional Requirement (Epic)** | **Sub Requirement (Story / Sub-Task)** |
| **FR-1** | **User Registration** | **Sign-up via Form  Sign-up with Gmail  Sign-up using LinkedIn** |
| **FR-2** | **User Confirmation** | **Verify through Email  Validate using OTP** |
| **FR-3** | **Book Browsing & Search** | **Explore by Category  Look up by Title or Author  Sort by Price or Rating** |
| **FR-4** | **Order & Checkout** | |  | | --- | |  |   **Add Item to Shopping Cart  Submit Order  Integrate Payment Gateway (e.g., Razorpay/Stripe)  Send Order Confirmation via Email** |
| **FR-5** | **Wishlist** | **Save Book to Wishlist  Access Wishlist  Delete Book 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 feature a clean, intuitive interface optimized for both desktop and mobile devices to ensure a smooth user journey** |
| **NFR-2** | **Security** | **User authentication will be secured using JWT, with passwords encrypted via bcrypt, HTTPS for safe data transfer, and file uploads protected through Multer middleware.** |
| **NFR-3** | **Reliability** | **The system must deliver consistent performance with minimal service interruption, including comprehensive error handling, automatic retries, and regular database backups for data safety** |
| **NFR-4** | **Performance** | **The system should handle up to 500 active users at once, maintaining response times under 2 seconds by leveraging caching mechanisms and a content delivery network..** |
| **NFR-5** | **Availability** | **The system will maintain 99.9% uptime by utilizing continuous server monitoring, periodic health checks, and deployment in multiple availability zones.** |
| **NFR-6** | **Scalability** | **The backend leverages a scalable Node.js and Express framework, with MongoDB configured for horizontal scaling and a modular service-based structure to support growth.** |