**Project Design Phase-II**

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

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| Date | 12 April 2025 |
| Team ID | SWTID1743519094 |
| Project Name | Book Store |
| 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 | Book Management | Add New Book (Admin)  Update Book Details (Admin)  Remove Book from Catalog (Admin)  View Book Details (User)  Search and Filter Books (User) |
| FR-4 | Order and Cart Management | Add Book to Cart  Remove Book from Cart  Modify Quantity in Cart  Place Order  View Order History |

**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 website should have a user-friendly interface that is easy to navigate, with intuitive features such as a search bar, filters for books by genre/author, and a clear checkout process to enhance the user experience. |
| NFR-2 | **Security** | User data must be protected through secure authentication mechanisms (e.g., JWT), data encryption, and secure APIs. Payment details should be handled through trusted third-party gateways. |
| NFR-3 | **Reliability** | The application must function consistently without failures. It should ensure that book listings, cart data, and orders are processed and saved accurately, even under load. |
| NFR-4 | **Performance** | The website should have fast response times, with optimized database queries, efficient frontend rendering using React, and backend performance tuning to handle concurrent users smoothly. |
| NFR-5 | **Availability** | The system should ensure high uptime through cloud deployment with redundancy. Users should be able to access the bookstore at any time with minimal disruptions. |
| NFR-6 | **Scalability** | The system should support horizontal scaling to accommodate growing numbers of books, users, and transactions using technologies like Node.js clusters and MongoDB sharding. |