**Project Design Phase-II**

**Data Flow Diagram & User Stories**

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| Date | 5 july 2025 |
| Team ID | LTVIP2025TMID49612 |
| Project Name | **BookNest: Where Stories Nestle** |
| Maximum Marks | 4 Marks |

**Flow – BookEase Web Application**

1. User opens BookEase and logs in  
   Users (Customer, Seller, Admin) enter credentials to authenticate and access their personalized dashboard.
2. User interacts with the system based on role
   * Customers browse books, manage cart/wishlist, and place orders.
   * Sellers add/update book listings, view orders, and monitor analytics.
   * Admins manage users, books, orders, and review approvals.
3. Data is sent to the backend API  
   The frontend sends requests (e.g., add book, fetch orders, update profile) to the Express.js server through RESTful APIs.
4. Backend processes the request
   * MongoDB handles data operations (CRUD).
   * Middleware (authentication, validation) ensures secure operations.
   * File uploads (e.g., book cover images) are stored using Multer.
5. Responses are sent back to the frontend  
   The server sends JSON responses, which are used to dynamically update the UI using React state and hooks.
6. Real-time UI updates & feedback  
   React updates components using hooks, Zustand store, and toast messages (via react-hot-toast) to show success/failure.
7. Analytics & Reviews
   * Sellers and Admins see order and book insights on dashboards.
   * Customers can review delivered books; Admin approves reviews.

**Data Flow Diagrams:**

Diagram

Description automatically generated

**User Stories Table – BookEase**

| **User Type** | **Functional Requirement (Epic)** | **User Story Number** | **User Story / Task** | **Acceptance Criteria** | **Priority** | **Release** |
| --- | --- | --- | --- | --- | --- | --- |
| Customer (Mobile user) | Registration | USN-1 | As a user, I can register for the application by entering my email, password, and confirming my password. | I can access my account / dashboard | High | Sprint-1 |
|  |  | USN-2 | As a user, I will receive confirmation email once I have registered for the application | I can receive confirmation email & click confirm | High | Sprint-1 |
|  |  | USN-3 | As a user, I can register for the application through Facebook | I can register & access the dashboard with Facebook Login | Low | Sprint-2 |
|  |  | USN-4 | As a user, I can register for the application through Gmail | I can register & access the dashboard with Gmail login | Medium | Sprint-1 |
|  | Login | USN-5 | As a user, I can log into the application by entering email & password | User is authenticated and redirected to dashboard | High | Sprint-1 |
|  | Dashboard | USN-6 | As a user, I can view featured books, new arrivals, and best sellers | Dashboard loads with personalized book sections | High | Sprint-2 |
|  | Book Browsing | USN-7 | As a user, I can search for books using keywords, categories, or authors | Relevant books appear based on filters and search query | High | Sprint-2 |
|  | Wishlist | USN-8 | As a user, I can add books to my wishlist | Wishlist saves selected books | Medium | Sprint-3 |
|  | Orders | USN-9 | As a user, I can place orders for books in my cart | Order confirmation is shown and saved in order history | High | Sprint-3 |
|  | Reviews | USN-10 | As a user, I can leave reviews for books I have purchased | Review is saved and visible after admin approval | Medium | Sprint-4 |
| Customer (Web user) | Same as mobile | Reuse USN-1 to USN-10 | All same features as mobile view, with responsive web interface | Works across browsers and device sizes | High | All Sprints |
| Customer Care Executive | User Support | USN-11 | As support staff, I can view user profiles and help with order issues | Can search users and update issue status | Medium | Sprint-4 |
| Administrator | User Management | USN-12 | As admin, I can view, approve, or deactivate users (including sellers) | Admin can toggle status from dashboard | High | Sprint-2 |
|  | Book Management | USN-13 | As admin, I can view, edit, and delete any book listing | Book info updates reflect across app | High | Sprint-2 |
|  | Review Moderation | USN-14 | As admin, I can approve or reject user reviews | Approved reviews are publicly visible | Medium | Sprint-3 |
|  | Analytics | USN-15 | As admin, I can view platform analytics including user growth and sales | Dashboard updates with charts and graphs |  |  |