**REQUIREMENT ANALYSIS & USER STORY WRITING**

1. **Project Overview:**

The client requires an Online Book Store that allows users to browse, search, and purchase books online with a user-friendly interface, secure transactions, and account management.

1. **Refined User Requirements:**

Users expect the following features from the online book store:

* Easy account creation and login/logout options.
* Browse books by categories, authors, and publishers.
* Advanced search with filters (price, genre, author, rating).
* Add books to shopping cart and wishlist.
* Secure checkout and payment process.
* Order history and tracking system.
* Responsive design for mobile and desktop.
* Notifications and emails about orders and offers

1. **Functional Requirements:**

* **User Authentication:** Signup, login, logout, password recovery.
* **Book Catalog Management:** Categorized browsing, detailed book information, reviews.
* **Search & Filtering:** Search by title/author/ISBN, apply filters (genre, price, rating).
* **Shopping Cart:** Add, remove, update quantities.
* **Wish list:** Save favorite books for later purchase.
* **Checkout & Payment**: Secure payment gateway, order confirmation, discount codes.
* **Order Management:** View history, track orders, cancel order.
* **Profile Management:** Update account details, addresses, payment methods.
* **Admin Features:** Perform CRUD operations on books, categories, users and orders.

1. **Non-Functional Requirements:**

* **Performance:** Search results load within 3 seconds.
* **Security:** SSL encryption, secure password storage, safe transactions
* **Usability:** Simple and intuitive UI for all user types.
* **Compatibility:** Work across browsers (Chrome, Edge, Firefox, Safari) and mobile devices.
* **Reliability:** System uptime should be at least 99.9%.
* **Scalability:** The system should support at least 500 concurrent users.
* **Maintainability**: Code should be well structured with proper documentation.

1. **User Stories with Acceptance Criteria:**

**1. User Authentication:**

**User Story:** As a user, I want to create an account so that I can manage my purchases and preferences.

**Acceptance Criteria:**

* Given the user is on the signup page,

When they provide valid details,

Then a new account should be created.

* Given the user is on the signup page,

When they provide invalid details,

Then an error message should be displayed.

* Given the user leaves mandatory fields empty,

When they click signup,

Then an error message should be shown indicating missing fields.

* Given the user enters a password less than 8 characters,

When they try to sign up,

Then a validation error should be displayed.

* Given the user enters an already registered email,

When they try to sign up,

Then a message 'Email already exists' should appear.

**User Story:** As a user, I want to log into my account so that I can access my profile and purchases.

**Acceptance Criteria:**

* Given the user is on the login page,

When they enter correct credentials,

Then they should be redirected to the homepage.

* Given the user is on the login page,

When they enter incorrect credentials,

Then an error message should be displayed.

* Given the user is inactive for 10 minutes,

When they try to perform an action,

Then the session should expire and redirect to login page.

**2. Book Catalog & Search:**

**User Story:** As a user, I want to search for books by title, author, or category so that I can quickly find what I need.

**Acceptance Criteria:**

* Given the user enters a valid book title,

When they click search,

Then relevant results should be displayed.

* Given the user enters an invalid keyword,

When they click search,

Then 'No results found' should be displayed.

* Given the user applies filters,

When they update search,

Then only filtered results should be shown.

* Given the user searches with special characters (e.g., @#$%),

When they click search,

Then a message 'Invalid search input' should be displayed.

* Given the user searches for a book not in stock,

When they view details,

Then 'Out of stock' should be displayed with no add-to-cart option.

* Given the user applies multiple filters (price + rating),

When results are displayed,

Then only books matching all filters should appear.

**3. Shopping Cart:**

**User Story:** As a user, I want to add and manage books in my cart so that I can prepare for checkout.

**Acceptance Criteria:**

* Given the user is viewing a book,

When they click 'Add to Cart',

Then the book should appear in their cart.

* Given the user updates quantity,

When they save,

Then the cart should reflect the change.

* Given the user has books in the cart,

When they remove one,

Then it should no longer appear in the cart.

* Given the user tries to checkout with an empty cart,

When they click 'Checkout',

Then an error message should be shown 'Your cart is empty'.

* Given the user adds the same book twice,

When they view the cart,

Then the quantity should increase instead of duplicate entries.

* Given the user updates book quantity to 0,

When they click save,

Then the book should be removed from the cart.

**4. Checkout & Payment:  
 User Story:** As a user, I want to securely checkout so that I can complete my purchase.

**Acceptance Criteria:**

* Given the user has books in the cart,

When they proceed to checkout with valid payment details,

Then the purchase should be successful.

* Given the user enters invalid payment details,

When they try to pay,

Then an error message should be shown.

* Given the user enters expired credit card details,

When they attempt payment,

Then an error message should be displayed.

* Given the user loses internet connection during payment,

When they retry,

Then the system should resume or rollback transaction.

* Given the user enters mismatched billing and shipping details,

When they submit,

Then a validation error should be shown.

**5. Order Tracking:**

**User Story:** As a user, I want to track my orders so that I know the current status of my purchases.

**Acceptance Criteria:**

* Given the user is logged in,

When they navigate to Order History,

Then all past orders should be displayed.

* Given the user has no past orders,

When they open Order History,

Then a message 'No orders found' should be shown.

* Given the user has multiple past orders,

When they open Order History,

Then all orders should be displayed in reverse chronological order.

* Given the user tries to access order history without login,

When they navigate to Order History,

Then they should be redirected to login.

* Given the user views an order in 'Processing' state,

When they refresh,

Then the updated status should be reflected in real-time.

1. **Sprint Planning:**

To complete the Online Bookstore project in an organized way, I have divided the work into five sprints. Each sprint focuses on a specific set of features so that the system can be built step by step.

* **Sprint 1: User Authentication**

In the first sprint, the main focus will be on user authentication. This includes signup, login, logout, and password reset. Getting this done first is important because it allows users to have their own accounts and makes the rest of the features easier to manage.

* **Sprint 2: Book Catalog and Search**

In the second sprint, the catalog of books and the search options will be developed. Users should be able to browse by categories, search by title/author/ISBN, and use filters like price and rating. This makes the store usable for finding books easily.

* **Sprint 3: Shopping Cart and Checkout**

Third sprint will focus on the shopping cart and checkout system. Users will be able to add and remove books from their cart, update quantities, and securely purchase through different payment methods. This sprint is important because it makes the system functional as a real store.

* **Sprint 4: Order Tracking and Admin Management**

In this sprint, users will be able to view their order history and track the status of their orders. Along with that, admin management features will be added so admins can manage the book catalog and users accounts.

* **Sprint 5: Performance, Security, and UI Enhancements**

The last sprint will improve the overall system by working on speed, security, and design. This includes making sure search results load fast, payment is secure, and the UI looks clean on both desktop and mobile.