

## **Requirement Analysis, User Story Writing & Sprint Planning**

### **Project Overview:**

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

### **Tasks:**

#### **1: Refine user requirements for preferences and expectations in online book shopping.**

##### ***Refined Requirements:***

1. Users should be able to browse books by categories such as genre (fiction, mystery, self-help etc.), age group (teens, kids, adults etc.), bestsellers and new arrivals.
2. Users should be able to search books by title, author, genre, or ISBN to quickly find what they want and refine their search results using available filters such as price, publication date, or rating.
3. Users should be able to create an account, log in, log out, and manage their password securely.
4. Users should be able to add books to a shopping cart, update quantities, remove books, and view the cart.
5. Users should be able to checkout and pay securely using either online options like credit/debit cards, bank transfer, mobile wallets etc. or cash on delivery. All online payments should be encrypted using standard security protocols.
6. Users should be able to view order history including their current status and details and should be able to track shipments.
7. The website should be user-friendly and compatible with major browsers like Chrome, Firefox, Safari, and Edge on both desktop and mobile devices.
8. Users should be able to add books to a wishlist for future purchase.
9. The system should provide recommendations based on previous purchases, wishlist, and browsing history.
10. The system should provide fast and reliable performance. Critical actions such as search and checkout should meet measurable targets (like search under 2 seconds, checkout under 5 seconds) while other interactions like login, logout, and browsing should also respond quickly.

## **2: Define functional requirements.**

### ***Functional Requirements:***

1. Users can create an account, log in, log out, and manage their profile securely.
2. The system authenticates users by verifying their email and password before giving access to features like checkout.
3. Users can search for books by title, author, genre, or ISBN and view matching results.
4. Users can browse books by categories, including genre, age group, bestsellers, and new arrivals.
5. Users can add books to the shopping cart, update quantities, remove items, and view the cart.
6. Users can add books to a wishlist for future purchase.
7. The system provides personalized book recommendations based on users' previous purchases, wishlist, and browsing history.
8. Users can view their order history and track the current status of their orders.
9. Users can complete their purchase using secure payment methods of their choice.

## **3: Identify non-functional requirements.**

### ***Non-functional Requirements:***

1. Performance: Critical actions like search and checkout should be fast.
2. Usability: The interface should be clear and user-friendly.
3. Compatibility: Works on major browsers and devices.
4. Security: Protects user data and ensures secure transactions.
5. Reliability/Scalability: Can handle multiple users simultaneously without performance issues.

**4: Develop user stories to describe interactions and write clear and concise acceptance criteria for scenarios.**

***User story 1:***

Feature: Browse books by categories

Background: Given the user is on the online bookstore website

Scenario:

Given the user is on the homepage

When the user selects a category such as genre, age group, bestsellers, or new arrivals

Then the system should display all books under that selected category And  
the user should be able to navigate through multiple pages of results

***Acceptance Criteria:***

1. User is able view books organized by genre, age group, bestsellers, and new arrivals.
2. Books that are displayed belong to the selected category.
3. User is able to navigate between pages of results smoothly.

***User Story 2:***

Feature: Search Books

Background: Given the user wants to search up a book

Scenario:

Given the user is on the search bar

When the user enters a title, author, genre, or ISBN

Then the system should display all matching results

And the user should be able to refine the search results using available filters

***Acceptance Criteria:***

1. The system displays only relevant books based on the search input.
2. The user is able to refine search results using filters such as price, publication date, or rating.

***User Story 3:***

Feature: User Account Management

Background: Given the user has access to the online bookstore website

***Action 1: Create Account***

Scenario:

Given the user is on the registration page

When the user enters the required details

And the user clicks the 'Create Account' button

Then the system should create a new account for the user

And the user should be redirected to the login page And

the user should be presented with a success message

***Acceptance Criteria:***

1. The system creates the account with the entered details.
2. The user is redirected to the login page immediately after account creation.
3. The user is able to see a confirmation message.

*Action 2: Log In*

Scenario:

Given the user is on the login page

When the user enters a valid username and password

And the user clicks the 'Login' button

Then the system should authenticate the user

And the user should be redirected to the homepage And

the user should be presented with a success message

***Acceptance Criteria:***

1. The system logs in the user immediately.
2. The user is able to see the homepage.
3. The user is able to see a success message.

*Action 3: Log Out*

Scenario:

Given the user is logged in

When the user clicks the 'Logout' button

Then the system should log the user out

And the user should be redirected to the login page And the

user should be presented with a confirmation message

***Acceptance Criteria:***

1. The system logs out the user immediately.

2. The user is redirected to the login page.
3. The user is able to see a confirmation message.

#### *Action 4: Reset Password*

Scenario:

Given the user is logged in and wants to change their password

When the user clicks the 'Reset Password' button in account settings

And the user enters a new password

And the user confirms it

Then the system should update the password successfully

And the user should be notified of the update

#### *Acceptance Criteria:*

1. The system updates the password immediately.
2. The user is notified that the password has been changed.
3. The user is able to log in using the new password.

#### *Action 5: Forgot Password*

Scenario:

Given the user is on the login page

When the user clicks the 'Forgot Password' link

And the user submits their registered email address

Then the system should send a password reset link to the user's email

And the user should be notified that a reset link has been sent

***Acceptance Criteria:***

1. The system sends a password reset link to the provided email.
2. The user is able to reset the password successfully.
3. The user is notified of the password reset.

***User Story 4:***

Feature: Shopping Cart Management

Background: Given the user is currently shopping on the website

***Action 1: Add Book to Cart***

Scenario:

Given the user is on the product page

When the user clicks the 'Add to cart' icon on a book

Then the system should add that book to the cart And

the user should be able to view it in their cart

***Acceptance Criteria:***

1. The system adds the selected book to the cart.
2. The user is able to view the added book in the cart.
3. The cart displays the correct quantity and price.

***Action 2: Update Book Quantity***

Scenario:

Given the user has books in the cart

When the user clicks the "+" or "-" button

Then the system should update the cart with the new quantity

And the user should be able to see the updated total quantity and price

***Acceptance Criteria:***

1. The system updates the book quantity correctly.
2. The system updates the total price correctly.
3. The user is able to see changes immediately.

***Action 3: Remove Book from Cart***

Scenario:

Given the user has books in the cart

When the user clicks the ‘trash bin’ icon present beside the book

Then the system should remove that book from the cart

And the cart should be updated correctly

***Acceptance Criteria:***

- 1.The system removes the selected book successfully.
- 2.The user is able to see the updated cart.

***Action 4: View Cart***

Scenario:

Given the user has books in the cart

When the user clicks the ‘cart’ icon present at the top right of the page

Then the system should display all books in the cart with correct quantities and prices

And the user should be able to proceed to checkout



***Acceptance Criteria:***

1. The system displays all books in the cart accurately.
2. The quantities and prices are correct.
3. The user is able to go to the checkout page.

***User Story 5:***

Feature: Checkout and Payment

Background: Given the user has books in their cart and wants to checkout

Scenario:

Given the user proceeds to checkout

When the user selects an online payment method such as credit/debit card, bank transfer, or mobile wallet

And the user fills in the required details of the selected method

And the user clicks the 'Place your order' button

Then the system should process the payment securely

And the system should display an order confirmation message

When the user selects cash on delivery

Then the system should confirm the order without instant payment

And the system should display an order confirmation message

***Acceptance Criteria:***

1. The user is able to select from multiple payment methods.
2. All payment data is encrypted using standard security protocols.
3. The user is able to see the order confirmation message.

***User Story 6:***

Feature: Viewing order History and Tracking shipments

Background: Given the user is logged in and has completed orders

***Action 1: View Order History***

Scenario:

Given the user wants to see their order history

When the user navigates to the 'Order history' section

Then the system should display all previous orders with their current status such as pending, shipped, out for delivery, delivered, or cancelled

And the user should be able to view details of each order including items, quantity, total price, and order date

***Acceptance Criteria:***

1. The system displays all past orders.
2. The order status is correct for each order.
3. The user is able to view order details.

***Action 2: Track Shipments***

Scenario:

Given the user wants to track their shipments

When the user clicks the 'Track shipment' button on an order

Then the system should display the current shipment status

And the user should be able to track progress until delivery

***Acceptance Criteria:***

1. The system shows the current shipment status accurately.
2. The user is able to track the delivery progress.
3. The user can confirm when the order has been delivered.

***User Story 7:***

Feature: Wishlist

Background: Given the user wants to add books in the wishlist for future purchase

Scenario:

Given the user is browsing books

When the user clicks the 'Add to wishlist' icon on a book

Then the book should be saved to the user's wishlist And

the user should be able to view the wishlist anytime

***Acceptance Criteria:***

1. The user is able to add books to the wishlist for future purchase.
2. The user is able to view and manage the wishlist.

***User Story 8:***

Feature: Recommendations

Background: Given the user has previously purchased, browsed, or added books to the  
wishlist

Scenario:

Given the user is logged in

When the user is browsing the website

Then the system should display book recommendations based on the user's previous purchases, wishlist, and browsing history in a 'You may like' section

And the user should be able to click on any recommended book to view its details

***Acceptance Criteria:***

1. The user is able to see recommended books based on their previous purchases, wishlist, and browsing history.
2. The user is able to click on any recommended book to view its details.
3. Recommendations update dynamically as the user's activity changes.

***Acceptance Criteria for non-functional requirements:***

1. Browser Compatibility:

- a. Website opens and displays properly on major browsers such as Chrome, Firefox, Safari and Edge on both desktop and mobile.
- b. Layout, images and interactive elements remain consistent across supported browsers.
- c. All essential features such as forms, buttons and navigation work correctly on supported browsers.

2. Performance:

- a. Search results load within 2 seconds under normal load.
- b. Checkout process completes within 5 seconds under normal load.
- c. Login, logout and browsing respond within acceptable limits (ideally under 3 seconds).
- d. System remains responsive during peak usage without critical slowdowns.

3. Usability:

- a. User is able to easily navigate through all main sections without confusion.
- b. All buttons, forms, and menus are clearly labeled and function as expected.

- c. User is able to complete all tasks such as search, add to cart and checkout without guidance.

#### 4. Security:

- a. Only authenticated users are able to access the 'checkout' feature.
- b. All transactions are processed securely using standard security protocols.
- c. All the user data is protected.

#### 5. Reliability/Scalability:

- a. The website remains available and stable under expected peak loads.
- b. Errors or failures in one feature don't affect the rest of the website.

### 5: Do sprint planning.

#### *Sprint 1 (Week 1, 25.9.25 – 29.9.25)*

Goal: Test browsing, searching, and account management features.

User Story ID	Feature	User Story	Priority	Estimation (days)	Start Date	End Date
US1	Browse books	Browse books by categories	High	1	25.9.25	25.9.25
US2	Search books	Search by title/author/genre/ISBN	High	1	26.9.25	26.9.25
US3-A	Account management	Create account	High	1	27.9.25	27.9.25
US3-B	Account management	Log in	High	1	28.9.25	28.9.25

US3-C	Account management	Log out	Medium	1	29.9.25	29.9.25
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***Sprint 2 (Week 2, 30.9.25 – 4.10.25)***

Goal: Continue testing account management flows and start shopping cart testing.

User Story ID	Feature	User Story	Priority	Estimation (days)	Start Date	End Date
US3-D	Account management	Reset Password and Forgot password	Medium	1	30.9.25	30.9.25
US4-A	Shopping cart	Add to cart	High	1	1.10.25	1.10.25
US4-B	Shopping cart	Update quantity	High	1	2.10.25	2.10.25
US4-C	Shopping cart	Remove from cart	High	1	3.10.25	3.10.25
US4-D	Shopping cart	View cart	Medium	1	4.10.25	4.10.25

***Sprint 3 (Week 3, 5.10.25 – 8.10.25)***

Goal: Test checkout and payment, order history and tracking shipment, wishlist and recommendation features.

<b>User Story ID</b>	<b>Feature</b>	<b>User Story</b>	<b>Priority</b>	<b>Estimation (days)</b>	<b>Start Date</b>	<b>End Date</b>
US5	Checkout & Payment	Complete checkout & payment	Medium	1	5.10.25	5.10.25
US6	Order History & Tracking	View order history & track shipments	High	1	6.10.25	6.10.25
US7	Wishlist	Add/view/manage wishlist	Medium	1	7.10.25	7.10.25
US8	Recommendations	View personalized recommendations	Medium	1	8.10.25	8.10.25