Book Alley

Use-Case Specification: Add product to cart

Version 2.0

Revision History

| **Date** | **Version** | **Description** | **Author** |
| --- | --- | --- | --- |
| 09/11/2023 | 1.0 | Initial | Dang Ha Huy |
| 17/11/2023 | 2.0 | Review | Nguyen Minh Khoi |
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Use-Case Specification: Add product to cart

# Use-Case Name

## Brief Description

The "Add Product to Cart" use case in the Book Alley system allows registered users to conveniently select and add desired products to their shopping cart for subsequent purchase. This functionality enhances the overall shopping experience and streamlines the process of selecting items for checkout.

# Flow of Events

## Basic Flow

1. After browsing, the user navigates to the product detail page and selects the book they want to add to the cart.
2. The choose the desired quantity of the book
3. The user click on the “Add to cart” button on the product page
4. The selected book is added to cart
5. The system updates the cart with the book, its quantity and the cart total
6. The user is presented with options to continue shopping or proceed to checkout.

## Alternative Flows

### Insufficient stock

1. The user selects a book with insufficient stock.
2. The system notifies the user that the selected book is out of stock.
3. The user may choose an alternative product or update the quantity.

### Product unavailable

1. The user selects a book which is unavailable (or discontinued)
2. The system notifies the user that the selected book is currently unavailable
3. The user may choose an alternative product.

# Special Requirements

## Usability

* The "Add to Cart" button is a critical element of the user interface and must be prominently displayed on the product page. The language used on the button should also be clear and concise, such as "Add to Cart," to avoid any ambiguity about its purpose.
* Additionally, consider implementing visual feedback, such as a subtle animation or change in the button appearance, to confirm to the user that the product has been successfully added to their cart.

## Accessibility

* The web application must adhere to accessibility standards, ensuring that it is usable for people with disabilities. This includes providing alternative text for images, implementing keyboard navigation, ensuring sufficient color contrast, and using semantic HTML markup.

## Performance

* The process of adding a product to the cart must be fast and responsive, with a delay of under 2-3 seconds. This ensures a seamless user experience and prevents frustration caused by slow interactions.

## Security

* The shopping cart can only be accessed by the people that have access to the account. Cart contents must be encrypted during transmission and security measures should be applied to prevent common threats

## Reliability

* The "Add to Cart" function must be highly reliable to ensure that products are added correctly and consistently remain in the cart until the user either completes the purchase or removes them. This involves robust error handling to address scenarios like network interruptions or server errors. The system should also include mechanisms to handle concurrency issues, preventing conflicts when multiple users attempt to modify their carts simultaneously.

# Preconditions

## Internet connectivity

* The user's device should have consistent access to the internet to ensure a smooth experience during product selection and addition to the cart. In the absence of a reliable connection, the system should provide a user-friendly notification, advising the user to check their internet connection and try again.

## User authentication

* Proper authentication ensures the security and personalization of the shopping experience. If the user is not authenticated, the system should prompt them to log in or create an account before proceeding with adding items to the cart.

## Product page navigation

* The user should be on the product page of the book they intend to add to the cart. This ensures that the user is interacting with the correct item and has access to all relevant details, such as price, availability, and product description.

## Product availability

* The system should verify that there is enough stock of the selected book before allowing the user to add it to their cart. If the product is out of stock or unavailable, the system should provide a clear notification to the user, suggesting alternative products or informing them when the item will be restocked.

## No conflicting processes

* The user should not have initiated a conflicting process within the website that interferes with the "Add to Cart" functionality. For example, if the user is in the process of placing an order, viewing order history, or accessing account settings, the system should prompt them to complete or cancel the conflicting process before proceeding with adding items to the cart.

## No error

* The user should not have encountered any critical errors during the browsing or accessing of the product page that could impact the buying process. If the user has encountered errors, such as page crashes or data corruption, the system should guide them through error resolution or suggest alternative actions

# Postconditions

## Successful addition to cart

* The system should provide immediate feedback to the user, announcing the successful addition. This notification should be clear and visible, confirming that the desired product has been added to the cart.

## Update cart contents

* Following a successful addition to the cart, the cart's contents should be updated to reflect the newly added product. The system should display the added product along with the chosen quantity, and the total cost of the cart should be recalculated and updated accordingly.

## Shopping options

* After adding a product to the cart, the user should be presented with options to either continue shopping or proceed to checkout. Clear and intuitive navigation elements, such as buttons or links, should guide the user to these actions.

## Cart persistence

* The shopping cart should remain accessible at all times when the user is on the website. Even if the user logs out and logs back in, the contents of the cart should persist. This ensures a consistent and convenient shopping experience, allowing users to resume their shopping without losing previously selected items.

## Synchronize cart

* To enhance the user experience, the shopping cart should remain consistent across multiple devices. If a user adds items to their cart on one device, the cart contents should synchronize automatically when they log in on another device.

## Quantity update

* If the user add the same product again, that product within the cart will automatically update its quantity
* User can also update the quantity of any products that have been added to cart within the shopping cart page

# Extension Points

## Customized discount

* To enhance the marketing and promotional aspects of the platform, the system should allow for the integration of custom discount and promotion modules. This enables the implementation of various promotional strategies, such as percentage discounts, buy-one-get-one-free offers, or promotional codes.

## Shipping integration

* To cater to diverse user preferences, the system should allow for the integration of various shipping methods and carriers. This integration gives users flexibility in choosing delivery options, such as standard shipping, express delivery, or different carriers.