

| Element | Detail |
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| Name | Add category |
| ID | UC001 |
| Description | Admins can add new product categories to the e-commerce system. |
| Actor | Admin |
| Frequency of use | High |
| Triggers | New products require a new category. Market trends demand a specific category. Seasonal promotions need temporary category |
| Postcondition | Successfully added category visible on the website. |
| Main Course | <ol style="list-style-type: none"> Admin logs in. Navigate to Category Management. Select Add Category. Provide Category Details. Save Category. Confirmation of addition. |
| Alternate Course | <ul style="list-style-type: none"> <i>Cancel Addition:</i> Admin can abort before saving. <i>Duplicate Category:</i> System prompts for a unique name. <i>Invalid Input:</i> System provides error messages for correction. |

| Element | Detail |
|------------------|---|
| Name | Modify Category |
| ID | UC002 |
| Description | Admins can update details of an existing product category in the e-commerce system. |
| Actor | Admin |
| Frequency of use | Regular |
| Triggers | <ul style="list-style-type: none"> • Category details need correction or update. • Products are re-categorized. • Changes in market trends impact category attributes. |
| Postcondition | successfully modified category details visible on the website. |
| Main Course | <ol style="list-style-type: none"> 1. Admin logs in. 2. Navigate to Category Management. 3. Select Modify Category. 4. Choose Category: Admin selects the category to modify. 5. Update Details: Admin edits category name, description, or attributes. 6. Save Changes. 7. Confirmation of modification. |
| Alternate Course | <ul style="list-style-type: none"> • <i>Cancel Modification:</i> Admin can abort before saving changes. • <i>Invalid Input:</i> System provides error messages for correction. • <i>Category Not Found:</i> If the selected category is not found, the system prompts the admin to choose an existing category. |

| Element | Detail |
|------------------|---|
| Name | Block/Unblock Accounts |
| ID | UC003 |
| Description | Admins can block or unblock user accounts in the e-commerce system. |
| Actor | Admin |
| Frequency of use | Regular |
| Triggers | <ul style="list-style-type: none"> • Violation of user policies. • Fraudulent activities detected. • User requests account suspension or reactivation. |
| Postcondition | User account status (blocked/unblocked) is updated in the system. |
| Main Course | <ol style="list-style-type: none"> 1. 1. Admin logs in. 2. Navigate to User Management. 3. Select Block/Unblock Accounts. 4. Choose User: Admin selects the user account to block or unblock. 5. Select Action: Admin chooses to block or unblock the account. 6. Provide Reason: Optionally, the admin can add a reason for the action. 7. Confirm Action: Admin confirms the decision. 8. Notification: The system notifies the user about the account status change. |
| Alternate Course | <ul style="list-style-type: none"> • <i>Cancel Action:</i> Admin can abort before confirming the action. • <i>Invalid User Selection:</i> If the selected user account is not found, the system prompts the admin to choose an existing user. • <i>Communication Failure:</i> If the notification to the user fails, the system provides an error message. |

| Element | Detail |
|------------------|---|
| Name | Add Products |
| ID | UC004 |
| Description | Admins can add new products to the e-commerce system. |
| Actor | Admin |
| Frequency of use | Regular |
| Triggers | <ul style="list-style-type: none"> • New products are introduced to the inventory. • Seasonal additions or promotions. • Expansion of product offerings. |
| Postcondition | The new product is successfully added to the system and is visible on the website. |
| Main Course | <ol style="list-style-type: none"> 1. Admin logs in. 2. Navigate to Product Management. 3. Select Add Product. 4. Provide Product Details: Admin fills in information such as product name, description, price, and other relevant attributes. 5. Upload Images: Admin uploads product images. 6. Set Availability: Admin specifies product availability. 7. Assign to Categories: Admin associates the product with relevant categories. 8. Save Product: Admin saves the new product. 9. Confirmation of Addition: The system confirms the successful addition of the product.. |
| Alternate Course | <ul style="list-style-type: none"> • <i>Cancel Addition:</i> Admin can abort before saving the new product. • <i>Incomplete Information:</i> If essential details are missing, the system prompts the admin to provide the necessary information. • <i>Image Upload Failure:</i> If image upload fails, the admin is prompted to re-upload images. |

| Element | Detail |
|------------------|--|
| Name | Modify Products |
| ID | UC005 |
| Description | Admins can update details of existing products in the e-commerce system. |
| Actor | Admin |
| Frequency of use | Regular |
| Triggers | <ul style="list-style-type: none"> • Changes in product information (e.g., price, description). • Updates due to user feedback or reviews. • Corrections or improvements to product attributes. |
| Postcondition | The modified product details are successfully updated in the system and reflected on the website. |
| Main Course | <ol style="list-style-type: none"> 1. Admin logs in. 2. Navigate to Product Management. 3. Select Modify Product. 4. Choose Product: Admin selects the product to modify. 5. Update Details: Admin edits product name, description, price, or other relevant attributes. 6. Modify Images: Admin can update product images if necessary. 7. Adjust Availability: Admin modifies the product's availability status. 8. Save Changes: Admin saves the modified product details. 9. Confirmation of Modification: The system confirms the successful update of the product. |
| Alternate Course | <ul style="list-style-type: none"> • <i>Cancel Modification:</i> Admin can abort before saving changes. • <i>Invalid Input:</i> If the admin provides incomplete or invalid information, the system provides error messages for correction. • <i>Image Update Failure:</i> If the modification of images fails, the admin is prompted to re-upload images. |

| Element | Detail |
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| Name | Add Products and Update Status |
| ID | UC006 |
| Description | Admins can add new products to the e-commerce system and update their status. |
| Actor | Admin |
| Frequency of use | Regular |
| Triggers | <ul style="list-style-type: none"> • Introduction of new products to the inventory. • Seasonal additions or promotions. • Changes in product availability or status. |
| Postcondition | The new product is successfully added to the system, and its status is updated (e.g., available, out of stock). |
| Main Course | <ol style="list-style-type: none"> 1. 1. Admin logs in. 2. Navigate to Product Management. 3. Select Add Product. 4. Provide Product Details: Admin fills in information such as product name, description, price, and other relevant attributes. 5. Upload Images: Admin uploads product images. 6. Set Availability: Admin specifies product availability. 7. Assign to Categories: Admin associates the product with relevant categories. 8. Save Product: Admin saves the new product. 9. Update Status: Admin sets the product status (e.g., available, out of stock). 10. Confirmation of Addition and Status Update: The system confirms the successful addition of the product and its updated status. |
| Alternate Course | <ul style="list-style-type: none"> • <i>Cancel Addition:</i> Admin can abort before saving the new product. • <i>Incomplete Information:</i> If essential details are missing, the system prompts the admin to provide the necessary information. • <i>Image Upload Failure:</i> If image upload fails, the admin is prompted to re-upload images. • <i>Status Update Failure:</i> If the modification of product status fails, the admin is alerted to reattempt the update |

| Element | Detail |
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| Name | Send Notifications for Orders |
| ID | UC007 |
| Description | The system automatically sends notifications for order-related events to users. |
| Actor | System |
| Frequency of use | Real-time as orders are processed. |
| Triggers | <ul style="list-style-type: none"> • Order placement. • Order processing updates (e.g., shipped, delivered). • Order status changes. |
| Postcondition | Users receive timely and accurate notifications regarding their orders. |
| Main Course | <ol style="list-style-type: none"> 1. Order Placement: When a user places an order, the system generates an order confirmation notification. 2. Order Processing Updates: As the order progresses (e.g., being shipped, out for delivery), the system sends status update notifications. 3. Delivery Confirmation: When the order is successfully delivered, the system sends a delivery confirmation notification. 4. Cancellation/Refund Notification: If an order is canceled or refunded, the system notifies the user. |
| Alternate Course | <ul style="list-style-type: none"> • <i>Failed Notification:</i> In case of a notification failure (e.g., email bounce), the system logs the issue for further investigation and may attempt to resend the notification. • <i>User Opt-Out:</i> If a user has opted out of notifications, the system respects the user's preference and refrains from sending notifications. • <i>Invalid Order:</i> If an order is deemed invalid or unprocessable, the system alerts administrators for manual intervention and does not send notifications to the user. |

| Element | Detail |
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| Name | Register Customer |
| ID | UC008 |
| Description | New customers can register on the e-commerce system. |
| Actor | Customer |
| Frequency of use | Occasional |
| Triggers | <ul style="list-style-type: none"> • First-time users wanting to make a purchase. • Users desiring personalized services (e.g., saved preferences, order history). |
| Postcondition | The customer successfully registers an account on the system, gaining access to personalized features. |
| Main Course | <ol style="list-style-type: none"> 1. Access Registration Page: Customer accesses the registration page on the e-commerce website. 2. Provide Information: Customer enters required details (e.g., name, email, password). 3. Verification: The system validates the provided information (e.g., email verification). 4. Create Account: Once verified, the customer creates their account. 5. Login: The system automatically logs in the customer after successful registration. 6. Profile Setup: Optionally, the customer can set up their profile with additional information. 7. Confirmation: The system confirms successful registration. |
| Alternate Course | <ul style="list-style-type: none"> ○ <i>Invalid Information:</i> If the provided information is incomplete or invalid, the system prompts the customer to correct it. ○ <i>Email Verification Failure:</i> If email verification fails, the system provides guidance on the necessary steps to complete the process. ○ <i>Existing Account:</i> If the email is already associated with an existing account, the system alerts the customer to choose a different email or attempt a login. |

| Element | Detail |
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| Name | Customer Login and Logout |
| ID | UC009 |
| Description | Customers can securely log in and out of their accounts on the e-commerce system. |
| Actor | Customer |
| Frequency of use | Regular |
| Triggers | <ul style="list-style-type: none"> • Accessing personalized features. • Initiating a purchase or viewing order history. • Ensuring account security by logging out. |
| Postcondition | Customer gains access to personalized features upon login and is securely logged out after use. |
| Main Course | <ol style="list-style-type: none"> 1. Access Login Page: Customer navigates to the login page on the e-commerce website. 2. Enter Credentials: Customer provides valid login credentials (email/username and password). 3. Authentication: The system authenticates the customer's credentials. 4. Login: Upon successful authentication, the system logs the customer into their account. 5. Access Personalized Features: Customer can now access personalized features (e.g., saved preferences, order history). 6. Logout: After completing activities, the customer initiates a logout. 7. Confirmation: The system confirms the successful logout. |
| Alternate Course | <p><i>Invalid Credentials:</i> If the provided login credentials are incorrect, the system prompts the customer to re-enter the information.</p> <p><i>Forgotten Password:</i> The system provides a password reset option if the customer forgets their password.</p> <p><i>Session Timeout:</i> If there is inactivity for a specified duration, the system automatically logs out the customer to ensure security.</p> <p><i>Logout Confirmation:</i> The system confirms the successful logout, assuring the customer that their session is terminated.</p> |

| Element | Detail |
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| Name | Search Product |
| ID | UC0010 |
| Description | Customers can search for products on the e-commerce system to find specific items. |
| Actor | Customer |
| Frequency of use | Frequent |
| Triggers | <ul style="list-style-type: none"> • User wants to find a specific product. • Exploring available products within a category. • Navigating through search results. |
| Postcondition | The customer views a list of relevant products based on their search query. |
| Main Course | <ol style="list-style-type: none"> 1. Access Search Bar: Customer locates and accesses the search bar on the e-commerce website. 2. Enter Search Query: Customer enters a search query, such as a product name or keyword. 3. Initiate Search: Customer submits the search query to the system. 4. Retrieve Results: The system processes the query and presents a list of relevant products. 5. Browse Results: Customer can browse through the displayed products. 6. View Product Details: Customer selects a specific product to view detailed information.. |
| Alternate Course | <ul style="list-style-type: none"> • <i>No Results:</i> If the search query yields no results, the system notifies the customer and may suggest alternative keywords or products. • <i>Refine Search:</i> The system allows customers to refine their search using filters (e.g., price range, category) to narrow down results. • <i>Typo Correction:</i> If there's a potential typo in the search query, the system may suggest corrected terms for better results. • <i>Autocomplete Suggestions:</i> The system provides autocomplete suggestions as the customer types their search query to assist in finding relevant products faster. |

| Element | Detail |
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| Name | Place Order and Make Payment |
| ID | UC0012 |
| Description | Customers can finalize their purchase by placing an order and making payment for selected items. |
| Actor | Customer |
| Frequency of use | Occasiona |
| Triggers | <ul style="list-style-type: none"> • Customer is ready to complete a purchase. • After reviewing the shopping cart, the customer proceeds to checkout. • Selected items are ready for payment. |
| Postcondition | The order is successfully placed, and payment is processed. |
| Main Course | <ol style="list-style-type: none"> 1. Access Shopping Cart: Customer reviews items in the shopping cart. 2. Proceed to Checkout: Customer clicks the "Proceed to Checkout" button. 3. Provide Shipping Information: Customer enters shipping details and selects a preferred shipping method. 4. Review Order: Customer reviews the order summary, including products, quantities, and total cost. 5. Select Payment Method: Customer chooses a preferred payment method (e.g., credit card, PayPal). 6. Enter Payment Details: Customer enters payment information (e.g., credit card details). 7. Place Order: Customer clicks the "Place Order" button to confirm the purchase. 8. Payment Processing: The system processes the payment using the provided details. 9. Order Confirmation: The system confirms the successful placement of the order and provides an order confirmation number. 10. Send Order Confirmation: The system sends an order confirmation email to the customer. |

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| Alternate Course | <ol style="list-style-type: none">1. <i>Payment Failure:</i> If the payment cannot be processed successfully, the system informs the customer and may suggest alternative payment methods.2. <i>Address Verification:</i> The system may perform address verification to ensure accurate delivery.3. <i>Order Modification:</i> Before finalizing the order, the customer can modify shipping details, quantities, or remove items.4. <i>Order Tracking:</i> The system may provide a link for the customer to track the status of their order once it is placed.<ul style="list-style-type: none">○ <i>Cart Modification:</i> Customer can adjust quantities or remove items from the cart before proceeding to checkout.○ <i>Save for Later:</i> Optionally, the system may offer the ability to "Save for Later" if the customer is not ready to proceed with the purchase immediately. |
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