1. Use case
2. Scenarios and User stories, acceptance criteria
   1. Scenarios
      1. A customer successfully logs in using their email and password

| **ID and Name** | **UC1 - Customer Login Using Email and Password** |
| --- | --- |
| **Actor** | Customer |
| **Trigger** | The customer opens the login page and inputs their credentials. |
| **Preconditions** | PRE-1. The customer already has a registered account. PRE-2. The email and password are correct. |
| **Postconditions** | POST-1. The customer is logged into the system and redirected to their account dashboard. |
| **Normal Flow** | 1. The customer navigates to the login page using their browser or the app. 2. The customer enters their email address and password in the respective fields. 3. The customer clicks the "Login" button. 4. The system verifies the entered email and password by checking the customer database. 5. If the credentials are correct, the system logs in the customer. 6. The system redirects the customer to their account dashboard, displaying account information and available actions. |
| **Alternative Flow** | 1a. If the credentials are invalid, the system displays an error message (e.g., "Invalid email or password") and prompts the user to try again. |
| **Exception** | None |

1. Staff member logs in to the support dashboard

| **ID and Name** | **UC2 - Staff Login to Support Dashboard** |
| --- | --- |
| **Actor** | Staff |
| **Trigger** | The staff member opens the login page and enters their credentials. |
| **Preconditions** | PRE-1. The staff member has valid credentials. PRE-2. The support dashboard is accessible. |
| **Postconditions** | POST-1. The staff member is logged in and can access the support features. |
| **Normal Flow** | 1. The staff member navigates to the support dashboard login page. 2. The staff member enters their email or username and password. 3. The staff member clicks the "Login" button. 4. The system checks the credentials against the staff user database. 5. Upon successful authentication, the system logs the staff member into the support dashboard. 6. The system displays the staff dashboard, showing available support tools and options. |
| **Alternative Flow** | 1a. If the credentials are incorrect, the system displays an error message, prompting the staff to retry. |
| **Exception** | None |

1. A new customer creates an account

| **ID and Name** | **UC3 - New Customer Account Creation** |
| --- | --- |
| **Actor** | Customer |
| **Trigger** | The customer decides to create an account and navigates to the signup page. |
| **Preconditions** | PRE-1. The customer is not already registered. PRE-2. The system is online and available. |
| **Postconditions** | POST-1. The new customer account is created and available for login. |
| **Normal Flow** | 1. The customer navigates to the signup page. 2. The customer fills in the required details such as name, email, password, and possibly phone number. 3. The customer agrees to the terms and conditions and clicks the "Create Account" button. 4. The system validates the inputs (e.g., checks email format, password strength). 5. The system checks if the email is already in use. If not, the system creates a new customer account. 6. The system sends a confirmation email or message to verify the email address. 7. The system redirects the customer to the login page or their new dashboard, depending on the system design. |
| **Alternative Flow** | 1a. If the email is already in use, the system displays a message prompting the customer to try another email. |
| **Exception** | None |

1. A customer requests a password reset via email

| **ID and Name** | **UC4 - Customer Password Reset Request** |
| --- | --- |
| **Actor** | Customer |
| **Trigger** | The customer clicks on "Forgot Password" link. |
| **Preconditions** | PRE-1. The customer has a registered account. PRE-2. The customer remembers their registered email address. |
| **Postconditions** | POST-1. A password reset email is sent to the customer’s registered email address. |
| **Normal Flow** | 1. The customer navigates to the login page and clicks the "Forgot Password" link. 2. The system prompts the customer to enter their registered email address. 3. The customer enters their email and clicks "Submit". 4. The system checks if the email exists in the database. 5. If the email is found, the system generates a unique password reset token and sends it to the customer's email. 6. The system displays a message indicating that the password reset email has been sent. 7. The customer receives the email and follows the instructions to reset their password. |
| **Alternative Flow** | 1a. If the email is not found in the database, the system displays an error message (e.g., "Email not registered"). |
| **Exception** | None |

1. Admin blocks/suspends a user account for violating terms

|  |  |
| --- | --- |
| **ID and Name** | **UC5 - Admin Blocks User Account** |
| **Actor** | Admin |
| **Trigger** | Admin receives a report or identifies a violation of terms of service. |
| **Preconditions** | PRE-1. The user has violated the terms of service. PRE-2. The admin has the required permissions to block users. |
| **Postconditions** | POST-1. The user's account is blocked and they are unable to log in. |
| **Normal Flow** | 1. The admin navigates to the user management section of the admin panel. 2. The admin searches for the user by their username or email. 3. The system displays the user’s account details. 4. The admin reviews the reported violations or terms of service breach. 5. The admin selects the option to "Block" or "Suspend" the user account. 6. The system confirms the action and updates the user's account status to "Blocked" or "Suspended". 7. The system notifies the user via email or message about the account suspension. |
| **Alternative Flow** | None |
| **Exception** | None |

1. A customer searches for products using keywords

| **ID and Name** | **UC6 - Customer Product Search Using Keywords** |
| --- | --- |
| **Actor** | Customer |
| **Trigger** | The customer enters keywords in the search bar to find products. |
| **Preconditions** | PRE-1. The customer has access to the online store. PRE-2. The product database is online and available. |
| **Postconditions** | POST-1. Relevant products matching the search keywords are displayed to the customer. |
| **Normal Flow** | 1. The customer navigates to the online store's homepage or search page. 2. The customer enters one or more keywords into the search bar (e.g., "laptop", "running shoes"). 3. The customer clicks the "Search" button or presses "Enter". 4. The system searches the product database for matches to the keywords entered. 5. The system retrieves and displays a list of relevant products, showing basic information like name, price, and a brief description. 6. The customer can browse through the results, clicking on product names for more details. |
| **Alternative Flow** | 1a. No results found: If no matching products are found, the system displays a message like "No results found. Please try different keywords." |
| **Exception** | None |

1. A customer filters products by category, price range, and brand

| **ID and Name** | **UC7 - Customer Filters Products by Category, Price, and Brand** |
| --- | --- |
| **Actor** | Customer |
| **Trigger** | The customer uses filters to narrow down the list of products. |
| **Preconditions** | PRE-1. The product database contains various categories, brands, and price ranges. PRE-2. The filter options are available and displayed. |
| **Postconditions** | POST-1. The filtered products matching the criteria are displayed to the customer. |
| **Normal Flow** | 1. The customer navigates to the product search results or category page. 2. The customer clicks on the "Filter" button or uses the filter panel available. 3. The customer selects one or more categories (e.g., Electronics, Clothing). 4. The customer adjusts the price range slider to their preferred budget. 5. The customer selects a specific brand from the available list. 6. The customer clicks "Apply Filters". 7. The system refines the product list based on the selected filters (category, price, brand) and displays the updated list. 8. The customer can review the filtered products and select the desired items. |
| **Alternative Flow** | None |
| **Exception** | None |

1. A customer sorts products by price (high to low)

| **ID and Name** | **UC8 - Customer Sorts Products by Price (High to Low)** |
| --- | --- |
| **Actor** | Customer |
| **Trigger** | The customer chooses to sort the displayed products by price. |
| **Preconditions** | PRE-1. The product list is already displayed. PRE-2. Products have defined prices in the database. |
| **Postconditions** | POST-1. The product list is sorted and displayed with the highest priced items first. |
| **Normal Flow** | 1. The customer is browsing through a product list (e.g., search results, category page). 2. The customer clicks on the "Sort" button or dropdown menu. 3. The customer selects "Price: High to Low" from the sorting options. 4. The system rearranges the products in the list, displaying the highest priced items at the top. 5. The customer can now browse the sorted products from highest to lowest price. |
| **Alternative Flow** | None |
| **Exception** | None |

1. Staff updates product inventory levels

| **ID and Name** | **UC9 - Staff Updates Product Inventory** |
| --- | --- |
| **Actor** | Staff |
| **Trigger** | The staff member identifies the need to update product inventory levels (e.g., restocking, low stock). |
| **Preconditions** | PRE-1. The staff member is logged into the inventory management system. PRE-2. The product database is accessible. |
| **Postconditions** | POST-1. The updated inventory levels are saved in the system, and stock levels are reflected in the product listings. |
| **Normal Flow** | 1. The staff member logs into the inventory management system. 2. The staff member navigates to the product management section. 3. The staff member searches for the product that needs inventory adjustments. 4. The system displays the current stock level and product details. 5. The staff member enters the new inventory quantity (e.g., increasing stock after restocking). 6. The staff member clicks "Save" to update the inventory in the system. 7. The system updates the product's stock level and makes it visible to customers on the store's website. 8. The staff member confirms that the inventory update was successful. |
| **Alternative Flow** | None |
| **Exception** | None |

1. Admin approves or rejects new product listings

| **ID and Name** | **UC10 - Admin Approves or Rejects Product Listings** |
| --- | --- |
| **Actor** | Admin |
| **Trigger** | A new product listing is submitted for approval. |
| **Preconditions** | PRE-1. The admin is logged into the admin dashboard. PRE-2. The product listing is awaiting approval in the system. |
| **Postconditions** | POST-1. The product is either approved and visible to customers or rejected and removed from the pending list. |
| **Normal Flow** | 1. The admin logs into the admin dashboard. 2. The admin navigates to the "Pending Product Listings" section. 3. The system displays a list of products awaiting approval. 4. The admin selects a product to review the details (e.g., title, description, price, category, images). 5. The admin evaluates whether the product meets the store’s standards and policies. 6. The admin clicks "Approve" to make the product visible in the store, or "Reject" to prevent it from being listed. 7. If approved, the product is published to the store, and customers can view and purchase it. 8. If rejected, the system notifies the staff who submitted the listing. |
| **Alternative Flow** | None |
| **Exception** | None |

1. A customer adds items to their shopping cart

| **ID and Name** | **UC11 - Customer Adds Items to Cart** |
| --- | --- |
| **Actor** | Customer |
| **Trigger** | The customer decides to add one or more products to the shopping cart. |
| **Preconditions** | PRE-1. The customer is browsing product pages. PRE-2. The product is available for purchase. |
| **Postconditions** | POST-1. The selected products are added to the customer’s shopping cart. |
| **Normal Flow** | 1. The customer views a product on its detail page. 2. The customer selects the desired quantity, size, or other options if applicable (e.g., size for clothes). 3. The customer clicks the "Add to Cart" button. 4. The system checks if the product is in stock. 5. If the product is in stock, the system adds the selected quantity to the customer’s cart. 6. The system confirms the addition by displaying a message (e.g., "Item added to your cart"). 7. The customer can choose to continue shopping or proceed to the cart for checkout. |
| **Alternative Flow** | 1a. If the product is out of stock, the system displays an error message (e.g., "Sorry, this product is currently out of stock"). |
| **Exception** | None |

1. A customer modifies the quantity of items in cart

| **ID and Name** | **UC12 - Customer Modifies Quantity of Items in Cart** |
| --- | --- |
| **Actor** | Customer |
| **Trigger** | The customer wants to change the quantity of items in their cart before proceeding to checkout. |
| **Preconditions** | PRE-1. The customer has already added items to the cart. PRE-2. The cart page is accessible. |
| **Postconditions** | POST-1. The cart is updated with the new quantity of the item. |
| **Normal Flow** | 1. The customer navigates to the shopping cart page. 2. The system displays the list of products in the cart with the current quantities. 3. The customer modifies the quantity of a product by selecting a new number from the quantity dropdown or entering it manually. 4. The customer clicks "Update Cart" to confirm the changes. 5. The system checks if the requested quantity is available in stock. 6. If the quantity is available, the system updates the cart with the new quantity and recalculates the total price. 7. The system confirms the update with a message (e.g., "Cart updated"). 8. The customer can now proceed to checkout or continue shopping. |
| **Alternative Flow** | None |
| **Exception** | None |

1. A customer removes items from cart

| **ID and Name** | **UC13 - Customer Removes Items from Cart** |
| --- | --- |
| **Actor** | Customer |
| **Trigger** | The customer decides to remove one or more items from their shopping cart. |
| **Preconditions** | PRE-1. The customer has already added items to the cart. PRE-2. The cart page is accessible. |
| **Postconditions** | POST-1. The item(s) are removed from the cart, and the total price is recalculated. |
| **Normal Flow** | 1. The customer navigates to the shopping cart page. 2. The system displays the list of products currently in the cart. 3. The customer clicks on the "Remove" button next to the item they want to delete. 4. The system removes the selected item from the cart. 5. The system updates and recalculates the total price. 6. The customer can continue shopping or proceed to checkout. |
| **Alternative Flow** | None |
| **Exception** | None |

1. A customer applies a valid discount coupon

| **ID and Name** | **UC14 - Customer Applies Discount Coupon** |
| --- | --- |
| **Actor** | Customer |
| **Trigger** | The customer applies a discount coupon to reduce the total price of their purchase. |
| **Preconditions** | PRE-1. The customer has added items to the cart. PRE-2. The coupon code is valid and active. |
| **Postconditions** | POST-1. The total amount in the cart is reduced based on the coupon. |
| **Normal Flow** | 1. The customer views their shopping cart or proceeds to checkout. 2. The customer enters a valid coupon code in the "Coupon Code" field. 3. The customer clicks "Apply". 4. The system verifies the validity of the coupon code. 5. The system recalculates the total price, applying the discount based on the coupon. 6. The customer reviews the updated total and proceeds to payment. |
| **Alternative Flow** | None |
| **Exception** | None |

1. A customer tries to apply an expired coupon

| **ID and Name** | **UC15 - Customer Tries to Apply Expired Coupon** |
| --- | --- |
| **Actor** | Customer |
| **Trigger** | The customer enters a coupon code that has already expired. |
| **Preconditions** | PRE-1. The customer has added items to the cart. PRE-2. The coupon code is no longer valid due to expiration. |
| **Postconditions** | POST-1. The customer is notified that the coupon code is invalid or expired. |
| **Normal Flow** | 1. The customer views their shopping cart or proceeds to checkout. 2. The customer enters an expired coupon code in the "Coupon Code" field. 3. The customer clicks "Apply". 4. The system checks the coupon and identifies it as expired. 5. The system displays an error message indicating that the coupon is no longer valid (e.g., "Coupon has expired"). 6. The customer can choose to proceed without the discount or search for another valid coupon. |
| **Alternative Flow** | None |
| **Exception** | None |

1. A customer completes a purchase using saved payment information

| **ID and Name** | **UC16 - Customer Completes Purchase with Saved Payment** |
| --- | --- |
| **Actor** | Customer |
| **Trigger** | The customer proceeds to checkout and selects saved payment information. |
| **Preconditions** | PRE-1. The customer has saved their payment information (e.g., credit card, digital wallet). PRE-2. The customer has added items to their cart. |
| **Postconditions** | POST-1. The payment is processed successfully, and an order confirmation is displayed. |
| **Normal Flow** | 1. The customer reviews their shopping cart and clicks "Checkout". 2. The system displays the payment options. 3. The customer selects their saved payment method (e.g., credit card, PayPal). 4. The customer confirms the payment and clicks "Place Order". 5. The system processes the payment. 6. If successful, the system displays an order confirmation, and the customer receives a confirmation email. 7. The customer can now view their order status from the account page. |
| **Alternative Flow** | 5a. Payment failure: If the payment fails, the system displays an error message, and the customer is prompted to choose another payment method. |
| **Exception** | None |

1. A customer adds a new shipping address

| **ID and Name** | **UC17 - Customer Adds Shipping Address** |
| --- | --- |
| **Actor** | Customer |
| **Trigger** | The customer wants to add a new shipping address during checkout. |
| **Preconditions** | PRE-1. The customer has a registered account. PRE-2. The customer is in the checkout process. |
| **Postconditions** | POST-1. The new address is saved and available for future orders. |
| **Normal Flow** | 1. The customer reviews the shipping details during checkout. 2. The customer clicks "Add New Address". 3. The system displays a form for the customer to enter their new address details (e.g., street, city, postal code). 4. The customer fills in the new address and clicks "Save". 5. The system verifies and saves the new address. 6. The new address is now available for selection in the shipping options. 7. The customer selects the new address and proceeds with the checkout. |
| **Alternative Flow** | None |
| **Exception** | None |

1. A customer selects express shipping option

| **ID and Name** | **UC18 - Customer Selects Express Shipping** |
| --- | --- |
| **Actor** | Customer |
| **Trigger** | The customer wants faster delivery and selects express shipping during checkout. |
| **Preconditions** | PRE-1. The customer has items in the cart and is checking out. PRE-2. The express shipping option is available for the selected items. |
| **Postconditions** | POST-1. The order is processed with express shipping, and the customer is charged accordingly. |
| **Normal Flow** | 1. The customer proceeds to the checkout page. 2. The system displays the available shipping options (e.g., standard, express). 3. The customer selects "Express Shipping". 4. The system updates the shipping cost and estimated delivery date. 5. The customer reviews the new total and confirms the order. 6. The system processes the order with express shipping and displays the confirmation. |
| **Alternative Flow** | None |
| **Exception** | None |

1. A customer pays using a credit card

| **ID and Name** | **UC19 - Customer Pays with Credit Card** |
| --- | --- |
| **Actor** | Customer |
| **Trigger** | The customer selects credit card as the payment method. |
| **Preconditions** | PRE-1. The customer has added items to the cart. PRE-2. The customer has a valid credit card. |
| **Postconditions** | POST-1. The payment is processed successfully, and the order is confirmed. |
| **Normal Flow** | 1. The customer reviews the shopping cart and clicks "Checkout". 2. The customer selects "Credit Card" as the payment option. 3. The system prompts the customer to enter credit card details (e.g., card number, expiration date, CVV). 4. The customer enters the details and clicks "Pay". 5. The system processes the payment. 6. If successful, the system confirms the payment and displays an order confirmation. |
| **Alternative Flow** | 5a. Payment fails: The system displays an error, and the customer is asked to re-enter card details or try another payment method. |
| **Exception** | None |

1. A customer pays using a digital wallet

| **ID and Name** | **UC20 - Customer Pays with Digital Wallet** |
| --- | --- |
| **Actor** | Customer |
| **Trigger** | The customer selects a digital wallet (e.g., PayPal) as the payment method. |
| **Preconditions** | PRE-1. The customer has added items to the cart. PRE-2. The customer has a valid digital wallet account. |
| **Postconditions** | POST-1. The payment is processed successfully, and the order is confirmed. |
| **Normal Flow** | 1. The customer proceeds to checkout. 2. The customer selects "Digital Wallet" (e.g., PayPal) as the payment method. 3. The system redirects the customer to the digital wallet provider's site. 4. The customer logs into their digital wallet account. 5. The customer confirms the payment. 6. The system processes the payment and redirects the customer back to the store. 7. The system confirms the payment and displays an order confirmation. |
| **Alternative Flow** | 4a. Login fails: The customer is prompted to retry or use another payment method. |
| **Exception** | None |

1. A customer views their order history

| **ID and Name** | **UC21 - Customer Views Order History** |
| --- | --- |
| **Actor** | Customer |
| **Trigger** | The customer wants to review past purchases and navigates to the order history page. |
| **Preconditions** | PRE-1. The customer has previously placed orders. PRE-2. The customer is logged into their account. |
| **Postconditions** | POST-1. The customer is shown a list of past orders along with their statuses. |
| **Normal Flow** | 1. The customer logs into their account. 2. The customer clicks on "Order History" from their account dashboard. 3. The system retrieves and displays a list of the customer's previous orders, including order number, date, items purchased, total cost, and order status (e.g., shipped, delivered, canceled). 4. The customer selects an order to view detailed information about that specific order (e.g., tracking number, items, shipping address). |
| **Alternative Flow** | None |
| **Exception** | None |

1. A customer tracks their current order status

| **ID and Name** | **UC22 - Customer Tracks Current Order** |
| --- | --- |
| **Actor** | Customer |
| **Trigger** | The customer wants to check the status of a current order. |
| **Preconditions** | PRE-1. The customer has placed an order. PRE-2. The customer is logged into their account. |
| **Postconditions** | POST-1. The current status of the order is displayed. |
| **Normal Flow** | 1. The customer logs into their account. 2. The customer navigates to "Order History" and selects the current order. 3. The system retrieves the order information and displays the current status (e.g., processing, shipped, out for delivery). 4. The customer clicks "Track Order" to view tracking details (e.g., estimated delivery date, tracking number). |
| **Alternative Flow** | None |
| **Exception** | None |

1. A customer cancels an order before shipping

| **ID and Name** | **UC23 - Customer Cancels Order** |
| --- | --- |
| **Actor** | Customer |
| **Trigger** | The customer decides to cancel their order before it has been shipped. |
| **Preconditions** | PRE-1. The customer has placed an order. PRE-2. The order has not yet been shipped. |
| **Postconditions** | POST-1. The order is successfully canceled, and the customer is refunded if payment has been processed. |
| **Normal Flow** | 1. The customer logs into their account. 2. The customer navigates to the "Order History" page and selects the order they wish to cancel. 3. The system checks if the order is eligible for cancellation (i.e., it has not been shipped). 4. The customer clicks "Cancel Order". 5. The system confirms the cancellation and refunds the customer if the payment was already processed. 6. The system updates the order status to "Canceled". |
| **Alternative Flow** | 3a. If the order has already been shipped, the system notifies the customer that cancellation is no longer possible and provides information on the return process. |
| **Exception** | None |

1. A customer requests a refund for a delivered item

| **ID and Name** | **UC24 - Customer Requests Refund** |
| --- | --- |
| **Actor** | Customer |
| **Trigger** | The customer is unsatisfied with the delivered item and requests a refund. |
| **Preconditions** | PRE-1. The item has been delivered. PRE-2. The return/refund policy allows for refunds. PRE-3. The customer is logged into their account. |
| **Postconditions** | POST-1. The refund request is submitted and processed by the system. |
| **Normal Flow** | 1. The customer logs into their account. 2. The customer navigates to "Order History" and selects the delivered order. 3. The customer clicks "Request Refund" for the specific item. 4. The system displays a form where the customer enters the reason for the refund (e.g., damaged item, incorrect size). 5. The customer submits the refund request. 6. The system processes the request and sends a confirmation email to the customer. 7. The system updates the order status to "Refund Requested". |
| **Alternative Flow** | None |
| **Exception** | None |

1. Staff processes refund requests

| **ID and Name** | **UC25 - Staff Processes Refunds** |
| --- | --- |
| **Actor** | Staff |
| **Trigger** | A customer has submitted a refund request, and a staff member needs to process it. |
| **Preconditions** | PRE-1. A refund request has been submitted. PRE-2. The staff member has access to the support dashboard. |
| **Postconditions** | POST-1. The refund is processed, and the customer is notified of the outcome. |
| **Normal Flow** | 1. The staff member logs into the support dashboard. 2. The staff member navigates to the "Refund Requests" section. 3. The system displays a list of pending refund requests. 4. The staff member selects a refund request and reviews the customer's reason for the refund. 5. The staff member approves or rejects the refund. 6. If approved, the system processes the refund and updates the customer's order status. 7. The system sends a confirmation email to the customer. |
| **Alternative Flow** | None |
| **Exception** | None |

1. A customer writes a product review

| **ID and Name** | **UC26 - Customer Writes Product Review** |
| --- | --- |
| **Actor** | Customer |
| **Trigger** | The customer decides to leave feedback on a purchased product. |
| **Preconditions** | PRE-1. The customer has purchased the product. PRE-2. The customer is logged into their account. |
| **Postconditions** | POST-1. The review is submitted and appears on the product page. |
| **Normal Flow** | 1. The customer logs into their account. 2. The customer navigates to the product page or order history. 3. The customer clicks "Write a Review". 4. The system displays a review form where the customer can rate the product and write feedback. 5. The customer submits the review. 6. The system verifies the review and publishes it on the product page. |
| **Alternative Flow** | None |
| **Exception** | None |

1. A customer initiates a return process

| **ID and Name** | **UC27 - Customer Initiates Return Process** |
| --- | --- |
| **Actor** | Customer |
| **Trigger** | The customer wants to return a purchased item. |
| **Preconditions** | PRE-1. The item is eligible for return under the return policy. PRE-2. The customer is logged into their account. |
| **Postconditions** | POST-1. The return request is submitted and the customer is provided with return instructions. |
| **Normal Flow** | 1. The customer logs into their account. 2. The customer navigates to "Order History" and selects the order they wish to return. 3. The customer clicks "Request Return". 4. The system displays a form for the customer to specify the reason for the return. 5. The customer submits the return request. 6. The system sends the return instructions to the customer (e.g., return label, shipping address). 7. The system updates the order status to "Return Initiated". |
| **Alternative Flow** | None |
| **Exception** | None |

1. Staff updates order status and shipping information

| **ID and Name** | **UC28 - Staff Updates Order Status** |
| --- | --- |
| **Actor** | Staff |
| **Trigger** | A staff member needs to update the order status or shipping information for an ongoing order. |
| **Preconditions** | PRE-1. The order is in progress. PRE-2. The staff member has access to the support dashboard. |
| **Postconditions** | POST-1. The order status is updated, and the customer is notified. |
| **Normal Flow** | 1. The staff member logs into the support dashboard. 2. The staff member navigates to the "Orders" section. 3. The system displays a list of orders with current statuses. 4. The staff member selects an order to update. 5. The staff member changes the order status (e.g., from "Processing" to "Shipped"). 6. If necessary, the staff member updates the shipping information (e.g., tracking number, carrier). 7. The system saves the updates and notifies the customer of the status change via email. |
| **Alternative Flow** | None |
| **Exception** | None |

1. Admin removes inappropriate product listings or reviews

| **ID and Name** | **UC29 - Admin Removes Inappropriate Content** |
| --- | --- |
| **Actor** | Admin |
| **Trigger** | The admin identifies inappropriate product listings or customer reviews that violate platform policies. |
| **Preconditions** | PRE-1. The admin is logged into the admin dashboard. PRE-2. The inappropriate content has been reported or flagged. |
| **Postconditions** | POST-1. The inappropriate listing or review is removed from the platform. |
| **Normal Flow** | 1. The admin logs into the admin dashboard. 2. The admin navigates to the "Content Moderation" section. 3. The system displays flagged product listings or reviews. 4. The admin reviews the flagged content and determines if it violates platform policies. 5. If inappropriate, the admin selects "Remove" and provides a reason for the removal. 6. The system removes the content and notifies the respective user (product owner or reviewer) of the action taken. |
| **Alternative Flow** | None |
| **Exception** | None |

1. Admin manages product categories and attributes

| **ID and Name** | **UC30 - Admin Manages Categories** |
| --- | --- |
| **Actor** | Admin |
| **Trigger** | The admin needs to create, update, or delete product categories and attributes to ensure accurate product listings. |
| **Preconditions** | PRE-1. The admin is logged into the admin dashboard. PRE-2. There are products associated with categories and attributes. |
| **Postconditions** | POST-1. The categories or attributes are successfully updated in the system. |
| **Normal Flow** | 1. The admin logs into the admin dashboard. 2. The admin navigates to the "Categories" section. 3. The system displays a list of existing categories and attributes. 4. The admin selects an option to create a new category, update an existing category, or delete an outdated category. 5. The admin fills in or edits the necessary information (e.g., category name, attributes). 6. The admin saves the changes, and the system updates the product catalog accordingly. 7. The system ensures that all products remain associated with the appropriate categories. |
| **Alternative Flow** | None |
| **Exception** | None |

b. User story

| **No** | **User Story** | **Acceptance Criteria** |
| --- | --- | --- |
| 1 | As a customer, I want to log in using my email and password so that I can access my account. | - Customer can input email and password. - System authenticates credentials. - System grants access for valid credentials. - Error message is shown for invalid credentials. |
| 2 | As a staff member, I want to log in to the support dashboard so that I can manage customer support requests. | - Staff inputs email and password. - System authenticates staff credentials. - Access to the support dashboard is granted for valid credentials. - Error message for invalid credentials. |
| 3 | As a new customer, I want to create an account so that I can start purchasing items. | - Customer inputs name, email, and password. - System verifies the email. - Account created if email not in use. - Confirmation email is sent after account creation. |
| 4 | As a customer, I want to request a password reset via email so that I can regain access to my account if I forget my password. | - Customer inputs email for reset. - System sends a reset link to email. - Confirmation of email sent is shown. - Error message for unrecognized email. |
| 5 | As an admin, I want to block or suspend a user account for violating the terms and conditions. | - Admin can search and select user account. - Admin can block/suspend account. - Blocked user cannot log in. - Notification is sent to user. |
| 6 | As a customer, I want to search for products using keywords so that I can find the items I want to purchase. | - Customer inputs keywords. - System returns matching products. - Products include name, price, and image. - Error shown if no matches. |
| 7 | As a customer, I want to filter products by category, price range, and brand so that I can narrow down the options. | - Customer selects filters for category, price range, and brand. - System applies filters and updates product list. - Filtered products are shown. - Customer can reset filters. |
| 8 | As a customer, I want to sort products by price (high to low) so that I can view the most expensive products first. | - Customer selects "Sort by Price (High to Low)". - System sorts products in descending order by price. - Products are updated with new sorting. - Customer can change sorting options. |
| 9 | As a staff member, I want to update product inventory levels so that customers can see accurate stock information. | - Staff inputs new inventory levels. - System updates stock levels. - Updated stock shown on product pages. - Error shown for invalid inputs. |
| 10 | As an admin, I want to approve or reject new product listings so that only valid products are available on the site. | - Admin reviews product listings. - Admin approves or rejects listings. - Approved listings are published. - Rejected listings do not appear. |
| 11 | As a customer, I want to add items to my shopping cart so that I can purchase them later. | - Customer clicks "Add to Cart" on products. - Items are added to the cart. - System updates cart total. - Customer can view the cart at any time. |
| 12 | As a customer, I want to modify the quantity of items in my cart so that I can adjust my order. | - Customer modifies item quantity in the cart. - System updates cart total. - Minimum quantity is 1. - Error for invalid quantities. |
| 13 | As a customer, I want to remove items from my cart so that I only purchase what I need. | - Customer removes items from the cart. - System updates the cart total. - Item removed confirmation shown. - Items are successfully deleted. |
| 14 | As a customer, I want to apply a valid discount coupon so that I can receive a discount on my purchase. | - Customer inputs coupon at checkout. - System verifies coupon validity. - Discount applied if valid. - Error shown for invalid/expired coupons. |
| 15 | As a customer, I want to be notified if I try to apply an expired coupon so that I can use a valid one instead. | - Customer inputs expired coupon at checkout. - System checks coupon expiration. - Error shown for expired coupons. - Coupon not applied. |
| 16 | As a customer, I want to complete a purchase using my saved payment information so that I can check out quickly. | - Customer selects saved payment info at checkout. - Payment is processed successfully. - Order summary provided. - Confirmation email sent. |
| 17 | As a customer, I want to add a new shipping address so that I can have my order delivered to a different location. | - Customer inputs new shipping address. - System validates and saves address. - Customer selects address for future orders. - Confirmation is shown. |
| 18 | As a customer, I want to select express shipping so that I can receive my order faster. | - Customer selects express shipping at checkout. - Estimated delivery date is displayed. - System updates total price. - Confirmation message shown. |
| 19 | As a customer, I want to pay for my order using a credit card so that I can complete the purchase. | - Customer inputs credit card details. - Payment processed via credit card. - Confirmation email sent if successful. - Error message for declined/invalid cards. |
| 20 | As a customer, I want to pay for my order using a digital wallet so that I can check out faster and more securely. | - Customer selects digital wallet at checkout. - System redirects for wallet authentication. - Payment processed via wallet. - Order confirmed if successful. |
| 21 | As a customer, I want to view my order history so that I can keep track of past purchases. | - Customer navigates to "Order History". - Past orders displayed with product details. - Detailed order information is accessible. - Orders listed in chronological order. |
| 22 | As a customer, I want to track the status of my current order so that I know when it will be delivered. | - Customer selects current order to track status. - System displays order status (e.g., shipped). - Tracking number provided for shipped orders. - Email notifications sent for updates. |
| 23 | As a customer, I want to cancel an order before it is shipped so that I am not charged for items I no longer want. | - Customer requests cancellation. - System checks if the order is shipped. - If not shipped, order is canceled and refunded. - Cancellation confirmation email sent. |
| 24 | As a customer, I want to request a refund for a delivered item so that I can return the product if it doesn't meet my expectations. | - Customer requests refund from order history. - System allows item selection for refund. - Refund request processed. - Customer notified of refund approval. |
| 25 | As a staff member, I want to process customer refund requests so that refunds are handled promptly and efficiently. | - Staff views pending refund requests. - Refund requests reviewed and approved/rejected. - System updates order status. - Customers notified of decision. |
| 26 | As a customer, I want to write a review for a product I purchased so that I can share my experience with others. | - Customer writes a review from order history. - Rating and review can be submitted. - Reviews are approved before publishing. - Customer can edit or delete reviews. |
| 27 | As a customer, I want to initiate a return process for an item I purchased so that I can send it back if necessary. | - Customer initiates return from order history. - System provides return shipping instructions. - Order status updated to "Return in Process". - Email notifications sent throughout the process. |
| 28 | As a staff member, I want to update the order status and shipping information so that customers are informed about their order. | - Staff views orders in the dashboard. - Staff updates order status. - Shipping info and tracking number added. - Customer notified via email. |
| 29 | As an admin, I want to remove inappropriate product listings or reviews so that the platform maintains high content quality. | - Admin views flagged content. - Inappropriate listings/reviews are removed. - Affected users are notified. - Content no longer appears on the platform. |
| 30 | As an admin, I want to manage product categories and attributes so that product listings are accurately organized. | - Admin manages product categories and attributes. - System updates catalog based on changes. - Products are organized accordingly. - Changes are reflected across listings. |

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| **Class** | **Responsibilities** | **Collaborators** |
| Staff | - Manage employee records - Assign tasks and responsibilities - Evaluate performance - Provide training and development | - Manager - Department - Employee |
| Manager | - Oversee department operations - Make strategic decisions - Allocate resources - Provide leadership and guidance | - Staff - Department - Employee |
| Employee | - Perform assigned tasks and duties - Communicate with manager and colleagues - Contribute to department goals - Maintain productivity and efficiency | - Staff - Manager - Department |
| Department | - Coordinate team activities - Manage departmental resources - Ensure alignment with organizational objectives - Collaborate with other departments | - Staff - Manager - Employee |
| Address | - Store location information - Validate address data - Provide address details for various purposes | - Person - Customer - Shipping |
| Person | - Manage personal information - Maintain contact details - Provide identification data | - Employee - Customer - Address |
| FullName | - Store first and last name - Provide formatted name display - Validate name integrity | - Person |
| Account | - Store user login credentials - Manage account settings - Handle authentication and authorization | - Customer - Security |
| Cart | - Add and remove products - Calculate total price - Apply discounts - Save cart for later use | - Customer - Product - Order |
| CartItem | - Represent a product in the cart - Track quantity and price - Provide item details | - Cart - Product |
| Product | - Store product information - Provide product details - Manage product categories - Handle product searches | - ProductCategory - Supplier - Image - Review |
| ProductCategory | - Organize products into categories - Manage category hierarchy - Provide category-specific details | - Product - ProductCatalog |
| Supplier | - Provide product inventory - Handle product procurement - Manage supplier-related information | - Product |
| Image | - Store product images - Resize and optimize images - Manage image galleries - Handle image uploads | - Product - User Interface |
| Video | - Store product videos - Manage video quality and resolution - Provide video playback capabilities | - Product - User Interface |
| Resolution | - Represent video or image resolution - Provide resolution details - Ensure consistent quality | - Image - Video |
| Review | - Store customer reviews - Calculate product ratings - Display review information - Moderate review content | - Customer - Product |
| Customer | - Manage account information - Place orders - Provide shipping and payment info - Leave feedback and ratings | - User Interface - Cart - Order - Payment - Review |
| Notification | - Send order confirmations - Provide updates to customers - Alert customers about promotions - Manage notification preferences | - Customer - Order Management - Marketing |
| Email | - Send email notifications - Manage email templates - Track email deliverability | - Notification - Customer |
| InApp | - Deliver in-app notifications - Manage push notification preferences - Integrate with mobile platforms | - Notification - Customer |
| Phone | - Store customer phone numbers - Provide phone-based communication - Handle SMS and voice interactions | - Customer - Notification |
| Payment | - Process customer payments - Handle payment methods - Verify payment information - Issue refunds | - Customer - Order - PaymentType - Transaction |
| PaymentType | - Represent different payment options - Manage payment processing details - Provide payment-specific functionality | - Payment |
| Transaction | - Record payment transactions - Manage transaction statuses - Facilitate payment processing | - Payment - Order |
| Order | - Combine cart items - Calculate final price - Track order status - Store order history | - Cart - Customer - Order Management - Payment - Shipping |
| VoucherVault | - Store active vouchers - Manage voucher redemption - Provide voucher-related data | - Voucher - Order |
| Voucher | - Represent discount or promotional codes - Apply vouchers to orders - Track voucher usage and validity | - VoucherVault - Order |
| Warehouse | - Store product inventory - Manage warehouse locations - Coordinate shipping and returns | - Inventory - Shipping |
| Shipping | - Calculate shipping costs - Manage available shipping methods - Coordinate with shipping carriers - Track shipment status | - Order - Order Management - Warehouse - ShippingDevice |
| Shipper | - Represent a shipping carrier - Provide shipping rates and services - Handle shipment tracking and updates | - Shipping |
| ShippingDevice | - Manage a fleet of delivery devices - Plan efficient delivery routes - Monitor device status and maintenance | - Shipping - GPS |
| ShippingMethod | - Encapsulate shipping service details - Provide shipping cost calculations - Facilitate shipment processing | - Shipping |
| GPS | - Provide location data for shipments - Calculate optimal delivery routes - Track shipment progress and status | - ShippingDevice - Shipping |
|  | - Track order status | - Order Management System |
|  | - Store order history | - Payment System |
|  |  | - Shipping Department |
| Order Management System | - Process new orders | - Order |
|  | - Update order status | - Inventory |
|  | - Coordinate shipping and inventory | - Shipping Department |
|  | - Handle order cancellations and returns | - Billing System |
| Payment System | - Process payments | - Customer |
|  | - Verify payment information | - Order |
|  | - Handle payment methods | - Payment Gateway |
|  | - Issue refunds | - Billing System |
| Shipping Department | - Calculate shipping costs | - Order |
|  | - Manage shipping methods | - Order Management System |
|  | - Coordinate couriers | - Warehouse Management System |
|  | - Track shipments | - Drone System |
| Warehouse Management System | - Manage inventory locations | - Inventory |
|  | - Optimize picking and packing | - Shipping Department |
|  | - Coordinate shipping | - Order Management System |
|  | - Handle returns |  |
| Drone System | - Manage drone fleet | - Shipping Department |
|  | - Plan delivery routes | - GPS System |
|  | - Monitor drone status |  |
|  | - Handle drone maintenance |  |
| Customer Service | - Handle customer inquiries | - Customer |
|  | - Process returns and exchanges | - Order Management System |
|  | - Resolve customer disputes | - Inventory |
|  | - Provide product support | - Shipping Department |
| Analytics Module | - Collect and analyze data | - System |
|  | - Generate performance reports | - Marketing Module |
|  | - Provide marketing insights |  |
|  | - Monitor system performance |  |
| Marketing Module | - Manage promotions | - Customer |
|  | - Handle email marketing | - Analytics Module |
|  | - Personalize customer experiences |  |
|  | - Manage loyalty programs |  |
| Search Engine | - Index product catalog | - Product Catalog |
|  | - Process search queries | - User Interface |
|  | - Rank search results | - Analytics Module |
|  | - Provide autocomplete suggestions |  |
| Recommendation Engine | - Analyze user behavior | - Product Catalog |
|  | - Generate product recommendations | - Customer |
|  | - Personalize product listings | - Analytics Module |
|  | - Perform A/B testing |  |
| Notification System | - Send order confirmations | - Customer |
|  | - Provide updates to customers | - Order Management System |
|  | - Alert customers about promotions | - Marketing Module |
|  | - Manage notification preferences |  |