**USECASE DESCRIPTION**

1. Register via email/password – UC01

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| Register via email/password | |
| **Title** | **Content** |
| Use case Name | Register via email/password |
| ID | UC01 |
| Description | This use case allows a new user to register by providing an email address and creating a password. |
| Actor | Guest |
| Trigger | The user accesses to the registration page. |
| Preconditions | PRE-1: The user is not logged in. |
| Postconditions | POST-1: The system creates a new account in database.  POST-2: The system sends an OTP to the user’s email and go to UC5.2. |
| Main Flow | 1. The user accesses to the registration page.  2. The system displays a registration form.  3. The user enters the required details.  4. The user submits the registration form.  5. The system validates the input.  6. The system checks the email is already registered.  7. The system creates a new account in the database with an unverified status.  8. The system creates an OTP and sends it to the user’s email.  9. The system redirects the user to the OTP verification page.  Go to UC4.2. |
| Alternate Flow | AF-1: Invalid input  6a1. The system displays detailed error message and go back to step 3.  AF-2: Email already exists  7a1. The system displays error message and go back to step 3. |
| Exception | Ex-1: Internal server error.  - The system redirects the user to the “Server error” page.  Ex-2: Too many requests. - The system displays error message and end use case.  Ex-3: Email service unavailable.  - The system displays error message and end use case. |

1. Search product – UC02

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| Search product | |
| **Title** | **Content** |
| Use case Name | Search product |
| ID | UC02 |
| Description | This use case allows users to search for products by entering keywords, applying filters, or sorting results. The system retrieves and displays relevant products based on the search criteria. |
| Actor | Customer, Guest |
| Trigger | User enters a keyword into the search bar or apply filters. |
| Preconditions | PRE-1: The system must have products. |
| Postconditions | POST-1: The system displays relevant products matching the search query.  POST-2: If no matching products are found, the system displays a message. |
| Main Flow | 1. The user enters a keyword into the search bar or selects advanced filters.  2. The system retrieves matching products from the database.  3. The system check the results.  4. The system displays a list of products with relevant details to the user. |
| Alternate Flow | AF-1: No results found  4a1. If no results found, the system displays a “No products found” message. |
| Exception | Ex-1: Internal server error.  - The system redirects the user to the “Server error” page.  Ex-2: Too many requests. - The system displays error message and end use case. |

1. View product details– UC03

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| View details product | |
| **Title** | **Content** |
| Use case Name | View details product |
| ID | UC03 |
| Description | This use case allows user to see details information about a selected product. |
| Actor | Customer, Guest |
| Trigger | The user selects a product from a list or grid of products to view its detailed information. |
| Preconditions | PRE-1: Product available in the system |
| Postconditions | POST-1: The product details are displayed to the user. |
| Main Flow | 1. The user selects a specific product on the page or clicks on a product thumbnail or product name.  2. The system redirects the user to the selected product details page.  3. The system retrieves the product details from the database.  4. The system checks the result.  5. If have product, the system displays detailed information about the product. |
| Alternate Flow | AF-1: Product not found  5a. The system redirects the user to not found page and end use case. |
| Exception | Ex-1: Internal server error.  - The system redirects the user to the “Server error” page.  Ex-2: Too many requests. - The system displays error message and end use case. |

1. Login – UC04
   1. Login via email/password – UC05.1

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| Login via email/password | |
| **Title** | **Content** |
| Use case Name | Login via email/password |
| ID | UC4.1 |
| Description | This use case describes the process of a user logging into the system using their registered email and password. |
| Actor | All actors except guest |
| Trigger | User accesses to login page. |
| Preconditions | PRE-1: The user is not logged in. PRE-2: The user has a registered account. |
| Postconditions | POST-1: The user is authenticated and redirected to the appropriate page. |
| Main Flow | 1. The user accesses to login page.  2. The system displays a login form.  3. The user enters their email and password.  4. The user submits the login form  5. The system validates the input.  6. The system checks the credentials.  7. The system checks the user’s account need two-factor authentication by checking the account is verified.  8. If account doesn’t need 2FA, the system creates access token and refresh token, saves the refresh token in the database.  9. The system logs the user in.  10. The system redirects the user to the appropriate page based on user type. |
| Alternate Flow | AF-1: Invalid input: 6a1. The system displays detailed error message and go back to step 3. AF-2: Incorrect Credentials  7a1. The system displays an error message and go back to step 3.  AF-3: Account need two-factor authentication  8a1. The system creates an OTP in the database.  8a2. The system sends OTP to the user’s email.  8a3. The system redirects user to the OTP verification page and go to UC5.2. |
| Exception | Ex-1: Internal server error.  - The system redirects the user to the “Server error” page.  Ex-2: Too many requests. - The system displays error message and end use case. |

* 1. Verify account via OTP – UC4.2

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| Verify account via OTP | |
| **Title** | **Content** |
| Use case Name | Verify account via OTP |
| ID | UC4.2 |
| Description | This use case allows a user to verify their account using a One-Time Password (OTP) sent to their registered email or phone number. |
| Actor | All actors except guest |
| Trigger | The system redirects the user to the OTP verification page. |
| Preconditions | PRE-1: The user is not logged in. PRE-2: The system has sent an OTP to the user's email.  PRE-3: The user is redirected to verify OTP page by the system. |
| Postconditions | POST-1. The system updates the user’s account is verified in the database.  POST-2. The user is authenticated and redirected to the appropriate page. |
| Main Flow | 1. The system redirects the user to the OTP verification page.  2. The system displays an OTP verification form.  3. The user checks their email and enters the OTP code to the form.  4. The user submits the OTP verification form  5. The system validates the OTP input.  6. The system checks the OTP matches in the database by OTP code and expiration time.  7. The system checks user is verified.  8. The system removes the user’s current OTP.  9. The system creates access token and refresh token, saves the refresh token in the database.  10. The system logs the user in.  11. The system redirects the user to the appropriate page based on user type. |
| Alternate Flow | AF-1: Resend OTP  3a1. The user clicks to resend OTP button and goes to UC4.3, when UC4.3 is completed go back to step 3.  AF-2: Invalid OTP 6a1. The system displays an error message and go back to step 3. AF-3: OTP does not match  7a1. The system displays an error message and go back to step 3.  AF-4: Unverified User  8a1. The system updates the user’s account is verified.  8a2. The system sends a welcome email to the user’s email and go back to step 8. |
| Exception | Ex-1: Internal Server Error.  - At any step, the system redirects user to the error page. Ex-2: Too many requests. - At any step, the system displays error message.  Ex-3: Email Service Unavailable.  - The system displays error message. |

* 1. Send OTP via email – UC4.3

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| Send OTP via email | |
| **Title** | **Content** |
| Use case Name | Send OTP via email |
| ID | UC4.3 |
| Description | This use case involves sending a one-time password (OTP) to a user’s email address to verify their identity during authentication or account recovery processes. The OTP is a time-sensitive code that allows the user to securely complete their login or verification process. |
| Actor | All actors except guest |
| Trigger | The user clicks to the “Resend” button in the verification page. |
| Preconditions | PRE-1: In UC4.2. PRE-2: The user must not have previously exceeded the OTP request limit within a set time frame. |
| Postconditions | POST-1: The system sends OTP code to the user’s email and displays a success message. POST-2: The system displays a message asking the user to wait. |
| Main Flow | 1. The user clicks to the “Resend” button in the verification page.  2. The system checks for existing valid OTP.  3. If exist, the system checks the time limit is not valid.  4. If the time is not valid, the system removes the current OTP.  5. The system creates new OTP for the user in the database.  6. The system sends OTP code to the user’s email.  7. The system displays a success message. |
| Alternate Flow | AF-1: OTP does not exist, go back to step 6. AF-2: Resend OTP limit reached  4a1. If the time limit still valid, the system displays a message asking the user to wait. |
| Exception | Ex-1: Internal server error.  - The system redirects the user to the “Server error” page.  Ex-2: Too many requests. - The system displays error message and end use case.  EX-3: User not found. - The system displays error message and end use case.  Ex-4: Email Service Unavailable.  - The system displays error message. |

* 1. Login via google – UC4.4

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| Login via google | |
| **Title** | **Content** |
| Use case Name | Login via google |
| ID | UC4.1 |
| Description | This use case describes the process of a user logging into the system using their Google account. |
| Actor | Customer, Google |
| Trigger | The user chooses to log in via Google on the login page. |
| Preconditions | PRE-1: The user has a valid Google account.  PRE-2: The application is registered with Google OAuth and has appropriate API credentials. |
| Postconditions | POST-1: The user is authenticated and granted access to the system. |
| Main Flow | 1. The user selects "Login with Google" on the login page.  2. The system redirects the user to Google’s authentication page.  3. The user enters their Google credentials (email and password) and submits the form.  4. Google verifies the credentials and asks for user consent.  5. Google redirects the user back to the system with an authentication token.  6. The system validates the token with Google’s OAuth server.  7. If the token is valid, the system retrieves the customer's profile information  8. If the customer is logging in for the first time, the system creates an account using the retrieved information.  9. The system logs the customer in and redirects them to the appropriate page. |
| Alternate Flow | AF-1: User is already logged into Google  - Steps 3 and 4 are skipped, and Google automatically authorizes the login. AF-2: Google authentication fails 5a1. Google displays an error message and go back to step 3. |
| Exception | Ex-1: Internal server error  - The system redirects the user to the “Server error” page.  Ex-2: Too many requests - The system displays error message and end use case.  Ex-3: OAuth token validation fails  - The system displays an authentication error and end use case. |

1. Manage shipping addresses – UC05
   1. View shipping address list – UC05.1

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| View list shipping addresses | |
| **Title** | **Content** |
| Use case Name | View list shipping addresses |
| ID | UC5.1 |
| Description | This use case describes the process by which a user views their saved shipping addresses within the system. |
| Actor | Customer |
| Trigger | The user navigates to the "Shipping Addresses" section of their account. |
| Preconditions | PRE-1: The user is logged into their account. |
| Postconditions | POST-1: If have results, the system displays the list of saved shipping addresses.  POST-2: If no results, the system displays a message indicating no addresses are available. |
| Main Flow | 1. The user navigates to the "Shipping Addresses" section of their account.  2. The system retrieves the user's saved shipping addresses from the database.  3. The system checks the results.  4. The system displays the list of shipping addresses. |
| Alternate Flow | AF-1: No Saved Addresses:  4a1. The system displays a message "No results found". |
| Exception | Ex-1: Internal server error.  - The system redirects the user to the “Server error” page.  Ex-2: Too many requests. - The system displays error message and end use case.  Ex-3: Unauthorized access - The system redirects the user to the login page. |

* 1. Create shipping address – UC05.2

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| Create shipping address | |
| **Title** | **Content** |
| Use case Name | Create shipping address |
| ID | UC5.2 |
| Description | This use case describes the process by which a user adds a new shipping address to their account. It also includes the ability to view the updated list of shipping addresses after successfully creating a new one. |
| Actor | Customer |
| Trigger | The user selects the option to add a new shipping address from the "Shipping Addresses" section. |
| Preconditions | PRE-1: The user is logged into their account. PRE-2: In UC5.1: View list shipping addresses. |
| Postconditions | POST-1: A new shipping address is saved to the user's account.  POST-2: Go to UC5.3: View shipping address details. |
| Main Flow | 1. The user clicks the "Add new address" button.  2. The system displays a form modal for entering shipping details.  3. The user fills in the required details.  4. The user submits the form.  5. The system validates the input fields.  6. The system creates the new shipping address to the database.  7. The system displays a success message.  Go to UC5.1. |
| Alternate Flow | AF-1: Invalid input  6a1. The system shows detailed error and go back to step 3. |
| Exception | Ex-1: Internal server error.  - The system redirects the user to the “Server error” page.  Ex-2: Too many requests. - The system displays error message and end use case.  Ex-3: Unauthorized access - The system redirects the user to the login page. |

* 1. View shipping address details – UC05.3

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| View shipping address details | |
| **Title** | **Content** |
| Use case Name | View shipping address details |
| ID | UC5.3 |
| Description | This use case describes the process by which a user views the details of a specific shipping address. It also includes the ability to view the full list of shipping addresses before selecting a specific one. |
| Actor | Customer |
| Trigger | The user selects a specific shipping address from the "Shipping Addresses" list. |
| Preconditions | PRE-1: The user is logged into their account. PRE-2: In UC5.1 - View shipping address list. PRE-3: The user must have at least one saved shipping address. |
| Postconditions | POST-1: The system displays the selected shipping address details. |
| Main Flow | 1. The user selects a specific shipping address from the list.  2. The system retrieves the details of the selected address from the database.  3. The system checks the result.  4. If have result, the system displays a form with full details of the shipping address. |
| Alternate Flow | AF-1: Shipping address not found  4a1: The system redirects user to the “Not Found” page. |
| Exception | Ex-1: Internal server error.  - The system redirects user to the “Server error” page.  Ex-2: Too many requests. - The system displays error message and end use case.  Ex-3: Unauthorized access - The system redirects the user to the login page. |

* 1. Update shipping address – UC05.4

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| Update shipping address | |
| **Title** | **Content** |
| Use case Name | Update shipping address |
| ID | UC5.4 |
| Description | This use case describes the process by which a user updates the details of an existing shipping address. It includes viewing the address details before making the updates. |
| Actor | Customer |
| Trigger | The user selects a shipping address from their list and chooses the option to edit or update the address details. |
| Preconditions | PRE-1: The user is logged into their account. PRE-2: In UC5.3 - View shipping address details. |
| Postconditions | POST-1: The shipping address is updated in the system and go to UC5.1: View shipping address list. |
| Main Flow | 1. The user modifies the desired fields  2. The user submits the updated information by clicking to the “Update” button.  3. The system validates the input.  4. If validation is successful, the system checks if the selected address exists.  5. If address exists, the system updates the shipping address in the database.  Go to UC5.1: View shipping address list. |
| Alternate Flow | AF-1: Invalid input  4a1. If invalid input, the system shows detailed error and go back to step 1.  AF-2: Shipping address not found.  5a1. The system shows error message and end use case. |
| Exception | Ex-1: Internal server error.  - The system redirects user to the “Server error” page.  Ex-2: Too many requests. - The system displays error message and end use case.  Ex-3: Unauthorized access - The system redirects the user to the login page. |

* 1. Remove shipping address – UC5.5

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| Remove shipping address | |
| **Title** | **Content** |
| Use case Name | Remove shipping address |
| ID | UC5.5 |
| Description | This use case describes the process by which a user removes an existing shipping address from their account. It includes viewing the address details before removing it. |
| Actor | Customer |
| Trigger | - The user selects the "Remove" option in the list of saved shipping addresses.  - The user clicks the "Remove" button in the shipping address details view. |
| Preconditions | PRE-1: The user is logged into their account. PRE-2: In UC5.1 - View shipping address list. |
| Postconditions | POST-1: The selected shipping address is removed from the system and go to UC5.1: View shipping address list. POST-2: The user is logged in. |
| Main Flow | 1. The user selects a shipping address from the list to remove.  2. The user clicks the "Remove" option.  3. The system checks if the selected address exists.  4. If the address exists, the system removes the selected address from the database.  5. If the removed address was the default address and other addresses exist, the system sets another address as the new default.  6. The system display a success message.  Go to UC5.1: View shipping address list. |
| Alternate Flow | AF-1: Shipping address not found.  4a1. The system shows error message and end use case. |
| Exception | Ex-1: Internal server error.  - The system redirects user to the “Server error” page.  Ex-2: Too many requests. - The system displays error message and end use case.  Ex-3: Unauthorized access - The system redirects the user to the login page. |

1. Manage cart – UC06
   1. View cart – UC06.1

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| View cart | |
| **Title** | **Content** |
| Use case Name | View cart |
| ID | UC6.1 |
| Description | This use case describes how a user views the contents of their shopping cart, including a list of items, quantity, and total price. |
| Actor | Customer |
| Trigger | The user clicks on the "Cart" icon or navigates to the cart page |
| Preconditions | PRE-1: The user is logged into their account. |
| Postconditions | POST-1: If have results, the system displays the list of items in the cart, including item names, quantities, prices, and the total amount.  POST-2: If cart is empty, the system displays a message: “Your cart is empty”. |
| Main Flow | 1. The user clicks on the "Cart" icon or navigates to the cart page.  2. The system retrieves the items currently in the user's cart from the database.  3. The system checks the results.  4. The system displays the cart contents. |
| Alternate Flow | AF-1: Cart is empty: 3a. The system displays a message: "Your cart is empty". |
| Exception | Ex-1: Internal server error.  - The system redirects user to the “Server error” page.  Ex-2: Too many requests. - The system displays error message and end use case.  Ex-3: Unauthorized access - The system redirects the user to the login page. |

* 1. Add product to cart – UC06.2

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| Add product to cart | |
| **Title** | **Content** |
| Use case Name | This use case describes how a user adds a product to their shopping cart from the product listing or product details page. |
| ID | UC6.2 |
| Description | The user clicks the "Add to Cart" button on a product listing or product details page. |
| Actor | Customer |
| Trigger | The user decides to purchase a product. |
| Preconditions | PRE-1: The user is logged into their account.  PRE-2: The product variant must be available in stock. |
| Postconditions | POST-1: The product variant is added to the user's cart in the database. |
| Main Flow | 1. The user clicks the "Add to cart" button/icon on a product listing or product details page.  2. The system checks for product variant existence.  3. If exist product, the system checks product availability in stock.  4. If quantity available, the system checks the product exist in shopping cart.  5. If product exists in cart, the system updates quantity in the database.  6. The system displays a success message. |
| Alternate Flow | AF-1: Product variant not found  3a1. The system shows error message and end use case.  AF-2: Product variant out of stock  4a1. The system shows error message and end use case. AF-3: Product variant does not exist in cart 5a1. The system adds new product to the user’s shopping cart in the database and go back to step 6. |
| Exception | Ex-1: Internal server error.  - The system redirects user to the “Server error” page.  Ex-2: Too many requests. - The system displays error message and end use case.  Ex-3: Unauthorized access - The system redirects the user to the login page. |

* 1. Update quantity in cart – UC06.3

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| Update quantity in cart | |
| **Title** | **Content** |
| Use case Name | Update quantity in cart |
| ID | UC6.3 |
| Description | This use case describes how a user updates the quantity of a product in their shopping cart. It includes viewing the cart before making updates. |
| Actor | Customer |
| Trigger | The user navigates to the cart and modifies the quantity of an item using a quantity selector or input field. |
| Preconditions | PRE-1: The user is logged into their account.  PRE-2: The user must have at least one item in the cart. PRE-3: The product variant must be available in stock.  PRE-4: In UC6.1- View cart |
| Postconditions | POST-1: The selected cart is updated in the database. |
| Main Flow | 1. The user selects an item in the cart.  2. The user clicks the increase or decrease icon to modify the quantity.  3. The system checks if the cart exists.  4. If the cart exists, the system checks product availability quantity.  5. If the quantity is available, the system checks the quantity updated is zero.  6. If quantity is not equal zero, the system updates the quantity in the cart.  7. The system displays a success message.  Go to UC6.1. |
| Alternate Flow | AF-1: Cart not found  4a1. The system shows error message and end use case.  AF-2: Product variant out of stock  5a1. The system shows out-of-stock message and end use case.  AF-3: User decreases quantity to zero 6a1. The system removes the item from the cart and go back to step 7. |
| Exception | Ex-1: Internal server error.  - The system redirects user to the “Server error” page.  Ex-2: Too many requests. - The system displays error message and end use case.  Ex-3: Unauthorized access - The system redirects the user to the login page. |

* 1. Remove product from cart – UC06.4

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| Remove product from cart | |
| **Title** | **Content** |
| Use case Name | Remove product from cart |
| ID | UC6.4 |
| Description | This use case allows a user to remove a selected product from the shopping cart. |
| Actor | Customer |
| Trigger | The customer decides to remove an item from their cart. |
| Preconditions | PRE-1: The user is logged into their account. PRE-2: In UC6.1 - View cart.  PRE-3: The user must have at least one item in the cart. |
| Postconditions | POST-1: The selected cart is removed from the database. |
| Main Flow | 1. The user selects an item in the cart.  2. The user clicks the "Remove" button/icon.  3. The system checks if the cart exists.  4. If the cart exists, the system removes the product variant from the cart.  5. The system displays a success message.  Go to UC6.1. |
| Alternate Flow | AF-1: Cart not found  4a1. The system shows error message and end use case. |
| Exception | Ex-1: Internal server error.  - The system redirects user to the “Server error” page.  Ex-2: Too many requests. - The system displays error message and end use case.  Ex-3: Unauthorized access - The system redirects the user to the login page. |

1. Payment – UC08
   1. Payment via COD – UC07.1

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| Payment via COD | |
| **Title** | **Content** |
| Use case Name | Payment via COD |
| ID | UC7.1 |
| Description | This use case describes the process of a customer selecting Cash on Delivery (COD) as the payment method while placing an order on the cart page. The page allows the user to provide a shipping address, choose a payment method, review the cart details, and confirm the purchase by clicking the "Payment" button. |
| Actor | Customer |
| Trigger | The user clicks the "Payment" button to proceed with the checkout and selects "Cash on Delivery" as the payment method. |
| Preconditions | PRE-1: The user is logged into their account. PRE-2: The user has items in their cart. PRE-3: In 6.1: View cart |
| Postconditions | POST-1: The system creates the order with order status to “Pending” in the database and prepares it for delivery. |
| Main Flow | 1. The user navigates to the cart page.  2. The user provides or confirms their shipping address.  3. The user selects Cash on Delivery (COD) as the payment method.  4. The customer clicks the "Payment" button to confirm the order.  5. The system validates the cart, shipping address, and payment method.  6. The system creates an order with order status as “Pending”.  7. The system displays the order success page, which include:  + Order ID  + Order summary (products, subtotal, total price, quantity, total discount, shipping cost)  + Delivery information (receiver name, email, phone number, payment method, shipping address) |
| Alternate Flow | AF-1: Shipping address is invalid  5a. The system displays an error message and go back to step 2. |
| Exception | Ex-1: Internal server error.  - At any step, the system redirects user to the error page. Ex-2: Too many requests. - At any step, the system displays error message.  Ex-3: Cart is empty  - The system displays an error message. EX-4: Shipping Address is Missing or Invalid  - The system displays an error message. |

* 1. Payment via MoMo – UC08.2
  2. Payment via VnPay – UC08.3

1. Forgot password – UC08

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| Forgot password | |
| **Title** | **Content** |
| Use case Name | Forgot password |
| ID | UC08 |
| Description | This use case allows a user to reset their password if they forget it. The system will send a password reset link to the user's registered email. The user can then create a new password and regain access to their account. |
| Actor | Customer |
| Trigger | The user navigates to the forgot password page. |
| Preconditions | PRE-1: The user is not logged in. |
| Postconditions | POST-1: The system updates the user’s password in the database. |
| Main Flow | 1. The user navigates to the forgot password page.  2. The system displays a forgot password form.  3. The user enters email.  4. The user submits the forgot password form.  5. The system validates the input.  6. The system checks account exists with the email provided.  7. The system checks the time limit that requires a password reset.  8. The system creates a password reset token and saves it in the database.  9. The system sends a reset password link to the user’s email.  10. The user checks their email and clicks to the reset password link.  11. The system redirects user to the reset password page.  12. The system displays a reset password form.  13. The user enters a new password and confirm password.  14. The user submits the reset password form.  15. The system validates the new password.  16. The system check the reset password token existence by the token and expiration time.  17. If valid token, the system updates the user’s password in the database.  18. The system displays a success message.  19. The system redirects the user to the login page. |
| Alternate Flow | AF-1: Invalid email  6a1. If invalid email, the system shows detailed error and go back to step 3.  AF-2: User not found  7a1. If user not found, the system displays error message and go back to step 3.  AF-3: Request limit  8a1. If request limit, the system displays error message asking the user to wait and go back to step 3.  AF-4: Invalid new password or confirm password  16a1. If invalid email, the system shows detailed error and go back to step 13.  AF-5: Reset password token invalid  17a1. The system displays error message and redirects user to the forgot password page and end use case. |
| Exception | Ex-1: Internal server error.  - The system redirects user to the “Server error” page.  Ex-2: Too many requests. - The system displays error message and end use case.  Ex-3: Email service unavailable.  - The system displays error message and end use case. |

1. Review product – UC09
2. Manage account – UC10
   1. View user profile – UC10.1

|  |  |
| --- | --- |
| View user profile | |
| **Title** | **Content** |
| Use case Name | View user profile |
| ID | UC10.1 |
| Description | This use case allows a registered user to view their personal profile details, such as their name, email, phone number, and profile picture. |
| Actor | Customer |
| Trigger | The user navigates to the "Profile" section of their account. |
| Preconditions | PRE-1: The user is logged into their account. |
| Postconditions | POST-1: The system displays the user’s current profile information on the profile page. |
| Main Flow | 1. The user navigates to the "Profile" section.  2. The system retrieves the user’s current data.  3. The system displays the user’s profile details. |
| Alternate Flow | Don’t’ have. |
| Exception | Ex-1: Internal server error.  - The system redirects user to the “Server error” page.  Ex-2: Too many requests. - The system displays error message and end use case.  Ex-3: Unauthorized access - The system redirects the user to the login page. |

* 1. Update user profile – UC10.2

|  |  |
| --- | --- |
| Update user profile | |
| **Title** | **Content** |
| Use case Name | Update user profile |
| ID | UC10.2 |
| Description | This use case allows a registered user to update their personal details, including name, email, phone number, and profile picture, to keep their profile up to date. |
| Actor | Customer |
| Trigger | The user click to the “Update information” button in view profile page. |
| Preconditions | PRE-1: The user is logged into their account.  PRE-2: In UC10.1 |
| Postconditions | POST-1: The user’s profile is updated with the new information. |
| Main Flow | 1. The user click to the “Update information” button.  2. The system displays a form modal. 3. The user modifies their profile information.  4. The user submits the change.  5. The system validates the input data.  6. The system saves the updated information in the database.  7. The system displays a success message. |
| Alternate Flow | AF-1: Invalid input  6a1. The system shows detailed error and go back to step 1. |
| Exception | Ex-1: Internal server error.  - The system redirects user to the “Server error” page.  Ex-2: Too many requests. - The system displays error message and end use case.  Ex-3: Unauthorized access - The system redirects the user to the login page. |

* 1. View order history – UC10.3

|  |  |
| --- | --- |
| View order history | |
| **Title** | **Content** |
| Use case Name | View order history |
| ID | UC10.3 |
| Description | This use case allows a registered user to view a list of their previous orders, including order details such as order ID, items purchased, order status, payment status, delivery information, and date of purchase. The user can review their past transactions and track the status of any pending orders. |
| Actor | Customer |
| Trigger | The user navigates to the “Order” section. |
| Preconditions | PRE-1: The user is logged into their account. |
| Postconditions | POST-1: The system displays the user’s order history with relevant details. |
| Main Flow | 1. The user navigates to the “Order” section.  2. The system retrieves the user's order history from the database.  3. The system checks the results.  4. The system displays the user’s order history with relevant details. |
| Alternate Flow | AF-1: No results found  4a1. The system displays a message “No results found”. |
| Exception | Ex-1: Internal server error.  - The system redirects user to the “Server error” page.  Ex-2: Too many requests. - The system displays error message and end use case.  Ex-3: Unauthorized access - The system redirects the user to the login page. |

* 1. View Order Details – UC10.4

|  |  |
| --- | --- |
| View order details | |
| **Title** | **Content** |
| Use case Name | View order history |
| ID | UC10.4 |
| Description | This use case allows a user to view the detailed information of a specific order from their order history. It displays detailed order information such as items purchased, quantities, prices, shipping details, payment status, delivery status, and any applicable tracking numbers. The user can track the status of their order and review order-specific details. |
| Actor | Customer |
| Trigger | The user clicks to specific order in UC10.3 |
| Preconditions | PRE-1: The user is logged into their account.  PRE-2: In UC10.3. |
| Postconditions | POST-1: The system displays detailed information about the selected order, including the order items, order status, payment status, shipping details, and any tracking information. |
| Main Flow | 1. The user clicks to specific order in the order history page.  2. The system retrieves the selected order’s details from the database.  3. The system checks the order exists.  4. The system displays detailed information. |
| Alternate Flow | AF-1: Order not found  4a1. The system redirects user to “Not Found” page. |
| Exception | Ex-1: Internal server error.  - The system redirects user to the “Server error” page.  Ex-2: Too many requests. - The system displays error message and end use case.  Ex-3: Unauthorized access - The system redirects the user to the login page. |

* 1. Change password – UC10.5

|  |  |
| --- | --- |
| Change password | |
| **Title** | **Content** |
| Use case Name | Change password |
| ID | UC10.5 |
| Description | This use case allows a user to change their account password for security reasons. The user must provide their current password and set a new password that meets the security requirements. |
| Actor | Customer |
| Trigger | The user clicks to “Change password” button in view profile page. |
| Preconditions | PRE-1: The user is logged into their account.  PRE-2: In UC10.1. |
| Postconditions | POST-1 The user's password is updated successfully in the database. |
| Main Flow | 1. The user clicks to change password button.  2. The system display a form modal.  3. The user enters the required details.  4. The user submits the form.  5. The system validates input.  6. The system verifies the current password.  7. If correct password, the system updates new the password in the database.  8. The system display a success message. |
| Alternate Flow | AF-1: Invalid data  6a1. The system shows detailed error and go back to step 3.  AF-2: Incorrect current password  7a1. The system displays an error message and go back to step 3. |
| Exception | Ex-1: Internal server error.  - The system redirects user to the “Server error” page.  Ex-2: Too many requests. - The system displays error message and end use case.  Ex-3: Unauthorized access - The system redirects the user to the login page. |

1. View permission list – UC11

|  |  |
| --- | --- |
| View permission list | |
| **Title** | **Content** |
| Use case Name | View permission list |
| ID | UC11 |
| Description | This use case describes the process by which an authorized user retrieves the list of permissions from the system. |
| Actor | Admin |
| Trigger | The user navigates to the “Permissions management” section. |
| Preconditions | PRE-1: The user is logged into their account.  PRE-2: The user must have permission. |
| Postconditions | POST-1: The system displays a list of permissions.  POST-2: If there are no results, the system displays a message “No results found”. |
| Main Flow | 1. The user navigates to the “Permissions management” section.  2. The system retrieves the list of permissions from the database.  3. The system checks the results.  4. If results are available, the system displays the list of permissions. |
| Alternate Flow | AF-1: No permissions found  4a1. The system displays a message “No results found”. |
| Exception | Ex-1: Internal server error.  - The system redirects user to the “Server error” page.  Ex-2: Too many requests. - The system displays error message and end use case.  Ex-3: Unauthorized access - The system redirects the user to the login page.  Ex-4: Forbidden access  - The system redirects the user to the permission denied page. |

1. Manage roles – UC12
   1. View role list – UC12.1

|  |  |
| --- | --- |
| View role list | |
| **Title** | **Content** |
| Use case Name | View role list |
| ID | UC12.1 |
| Description | This use case describes the process by which an authorized user retrieves the list of roles from the system. |
| Actor | Admin |
| Trigger | The user navigates to the “Roles management” section. |
| Preconditions | PRE-1: The user is logged into their account.  PRE-2: The user must have permission. |
| Postconditions | POST-1: The system displays a list of roles.  POST-2: If there are no results, the system displays a message “No results found”. |
| Main Flow | 1. The user navigates to the “Roles management” section.  2. The system retrieves the list of roles from the database.  3. The system checks the results.  4. If results are available, the system displays the list of roles. |
| Alternate Flow | AF-1: No roles found  4a1. The system displays a message “No results found”. |
| Exception | Ex-1: Internal server error.  - The system redirects user to the “Server error” page.  Ex-2: Too many requests. - The system displays error message and end use case.  Ex-3: Unauthorized access - The system redirects the user to the login page.  Ex-4: Forbidden access  - The system redirects the user to the permission denied page. |

* 1. Search role – UC12.2

|  |  |
| --- | --- |
| Search role | |
| **Title** | **Content** |
| Use case Name | Search role |
| ID | UC12.2 |
| Description | This use case describes the process by which an authorized user searches for a specific role in the system based on a query (e.g., role name or description). |
| Actor | Admin |
| Trigger | The user enters a keyword into the search bar or apply filters. |
| Preconditions | PRE-1: The user is logged into their account.  PRE-2: The user must have permission.  PRE-3: In UC12.1. |
| Postconditions | POST-1: The system displays the list of roles that match the search criteria.  POST-2: If there are no results, the system displays a message “No results found”. |
| Main Flow | 1. The user enters a keyword into the search bar or apply filters.  2. The system retrieves the list of roles from the database based on the provided query.  3. The system checks the results.  4. If results are available, the system displays the list of roles that match the search criteria. |
| Alternate Flow | AF-1: No roles found  4a1. The system displays a message “No results found”. |
| Exception | Ex-1: Internal server error.  - The system redirects user to the “Server error” page.  Ex-2: Too many requests. - The system displays error message and end use case.  Ex-3: Unauthorized access - The system redirects the user to the login page.  Ex-4: Forbidden access  - The system redirects the user to the permission denied page. |

* 1. Create role – UC12.3

|  |  |
| --- | --- |
| Create role | |
| **Title** | **Content** |
| Use case Name | Create role |
| ID | UC12.3 |
| Description | This use case describes the process by which an administrator creates a new role within the system, with specified permissions and attributes. |
| Actor | Admin |
| Trigger | The user clicks to the “Create role” button. |
| Preconditions | PRE-1: The user is logged into their account.  PRE-2: The user must have permission.  PRE-3: In UC12.1. |
| Postconditions | POST-1: A new role is successfully created in the database. |
| Main Flow | 1. The user clicks to the “Add new role” button.  2. The system displays a form for creating a new role.  3. The user enters the required fields.  4. The system validates the input.  5. If valid input, the system checks the role name exists.  6. If role name does not exist, the system creates a new role in the database.  7. The system displays a success message.  Go to UC12.1. |
| Alternate Flow | AF-1: Invalid input  5a1. The system shows detailed error and go back to step 3.  AF-2: Role name already exists  6a1. The system display error message and go back to step 3. |
| Exception | Ex-1: Internal server error.  - The system redirects user to the “Server error” page.  Ex-2: Too many requests. - The system displays error message and end use case.  Ex-3: Unauthorized access - The system redirects the user to the login page.  Ex-4: Forbidden access  - The system redirects the user to the permission denied page. |

* 1. View role details – UC12.4

|  |  |
| --- | --- |
| View role details | |
| **Title** | **Content** |
| Use case Name | View role details |
| ID | UC12.4 |
| Description | This use case allows an administrator to view the details of a specific role, including the role's name, description, permissions, and users assigned to the role. |
| Actor | Admin |
| Trigger | The user selects a role from the list and clicks to option “View details”. |
| Preconditions | PRE-1: The user is logged into their account.  PRE-2: The user must have permission.  PRE-3: In UC12.1. |
| Postconditions | POST-1: The system displays the details of the selected role. |
| Main Flow | 1. The user selects a role from the list and clicks to option “View details”.  2. The system redirects the user to the details page.  3. The system checks the role exists.  4. If role exists, the system displays the details of the selected role. |
| Alternate Flow | AF-1: Role not found  4a1. The system redirects the user to “Not found” page and end use case. |
| Exception | Ex-1: Internal server error.  - The system redirects user to the “Server error” page.  Ex-2: Too many requests. - The system displays error message and end use case.  Ex-3: Unauthorized access - The system redirects the user to the login page.  Ex-4: Forbidden access  - The system redirects the user to the permission denied page. |

* 1. Update role – UC12.5

|  |  |
| --- | --- |
| Update role | |
| **Title** | **Content** |
| Use case Name | Update role |
| ID | UC12.5 |
| Description | This use case describes the process by which an administrator updates the details of an existing role, such as its name, description, and permissions. |
| Actor | Admin |
| Trigger | The user modifies the fields and clicks to save/update button. |
| Preconditions | PRE-1: The user is logged into their account.  PRE-2: The user must have permission.  PRE-3: In UC12.4. |
| Postconditions | POST-1: The role is updated with the new information in the database. |
| Main Flow | 1. The user modifies the necessary fields.  2. The user submit the changes.  3. The system validates the entered data.  4. If the data is valid, the system checks the current role exists.  5. If current role exists, the system checks the role name exists.  6. If role name does not exist, the system updates the role in the database.  6. The system display a success message. |
| Alternate Flow | AF-1: Invalid input  4a1. The system shows detailed error and go back to step 1. AF-2: Current role not found  5a1. The system displays error message and use case. |
| Exception | Ex-1: Internal server error.  - The system redirects user to the “Server error” page.  Ex-2: Too many requests. - The system displays error message and end use case.  Ex-3: Unauthorized access - The system redirects the user to the login page.  Ex-4: Forbidden access  - The system redirects the user to the permission denied page. |

* 1. Remove role – UC12.6

|  |  |
| --- | --- |
| Remove role | |
| **Title** | **Content** |
| Use case Name | Remove role |
| ID | UC12.6 |
| Description | This use case describes the process by which an administrator removes an existing role from the system, ensuring that the role is no longer available for assignment or use. |
| Actor | Admin |
| Trigger | The user clicks to remove button. |
| Preconditions | PRE-1: The user is logged into their account.  PRE-2: The user must have permission.  PRE-3: In UC12.4. |
| Postconditions | POST-1: The selected role is updated as removed in the database. |
| Main Flow | 1. The user clicks to remove button.  2. The system displays a confirmation prompt asking if the user is sure they want to remove the role.  3. The user confirms that they want to remove the role.  3. The system checks the role exists.  4. If role exists, the system checks the role is disabled.  5. If role is disabled, the system verifies that the role is not assigned to any users.  6. If the role is safe, the system proceeds to update the role as removed in the database.  7. The system displays a success message. |
| Alternate Flow | AF-1: User cancels action  3a1. End use case. AF-1: Role not found  4a1. The system displays error message and end use case.  AF-2: Role is enabled  5a1. The system displays error message and end use case.  AF-3: Role is assigned to users  6a1. The system displays error message and end use case. |
| Exception | Ex-1: Internal server error.  - The system redirects user to the “Server error” page.  Ex-2: Too many requests. - The system displays error message and end use case.  Ex-3: Unauthorized access - The system redirects the user to the login page.  Ex-4: Forbidden access  - The system redirects the user to the permission denied page. |

1. Manage payments – UC014
   1. View payments list – UC14.1

|  |  |
| --- | --- |
| View payments list | |
| **Title** | **Content** |
| Use case Name | View payments list |
| ID | UC14.1 |
| Description | This use case allows user to view payments for each order. |
| Actor | Admin, Staff |
| Trigger | - User accesses to “Payment management” page. |
| Preconditions | - The user’s account is logged in.  - The user’s account has permission. |
| Postconditions | - The system displays the payments list.  - If no payments, the system display a message “No payments found” |
| Main Course | 1. User accesses to the “Payment management” page.  2. The system retrieves the list of payments.  3. The system checks the results.  3.1. If have results, the system displays the list of payments. |
| Alternate Course | 3.2. If no results, the system displays a message “No payments found” |
| Exception | Ex1: Problems on internet connection.  Ex2: Lost database connection.  - The system redirects user to the “Error” page. |

* 1. Search payment – UC14.2

|  |  |
| --- | --- |
| Search / Filter payment | |
| **Title** | **Content** |
| Use case Name | Search / Filter payment |
| ID | UC14.2 |
| Description | This use case describes the process by which a user searches or apply filters for a payment in the system. |
| Actor | Admin, Staff |
| Trigger | User enters order id into the search bar. |
| Preconditions | - The user’s account is logged in.  - The user’s account has permission.  - User in UC14.1. |
| Postconditions | - The system displays a list of payments that match the search criteria.  - If no matching payments are found, a message will be displayed. |
| Main Course | 1. User enters order id into the search bar or apply filters.  2. The system retrieves relevant payments.  3. The system check the results.  3.1. If have results, the system displays a list of payments to the user. |
| Alternate Course | 3.2. If no results found, the system displays a “No payments found” message. |
| Exception | Ex1: Problems on internet connection.  Ex2: Lost database connection.  - The system redirects user to the “Error” page. |