### Use Case Specifications Table

1. For user:

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| **Use Case ID** | **Use Case Name** | **Description** | **Actor(s)** | **Priority** | **Trigger** | **Pre-Condition(s)** | **Post-Condition(s)** |
| UC-1 | Send Contact Email | Guest sends an inquiry to the platform through a contact form. | Guest | Low | Guest submits the contact form. | Contact form is filled with required information. | Inquiry is sent successfully, and a confirmation is displayed. |
| UC-2 | Add to Cart | User adds a product to their shopping cart. | Guest, Customer | High | Guest/Customer clicks "Add to Cart." | Product is available for addition. | Product is added to the cart, and the cart is updated. |
| UC-3 | Manage Cart | User updates, views, or removes items in the cart. | Guest, Customer | High | User selects "Manage Cart." | The cart contains items to manage. | Cart is successfully updated or modified. |
| UC-4 | Detect Pose | System analyzes the customer's pose for VR try-on functionality. | Guest, Customer | Medium | User initiates pose detection for VR try-on. | Camera is enabled and functional. | Pose is detected successfully, and try-on data is processed. |
| UC-5 | Try On Shirt | User virtually tries on a shirt using VR technology. | Guest, Customer | Medium | User selects "Try on Shirt." | Shirt data and user pose data are available. | Virtual try-on results are displayed to the user. |
| UC-6 | Register | Guest registers an account on the platform. | Guest | High | Guest submits the registration form. | Required details like email and password are provided. | Account is created successfully, and a confirmation is sent. |
| UC-7 | Login | User logs into their account. | Guest | High | Guest provides valid login credentials. | User is already registered. | User is logged into their account and redirected to the dashboard. |
| UC-8 | Forgot Password | User initiates a password reset process. | Guest, Customer | Medium | User selects "Forgot Password." | User provides their registered email address. | Reset password email is sent to the user. |
| UC-9 | Search | User searches for products on the platform. | Guest, Customer | High | User inputs a search query. | Search query is valid and relevant. | Search results are displayed to the user. |
| UC-10 | View Detail Product | User views detailed information about a product. | Guest, Customer | High | User clicks on a product to view its details. | Product exists in the database. | Product details are displayed successfully. |
| UC-11 | Update Account Info | Customer updates their account information. | Customer | Medium | Customer submits updated details. | Customer is logged into their account. | Account information is updated successfully. |
| UC-12 | Logout | Customer logs out of their account. | Customer | Medium | Customer selects "Logout." | Customer is logged into their account. | Customer is logged out and redirected to the homepage. |
| UC-13 | Manage Address | Customer updates or adds a new shipping address. | Customer | Medium | Customer selects "Manage Address." | Customer is logged in, and address details are provided. | Shipping address is updated successfully. |
| UC-14 | Place Order | Customer places an order for items in the cart. | Customer | High | Customer initiates the checkout process. | Customer's cart contains items, and shipping/payment details are provided. | Order is successfully placed and saved in the system. |
| UC-15 | View Order Detail | Customer views details of a specific order. | Customer | Medium | Customer selects an order to view. | Order exists in the customer's order history. | Order details are displayed to the customer. |
| UC-16 | Checkout | Customer completes the checkout process, including payment and shipping. | Customer | High | Customer confirms checkout details. | Cart contains valid items, and payment/shipping details are provided. | Order is confirmed, and a summary is displayed to the customer. |

2. Admin:

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| **Use Case ID** | **Use Case Name** | **Description** | **Actor(s)** | **Priority** | **Trigger** | **Pre-Condition(s)** | **Post-Condition(s)** |
| UC-17 | Manage Products | Admin manages product details, including adding, editing, or removing products. | Admin | High | Admin selects "Manage Products." | Admin is authenticated and authorized. | Product details are successfully updated in the database. |
| UC-18 | Manage Orders | Admin views, updates, or processes customer orders. | Admin | High | Admin selects "Manage Orders." | Admin is authenticated and authorized. | Order details are updated or processed successfully. |
| UC-19 | Manage Users | Admin manages user accounts, including creating, editing, or disabling accounts. | Admin | High | Admin selects "Manage Users." | Admin is authenticated and authorized. | User account details are successfully managed. |
| UC-20 | View Reports | Admin views business reports, including sales, orders, and user activity data. | Admin | Medium | Admin selects "View Reports." | Admin is authenticated and authorized. | Reports are displayed to the admin. |
| UC-21 | Manage Action | Admin manages system-level actions or settings. | Admin | Medium | Admin selects "Manage Action." | Admin is authenticated and authorized. | Actions or settings are updated successfully. |
| UC-22 | Manage Auth | Admin manages authentication settings, including login policies and access control. | Admin | High | Admin selects "Manage Auth." | Admin is authenticated and authorized. | Authentication settings are successfully updated. |
| UC-23 | Manage Brand | Admin manages brand-related details, including adding or removing brands. | Admin | Medium | Admin selects "Manage Brand." | Admin is authenticated and authorized. | Brand details are successfully updated in the database. |
| UC-24 | Manage Category | Admin manages product categories. | Admin | Medium | Admin selects "Manage Category." | Admin is authenticated and authorized. | Category details are successfully updated in the database. |
| UC-25 | Manage Comment | Admin moderates user comments, including approving, editing, or deleting comments. | Admin | Medium | Admin selects "Manage Comment." | Admin is authenticated and authorized. | Comment actions are successfully applied. |
| UC-26 | Manage Role | Admin manages roles and permissions for users. | Admin | High | Admin selects "Manage Role." | Admin is authenticated and authorized. | Roles and permissions are successfully updated. |
| UC-27 | Manage Staff | Admin manages staff accounts, including creating, editing, or disabling accounts. | Admin | High | Admin selects "Manage Staff." | Admin is authenticated and authorized. | Staff account details are successfully managed. |
| UC-28 | Manage Status | Admin manages order or user statuses. | Admin | Medium | Admin selects "Manage Status." | Admin is authenticated and authorized. | Status details are successfully updated. |
| UC-29 | Manage Transport | Admin manages transport-related settings, including shipping zones and rates. | Admin | Medium | Admin selects "Manage Transport." | Admin is authenticated and authorized. | Transport details are successfully updated. |

Work flow of use cases:

1. User:

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| **Use Case ID** | **Use Case Name** | **Basic Flow** | **Alternative Flow** | **Exception Flow** | **Business Rule** | **Non-Functional Requirement** |
| **UC-1** | Send Contact Email | 1. Guest fills out the contact form.2. System validates the form fields.3. Inquiry is sent to the platform's email.4. Confirmation message is displayed to the user. | None | If the email server fails, the system logs the issue and displays an error message. | All inquiries must include a valid email address. | Emails must be sent within 5 seconds. |
| **UC-2** | Add to Cart | 1. User selects a product and clicks "Add to Cart."2. System verifies product availability.3. System updates the cart in the database.4. User's cart is updated and displayed. | If the user is not logged in, the cart is stored in a session-based cart. | If the product is out of stock, the system displays an error message. | Products with zero stock cannot be added to the cart. | Cart updates must occur within 1 second. |
| **UC-3** | Manage Cart | 1. User accesses the cart.2. User modifies product quantities or removes items.3. System validates changes and updates the cart.4. Cart is updated and displayed. | None | If the cart update fails, the system displays an error message. | Users can only modify their own cart. | Updates must reflect immediately on the cart page. |
| **UC-4** | Detect Pose | 1. User enables pose detection.2. Camera captures the user's image.3. System processes the image for pose detection.4. Pose is detected successfully. | If camera access is denied, a default pose is used. | If the pose detection fails, the system displays an error message. | Pose detection must be accurate within 95% of reality. | Processing time must not exceed 3 seconds. |
| **UC-5** | Try On Shirt | 1. User selects "Try on Shirt."2. System retrieves shirt data.3. User's dimensions/pose data are analyzed.4. System displays virtual try-on results. | If pose data is not detected, a default model is used. | If shirt data is unavailable, the system displays an error message. | Virtual try-on results must reflect the correct shirt size. | Results should be generated within 5 seconds. |
| **UC-6** | Register | 1. Guest fills out the registration form.2. System validates the data.3. System saves user data in the database.4. Confirmation message is sent to the user. | None | If the email is already in use, the system displays an error message. | User's password must be at least 8 characters long. | Registration process should take less than 3 seconds. |
| **UC-7** | Login | 1. User enters valid login credentials.2. System verifies credentials.3. User is redirected to the dashboard. | If the user is already logged in, the dashboard is displayed directly. | If the credentials are invalid, the system displays an error message. | Passwords must be encrypted using industry-standard algorithms. | Login response should occur within 2 seconds. |
| **UC-8** | Forgot Password | 1. User selects "Forgot Password."2. User provides their registered email.3. System sends a reset password email.4. User receives an email confirmation. | If email delivery fails, the user is notified to try again later. | If the email does not exist, the system displays an error message. | Password reset links expire after 24 hours. | Reset emails should be sent within 5 seconds of the request. |
| **UC-9** | Search | 1. User enters a search query.2. System retrieves matching products.3. Search results are displayed to the user. | If no results are found, the system suggests similar products. | If the search service is unavailable, an error message is displayed. | Results must match at least 80% of the query terms. | Search results must load within 2 seconds for queries. |
| **UC-10** | View Detail Product | 1. User selects a product.2. System retrieves product details from the database.3. Product information is displayed. | None | If the product does not exist, the system displays an error message. | Product information must include price, description, and availability. | Product details must be displayed within 3 seconds of selection. |
| **UC-11** | Update Account Info | 1. Customer accesses their account settings.2. Customer updates relevant details.3. System validates and saves the updated information.4. Success message is displayed. | If the customer cancels, no changes are saved. | If validation fails, the system displays an error message. | Changes must adhere to platform security policies. | Updates should be reflected within 2 seconds of submission. |
| **UC-12** | Logout | 1. Customer selects "Logout."2. System terminates the user session.3. Customer is redirected to the homepage. | None | If the session cannot be terminated, the system logs an error. | Sessions must expire automatically after inactivity. | Logout must occur within 1 second of the request. |
| **UC-13** | Manage Address | 1. Customer selects "Manage Address."2. Customer adds or edits an address.3. System validates the address details.4. Address is saved in the database.5. Success message is displayed. | None | If validation fails, the system displays an error message. | Customers can save multiple addresses. | Address changes should be saved within 3 seconds. |
| **UC-14** | Place Order | 1. Customer initiates the checkout process.2. System verifies cart contents and calculates total.3. Customer provides shipping/payment details.4. System confirms order and saves it in the database.5. Success message is displayed. | If the payment method fails, the user can retry or choose another method. | If the cart is empty, the system notifies the user and halts the process. | Orders must include valid shipping and payment information. | Order confirmation must occur within 2 seconds. |
| **UC-15** | View Order Detail | 1. Customer selects an order from the history.2. System retrieves order details from the database.3. Order information is displayed to the customer. | None | If the order does not exist, the system displays an error message. | Customers can only view their own order history. | Order details must be displayed within 3 seconds of selection. |
| **UC-16** | Checkout | 1. Customer reviews and confirms checkout details.2. System validates cart contents and payment/shipping information.3. Payment is processed.4. Order confirmation is displayed. | If payment fails, the user can retry with a different method. | If the cart contains invalid items, the system notifies the user and halts checkout. | Payment processing must adhere to PCI-DSS standards. | Checkout must complete within 5 seconds of submission. |

2. Admin:

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| --- | --- | --- | --- | --- | --- | --- |
| **Use Case ID** | **Use Case Name** | **Basic Flow** | **Alternative Flow** | **Exception Flow** | **Business Rule** | **Non-Functional Requirement** |
| **UC-17** | Manage Products | 1. Admin navigates to the "Manage Products" page.2. Admin selects add, edit, or delete options.3. System validates inputs.4. Updates are saved in the database.5. Confirmation is displayed to the admin. | If the admin cancels changes, no updates are saved. | If validation fails, the system displays an error message. | Only authenticated admins can manage product details. | Updates must reflect in the system within 2 seconds. |
| **UC-18** | Manage Orders | 1. Admin navigates to the "Manage Orders" page.2. Admin views or edits order details.3. System validates changes and processes updates.4. Changes are saved in the database.5. Confirmation message is displayed. | None | If the order ID is invalid, the system notifies the admin. | Admins can only edit valid orders. | Updates must be processed within 3 seconds. |
| **UC-19** | Manage Users | 1. Admin navigates to the "Manage Users" page.2. Admin selects add, edit, or disable options.3. System validates inputs and applies updates.4. Updates are saved in the database.5. Confirmation message is displayed. | None | If the admin tries to edit a non-existent user, an error message is displayed. | Admins can only manage user accounts with valid IDs. | User data updates must occur within 2 seconds. |
| **UC-20** | View Reports | 1. Admin navigates to the "View Reports" page.2. Admin selects the type of report (e.g., sales, orders, user activity).3. System retrieves data and generates the report.4. Report is displayed to the admin. | None | If the report data is unavailable, the system displays a message. | Reports must be accurate and up to date. | Reports must generate within 5 seconds. |
| **UC-21** | Manage Action | 1. Admin navigates to the "Manage Action" page.2. Admin selects an action or setting to update.3. System validates inputs and applies updates.4. Updates are saved in the database.5. Confirmation message is displayed. | None | If validation fails, the system displays an error message. | Actions must not compromise system security or functionality. | Updates must occur within 2 seconds. |
| **UC-22** | Manage Auth | 1. Admin navigates to the "Manage Auth" page.2. Admin updates login policies or access controls.3. System validates inputs and saves the updates.4. Confirmation message is displayed. | None | If validation fails, the system displays an error message. | Authentication settings must comply with platform security policies. | Changes must be applied within 2 seconds. |
| **UC-23** | Manage Brand | 1. Admin navigates to the "Manage Brand" page.2. Admin selects add or remove options.3. System validates inputs.4. Updates are saved in the database.5. Confirmation message is displayed. | None | If the brand name already exists, the system notifies the admin. | Brand names must be unique across the platform. | Updates must reflect in the system within 2 seconds. |
| **UC-24** | Manage Category | 1. Admin navigates to the "Manage Category" page.2. Admin selects add, edit, or delete options.3. System validates inputs.4. Updates are saved in the database.5. Confirmation message is displayed. | None | If validation fails, the system displays an error message. | Categories must be hierarchical and support nesting. | Updates must be reflected in the system within 2 seconds. |
| **UC-25** | Manage Comment | 1. Admin navigates to the "Manage Comment" page.2. Admin selects approve, edit, or delete options.3. System applies updates to the comment database.4. Confirmation message is displayed. | None | If the comment ID is invalid, the system displays an error message. | Only authenticated admins can moderate comments. | Comment moderation actions must be applied within 2 seconds. |
| **UC-26** | Manage Role | 1. Admin navigates to the "Manage Role" page.2. Admin selects add, edit, or remove roles.3. System validates inputs.4. Updates are saved in the database.5. Confirmation message is displayed. | None | If the role name is invalid, the system displays an error message. | Roles must be associated with valid permissions. | Updates must be reflected in the system within 2 seconds. |
| **UC-27** | Manage Staff | 1. Admin navigates to the "Manage Staff" page.2. Admin selects add, edit, or disable options.3. System validates inputs and saves updates.4. Confirmation message is displayed. | None | If the staff ID is invalid, the system displays an error message. | Staff accounts must adhere to organizational policies. | Updates must occur within 2 seconds. |
| **UC-28** | Manage Status | 1. Admin navigates to the "Manage Status" page.2. Admin updates order or user statuses.3. System validates inputs and saves updates.4. Confirmation message is displayed. | None | If validation fails, the system displays an error message. | Status updates must adhere to system-defined workflows. | Updates must occur within 2 seconds. |
| **UC-29** | Manage Transport | 1. Admin navigates to the "Manage Transport" page.2. Admin updates shipping zones or rates.3. System validates inputs.4. Updates are saved in the database.5. Confirmation message is displayed. | None | If validation fails, the system displays an error message. | Transport settings must comply with regional shipping regulations. | Updates must be applied within 2 seconds. |