Raw requirement descriptions in dataset Web Store

No.	Requirement descriptions in Web Store
1	**Product Features:** Account Management (AM) (High Priority): AM allows users to create, edit, and view accounts information. It also allows the user to login/out of the system. Search Engine (SE) (Medium Priority): SE is the tool that assists the user in finding a specific item in the database. It can receive search criteria, find search criteria, and return the results of the search. Product Management (PM) (High Priority): PM allows sales personnel to manage the product line shown on the web site. Shopping Cart (SC) (Medium Priority): SC is temporary storage for customers shopping on the web. Items from the inventory can be reserved in a virtual cart until the customer decides to purchase them. Purchasing and Payment (PP) (High Priority): PP is used to approve and transfer payment from buyers when purchasing items in the cart.
2	**User Classes:** System Administrator: Is generally the owner that takes care of maintenance for the Web Store system. The administrator will be in charge of assigning privileges of accounts. Suggested more than one individual can have administrator privilege to ensure advisability. Full documentation will be provided to the Administrator to assist with this process. Sales Personnel: Is generally the owner of the Web Store tasked with updating inventory and product line descriptions. Once added, sales personnel can add, delete and change descriptions, pictures, prices, and when ready flag items for customers to buy. Customer: A customer is an individual wishing to purchase inventory from GAMMA-J's Web Store. The Web store will have a variety of clientele depending upon the inventory loaded on the Key. When creating a new account on Web Store it will default as a customer account. Later if the account needs to be upgraded the administrator can accomplish this via the administrator interface.
3	**Customer Accounts:** Customers will be able to create accounts to store their customer profiles, configure contact information, view their purchase history, and confirm orders. Customers will be able to register, log in, and log out of their accounts. Furthermore, Customer profiles will also include payment information, such as the ability to store credit card information, and address information.
4	**Inventory Management:** Products will be stored in multi-tiered categories; a category can contain sub categories or products. The inventory management will allow for administrators to update the categories, the products placed in categories, and the specific product details.
5	**Shopping Cart:** Customers will also be able to add products into the shopping cart. The shopping cart will clearly display the number of items in the cart, along with the total cost. The customer will also be able to add to or remove products from the shopping cart prior to checkout and order confirmation.
6	**Order Confirmation:** Customers will be able to confirm the order after checkout. If the order is incorrect, the customer will be able to revise and update their order. The customer will then receive a confirmation email with the specific order details.
7	**Interface:** Customers will be presented with an unambiguous interface to assist in browsing the categories and products. Customers will be able to search for products matching their search criteria. The interface will be compatible with all major web browsers such as Internet Explorer, Mozilla Navigator, Mozilla Firefox, Opera, and Safari.

The use cases designed by a requirement engineer with LLM assistance (Mid-level):

Use Case ID	01(Register Customer)
Intent	Customer creates new account
Role	Customer
Pre-conditions	Customer is on the system login page
Post-conditions	Customer account is created
Basic Flow	

1. Customer clicks "Register" button on login page.

2. System redirects to registration page.

3. System displays registration form (name, mobile, password).

4. Customer submits the form.

5. System sends verification code to mobile.

6. System delivers code to customer's phone.

7. Customer enters received code.

8. System validates the verification code.

9. System creates and stores account.

10. System auto-redirects back to login page.

Alternative Flow(s):

4a. Mobile number has been registered

   4a1. System shows "This mobile is already registered".

   4a2. System verifies mobile uniqueness.

   4a3. Customer modifies mobile and resubmits.

4b. Password is invalid

   4b1. System shows "Password needs 8+ chars with letters/numbers".

   4b2. System verifies password strength (8+ chars with letters/numbers).

   4b3. Customer updates password and resubmits.

8a. Verification code timeout (5 mins)

   8a1. System shows "Code expired, please request new one".

   8a2. System provides "Resend code" button.

   8a3. Customer clicks to resend.

   8a4. System sends new code (returns to Basic Flow step 8).

Use Case ID	02(Login Customer)
Intent	Customer logs into system
Role	Customer
Pre-conditions	Customer is on the system login page
Post-conditions	Customer is logged into system

Basic Flow

1. System displays login page (including mobile number input field, password field, and login button).

2. Customer enters registered mobile number and password.

3. Customer clicks "Login" button.

4. System creates new login session.

5. System redirects to Web Store homepage.

Alternative Flow(s):

3a. Unregistered mobile number

   3a1. System verifies whether mobile number exists.

   3a2. System displays "This mobile number is not registered. Please register first."

   3a3. System shows a "Register Now" link.

   3a4. Customer can choose to register a new account or re-enter a mobile number.

3b. Invalid mobile number format

3b1. System verifies if password matches mobile number.

3b2. System displays "Invalid mobile number format. Please re-enter."

3b3. System clears the mobile number input field.

3b4. Customer re-enters their mobile number and resubmits.

4a. Incorrect Password (≤5 consecutive attempts)

   4a1. System displays "Incorrect mobile number or password. X attempts remaining."

   4a2. System clears the password input field.

   4a3. Customer re-enters their password and resubmits.

4b. Incorrect Password (>5 consecutive attempts)

   4b1. System locks the account for 30 minutes.

   4b2. System displays "Account locked. Please try again after 30 minutes or reset your password."

   4b3. Use case terminates.

Use Case ID	03(Edit Customer Details)
Intent	Customer edits personal details
Role	Customer
Pre-conditions	Customer is logged into the system
Post-conditions	Customer details are updated

Basic Flow

1. Customer clicks "Edit Profile" button.

2. System displays an editable form with current details (e.g., name, address, payment info).

3. Customer modifies desired fields.

4. Customer submits the form.

5. System saves updated details.

6. System displays a confirmation message.

Alternative Flow(s):

4a. Invalid input format

   4a1. System displays error message (e.g., "Invalid email format" or "Incomplete address") and highlights invalid fields.

   4a2. System retains entered information (excluding invalid fields).

   4a3. Customer corrects the invalid fields and resubmits the form.

4b. Required fields missing

   4b1. System displays "Please fill all required fields" and highlights missing fields (e.g., name, mobile number).

   4b2. System retains entered information.

   4b3. Customer fills in the required fields and resubmits the form.

4c. Payment information validation failed

   4c1. System displays "Invalid credit card details" and highlights relevant fields (e.g., card number, expiration date).

   4c2. Customer corrects payment information and resubmits the form.

Use Case ID	04(Logout Customer)
Intent	Customer logs out of the system

Role	Customer
Pre-conditions	Customer is logged into the system
Post-conditions	System terminates the session

Basic Flow

1. Customer clicks "Logout" button.

2. System terminates the session and redirects to the login page.

Alternative Flow(s):

1a. Session is expired

    1a1. System automatically redirects to login page with "Session expired" message.

Use Case ID	05(Add Item To Cart)
Intent	Customer adds item to shopping cart
Role	Customer
Pre-conditions	Customer is viewing the selected product
Post-conditions	Item count in cart is updated

Basic Flow

1. Customer navigates to the product details page.

2. Customer clicks "Add to Cart" button.

3. Customer selects product attributes (e.g., size, color).

4. System shows loading feedback (e.g., spinner icon).

5. System checks real-time inventory status.

6. System adds item to the cart.

7. System displays a dynamic confirmation message (e.g., "1 item added!").

8. System updates the cart icon count and sidebar preview.

Alternative Flow(s):

2a. Missing product attributes

    2a1. System displays "Please select [attribute]" (e.g., "Select size").

    2a2. Highlight the missing attribute section.

    2a3. Customer selects the attribute and clicks the button again.

5a. Item is out of stock

    5a1. System shows "Out of stock" pop-up.

    5a2. Suggest alternatives: Show 3 similar items; "Notify me when restocked" option.

    5a3. Customer chooses: Save contact info and send confirmation; Redirect to category page.

Use Case ID	06(Checkout An Order)
Intent	Customer checks out and pays for the order
Role	Customer
Pre-conditions	Shopping cart is not empty
Post-conditions	Order is created and payment is processed

Basic Flow

1. Customer clicks "Checkout" button.

2. System displays order (items, total price, shipping options).

3. Customer selects shipping address and payment method (e.g., saved credit card, new card).

4. Customer clicks "Confirm Order" button.

5. System verifies inventory.

6. System sends payment request to the payment gateway.

7. System creates order.

8. Customer pays the order.

9. Payment gateway returns success status.

10. System clears the shopping cart.

11. System sends order confirmation email to the customer.

Alternative Flow(s):

3a. Invalid shipping address

   3a1. System displays "Invalid address. Please check and update."

   3a2. Customer updates the address and resubmits.

5a. Item is out of stock

   5a1. System displays "Item [Name] is out of stock. Please remove it to proceed."

   5a2. System retains other items in the cart.

   5a3. Customer removes the item or cancels checkout.

8a. Payment fails (e.g., insufficient funds, expired card)

   8a1. System displays "Payment failed: [Reason]. Please try another payment method."

   8a2. System retains order details and returns to step 3.

Use Case ID	07(Login Administrator)
Intent	Administrator logs into the system
Role	Administrator
Pre-conditions	Administrator is on the system login page
Post-conditions	Administrator is logged into the system

Basic Flow

1. System displays login page (username/email and password fields).

2. Administrator enters registered email/username and password.

3. Administrator clicks "Login" button.

4. System verifies credentials.

5. System creates a secure admin session.

6. System redirects to the admin dashboard.

Alternative Flow(s):

4a. Invalid credentials (email or password)

   4a1. System displays "Invalid email or password. [X] attempts remaining."

   4a2. System clears the password field.

   4a3. Administrator re-enters credentials and resubmits.

4b. Account is locked (due to >3 failed attempts)

   4b1. System locks the account for 1 hour.

   4b2. System displays "Account locked."

4c. Two-factor authentication (2FA) is required

   4c1. System sends a 6-digit code to the administrator's registered email.

   4c2. Administrator enters the code within 5 minutes.

   4c3. System validates the code and proceeds to step 5.

Use Case ID	08(Logout Administrator)
Intent	Administrator logs out of the system
Role	Administrator
Pre-conditions	Administrator is logged into the system
Post-conditions	System terminates the session
Basic Flow	

1. Administrator clicks "Logout" button.
2. System terminates the session.
3. System redirects to the login page.

Alternative Flow(s):

1a. Session is expired

   1a1. System automatically redirects to login page with "Session expired" message.

Use Case ID	09(Add User)
Intent	Administrator creates a new user account
Role	Administrator
Pre-conditions	Administrator is logged into the system
Post-conditions	New user account is created and stored in the system
Basic Flow	

1. Administrator navigates to the User Management page in the admin dashboard.
2. Administrator clicks Add New User.
3. System displays a form with fields: Username, mobile, number, Email, Password, Role (Customer/Sales Person/Administrator).
4. Administrator fills in the required fields.
5. Administrator clicks "Submit" button.
6. System validates the input (e.g., email format, unique username).
7. System creates the user account.
8. System displays User added successfully.

Alternative Flow(s):

5a. Duplicate username/email

   5a1. System displays "Username/Email already exists. Please choose another."

   5a2. System retains other entered information.

   5a3. Administrator modifies the username/email and resubmits.

Use Case ID	10(Remove User)
Intent	Administrator deletes a user account
Role	Administrator
Pre-conditions	Administrator is logged into the system
Post-conditions	User account is removed from the system
Basic Flow	

1. Administrator navigates to User Management.
2. Administrator selects the target user.

3.	Administrator clicks "Delete User" button.

3. Administrator clicks "Delete User" button.
4. System displays a confirmation dialog: "Permanently delete this user?"
5. Administrator confirms the action.
6. System removes the user account and displays "User deleted successfully."

Alternative Flow(s):

5a. Try to delete administrator account

    5a1. System displays "You cannot delete Administrator account."

    5a2. Use case terminates.

5b. User has active orders

    5b1. System displays "This user has active orders. Deletion is blocked."

    5b2. Administrator cancels deletion or transfers orders to another user.

Use Case ID	11(Change User Properties)
Intent	Administrator modifies user properties
Role	Administrator
Pre-conditions	Administrator is logged into the system
Post-conditions	User properties are updated and saved
Basic Flow	

1. Administrator selects the target user in the "User Management" page.
2. Administrator clicks "Edit Profile" button.
3. System displays editable fields (e.g., contact info, role, account status).
4. Administrator clicks "Save Changes" button.
5. System validates the modified data (e.g., email format, role permissions).
6. System updates the user account and displays "Changes saved successfully."

Alternative Flow(s):

4a. Invalid email format

    4a1. System displays "Invalid email format."

    4a2. Administrator corrects the email and resubmits.

Use Case ID	12(Install Plug-ins)
Intent	Administrator installs and activates a new plug-in
Role	Administrator
Pre-conditions	Administrator is logged into the system
Post-conditions	Plug-in is installed and activated.
Basic Flow	

1. Administrator navigates to "Plug-in Management" page.
2. Administrator clicks "Install New Plug-in".
3. System displays an upload interface for the plug-in file (.zip/.jar).
4. Administrator uploads the plug-in file.
5. System verifies plug-in compatibility and dependencies.
6. System installs the plug-in.
7. System adds it to the plug-in list.
8. System displays "Plug-in installed successfully."

Alternative Flow(s):

5a. Missing dependencies

   5a1.System displays "Missing required dependencies: [Dependency List]."

   5a2.System provides an option to automatically install dependencies.

   5a3.Administrator confirms installation, and the system proceeds to step 6.

5b. Compatibility occurs

   5b1. System displays "This plug-in is incompatible with the current system version."

   5b2. Installation is aborted, and the plug-in file is deleted.

Use Case ID	13(Remove Plug-ins)
Intent	Administrator uninstalls an existing plug-in
Role	Administrator
Pre-conditions	Administrator is logged into the system
Post-conditions	Plug-in is removed, and system stability is maintained.
Basic Flow	

1. Administrator navigates to "Plug-in Management" page.
2. Administrator selects the target plug-in from the list.
3. Administrator clicks "Uninstall" button.
4. System displays a confirmation dialog ("Uninstalling this plug-in may affect functionality. Proceed?").
5. Administrator confirms the action.
6. System checks for dependent components (e.g., other plug-ins, features).
7. System removes the plug-in.
8. System clears related configurations.
9. System displays "Plug-in uninstalled successfully".

Alternative Flow(s):

6a. Active dependencies exist

   6a1.System displays "Cannot uninstall: [Component List] depends on this plug-in."

   6a2.Administrator must disable or remove dependent components first.

Use Case ID	14(Manage Plug-in Options)
Intent	Administrator configures settings for an installed plug-in
Role	Administrator
Pre-conditions	Administrator is logged into the system
Post-conditions	Plug-in configurations are saved.
Basic Flow	

1. Administrator navigates to "Plug-in Management" page.
2. Administrator selects the target plug-in.
3. Administrator clicks "Configure" button.
4. System displays configuration options (e.g., API keys, toggle features).
5. Administrator modifies the settings.
6. Administrator clicks "Save" button.
7. System validates the configurations (e.g., API key format).
8. System applies the new settings and displays "Configuration saved."

Alternative Flow(s):

7a. Invalid configuration

    7a1. System displays "Invalid configuration: [Error Details]."

    7a2. System retains entered values but highlights invalid fields.

    7a3. Administrator corrects the values and resubmits.

Use Case ID	15(Install patch process)
Intent	Administrator applies a system patch to fix vulnerabilities
Role	Administrator
Pre-conditions	Administrator is logged into the system
Post-conditions	Patch is applied, and the system is restarted if required.

Basic Flow

1. Administrator navigates to "System Maintenance" page.
2. Administrator clicks "Apply Patch" button.
3. System displays a patch upload interface.
4. Administrator uploads the patch file.
5. System verifies the patch signature and compatibility.
6. System creates a backup snapshot automatically.
7. System applies the patch.
8. System restarts affected services.
9. System displays "Patch applied successfully."

Alternative Flow(s):

5a. Invalid patch signature

    5a1. System displays "Patch verification failed: Invalid signature."

    5a2. Patch file is deleted, and the process is aborted.

5b. Patch conflicts with existing configurations

    5b1. System displays "Patch conflicts with [Component]. Resolve conflicts manually."

    5b2. Administrator resolves conflicts or rolls back the patch.

6a. Backup fails

    6a1.System displays "Backup failed. Patch cannot be applied."

    6a2.Administrator must resolve storage issues and retry.

Use Case ID	16(Login Sales Person)
Intent	Sales Person logs into the system
Role	Sales Person
Pre-conditions	Sales Person is on the system login page
Post-conditions	Sales Person is logged into the system

Basic Flow

1. System displays login page (including mobile number input field, password field, and login button).
2. Sales Person enters registered mobile number and password.
3. Sales Person clicks "Login" button.
4. System verifies mobile number.
5. System verifies password.
6. System creates new login session.

| 7. System creates a session. |
| 8. System redirects to the product management dashboard. |
| **Alternative Flow(s):** |
| 4a. Unregistered mobile number |
| 4a1. System displays "This mobile number is not registered. Please register first." |
| 4a2. System shows a "Register Now" link. |
| 4a3. Sales Person can choose to register a new account or re-enter a mobile number. |
| 4b. Invalid mobile number format |
| 4b1. System displays "Invalid mobile number format. Please re-enter." |
| 4b2. System clears the mobile number input field. |
| 4b3. Sales Person re-enters their mobile number and resubmits. |
| 5a. Incorrect password (≤5 consecutive attempts) |
| 5a1. System displays "Incorrect mobile number or password. X attempts remaining." |
| 5a2. System clears the password input field. |
| 5a3. Sales Person re-enters their password and resubmits. |
| 5b. Incorrect password (>5 consecutive attempts) |
| 5b1. System locks the account for 30 minutes. |
| 5b2. System displays "Account locked. Please try again after 30 minutes or reset your password." |

Use Case ID	17(Logout Sales Person)
Intent	Sales Person logs out of the system
Role	Sales Person
Pre-conditions	Sales Person is logged into the system
Post-conditions	System terminates the session
Basic Flow	
1. Customer clicks "Logout" button.	
2. System terminates the session.	
3. System redirects to the login page.	
Alternative Flow(s):	
1a. Session is expired	
1a1. System automatically redirects to login page with "Session expired" message.	

Use Case ID	18(Add Product)
Intent	Sales Person adds a new product to the catalog
Role	Sales Person
Pre-conditions	Sales Person is logged into the system
Post-conditions	New product is added to the catalog
Basic Flow	
1. Sales Person navigates to "Add Product" page.	
2. System displays a form (name, description, price, category, images, stock quantity).	
3. Sales Person fills in required fields.	
4. Sales Person clicks "Submit" button.	
5. System saves the product and displays "Product added successfully."	

Alternative Flow(s):
3a. Missing required fields
3a1. System displays "Required fields missing: [Field Names]."
3a2. System highlights missing fields in red.
3a3.Sales Person fills in fields and resubmits.
5a. Invalid category
5a1. System validates data (e.g., price ≥0, stock ≥0, valid category).
5a2. System displays "Selected category does not exist. Choose a valid category."
5a3. System reloads category list from inventory.

Use Case ID	19(Remove Product)
Intent	Sales Person removes a product from the catalog
Role	Sales Person
Pre-conditions	Sales Person is logged into the system
Post-conditions	Product is removed from the catalog
Basic Flow	

Basic Flow
1. Sales Person navigates to the Product Management page.
2. System displays products.
3. Sales Person selects a product.
4. System displays the product details (e.g., name, category, current status).
5. Sales Person confirms the deletion.
6. System prompts: "Are you sure you want to permanently delete this product?"
7. Sales Person confirms the action.
8. System removes the product from the catalog and associated categories.
9. System notifies of successful deletion.
10. System displays a confirmation message: "Product [Product Name] has been removed."
11. System returns to the Product Management interface.

Alternative Flow(s):
5a. Product links to some active orders
5a1. System displays a warning dialog: "This product is linked to active orders. Deleting it will cancel these orders. Proceed?"
5a2. Options provided: Force Delete: Cancel linked orders and proceed with deletion; Cancel: Return to the Product Management interface.
5a3. If the Sales Person selects "Force Delete," the system removes the product and cancels associated orders.

Use Case ID	20(Update Product)
Intent	Sales Person modifies product details
Role	Sales Person
Pre-conditions	Sales Person is logged into the system
Post-conditions	Product details are updated
Basic Flow	

Basic Flow
1. Sales Person navigates to the Product Management page.
2. System displays products.

3. Sales Person selects a product to update.

4. System displays the product details (e.g., name, description, price, images, stock quantity, category).

5. Sales Person edits the product details.

6. Sales Person modifies fields (e.g., price, description, images, availability status).

7. Sales Person submits the updated details.

8. System validates the input (e.g., numeric price, non-empty description).

9. System saves the updated product details.

10. System confirms the successful update.

11. System returns to the Product Management interface.

Alternative Flow(s):

8a. Invalid price format

   8a1. System displays a error message: "Invalid price format. Enter a numeric value ≥ 0."

   8a2. System highlights the price input field.

   8a3. Sales Person corrects the price and resubmits.

8b. Empty description field

   8b1. System displays a red error message: "Description cannot be empty."

   8b2. System retains all other entered data.

   8b3. Sales Person fills in the description and resubmits.

8c. Invalid image file

   System displays a red error message: "Only JPG/PNG files $\leq$5MB are allowed."

   System automatically removes invalid files from the upload list.

   Sales Person uploads valid images and resubmits.

8d. Category is not found

   8d1. System displays a red error message: "Selected category is invalid. Choose from available categories."

   8d2. System reloads the category list from the database.

   8d3. Sales Person selects a valid category and resubmits.