No. Requirement descriptions in Web Store

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.

User Classes:

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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. **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
- 3 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.
- 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.
- 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.
- **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.
- 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 without LLM assistance (senior):

Use Case ID	01(Register Customer)		
Intent	Customer registers a new account		
Role	Customer		
Pre-conditions	None		
Post-conditions	The customer account is successfully created		
Basic Flow			

- 1. The customer selects the "Register" option.
- 2. The system displays the registration page, requesting necessary information.
- 3. The customer fills in the required information and submits the form.
- 4. The system validates whether the submitted information meets the requirements.
- 5. If the information is valid, the system creates a new customer account.
- 6. The system displays a success message.

- 3a. The input information is incomplete or incorrectly formatted:
- 3a1. The system returns an error message indicating which fields are missing or incorrectly formatted.
 - 3a2. The customer corrects the information and resubmits it.

Use Case ID	02(Login Customer)		
Intent	The customer logs into their existing account		
Role	Customer		
Pre-conditions	The customer has a valid account within the system		
Post-conditions	The customer is successfully logged in and can access		
	personalized features of the system		

Basic Flow

- 1. The customer selects the "Login" option on the website.
- 2. The system displays the login page, requesting the account number and password associated with the customer's account.
- 3. The customer enters their account number and password, then submits the form.
- 4. The system validates the credentials provided by the customer.
- 5. If the credentials are correct, the system logs the customer in.
- 6. The system displays a welcome message along with options for personalization, such as viewing order history, managing account details, etc.

Alternative Flow(s):

- 4a. Incorrect credentials:
- 4a1. The system returns an error message indicating that either the account number or password is incorrect.
 - 4a2. The customer is given an option to try logging in again or recover their password.

Use Case ID	03(Edit Customer Details)	
Intent	The customer edits their personal information	
Role	Customer	
Pre-conditions	The customer is logged into their account	
Post-conditions	The customer's details are updated successfully in the system	
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- 1. The customer selects the "My Account" or similar option from the menu.
- 2. The system displays the customer's current profile details.
- 3. The customer selects the "Edit Profile" option.
- 4. The system enables editing fields for the customer to modify their details (e.g., name, password, contact information, shipping address).

- 5. The customer makes necessary changes and clicks the "Save Changes" button.
- 6. The system validates the updated information.
- 7. If the information is valid, the system saves the changes and displays a confirmation message.
- 8. The system updates the customer's profile with the new details.

5a. Invalid input:

- 5a1. The system returns an error message indicating which fields contain invalid data.
- 5a2. The customer corrects the errors and resubmits the form.

Use Case ID	04(Logout Customer)	
Intent	The customer logs out of their account	
Role	Customer	
Pre-conditions	The customer logs out of their account	
Post-conditions	The customer is logged out from the system	

Basic Flow

- 1. The customer selects the "Logout" option from the menu.
- 2. The system terminates the current session and clears any session-related data.
- 3. The system redirects the customer to the homepage or login page.
- 4. The system displays a message confirming that the customer has been successfully logged out.

Alternative Flow(s):

None

Use Case ID	05(Add Item To Cart)	
Intent	The customer adds a product to their shopping cart	
Role	Customer	
Pre-conditions	The customer is logged into their account or browsing as a	
	guest. Products are available in the store inventory	
Post-conditions	The selected product is added to the customer's shopping cart	

Basic Flow

- 1. The customer browses the website and finds a product they wish to purchase.
- 2. The customer selects the desired quantity of the product and clicks on the "Add to Cart" button
- 3. The system updates the shopping cart with the new item, including quantity and total cost.
- 4. The system displays a confirmation message indicating that the item has been successfully added to the cart.
- 5. The customer can continue shopping or proceed to checkout.

Alternative Flow(s):

2a. Out of stock:

2a1. If the selected product is out of stock, the system displays an error message informing the customer.

- 2a2. The customer may choose to browse for alternative products or set up an alert for when the product becomes available again.
- 3a. Quantity exceeds inventory:
- 3a1. If the requested quantity exceeds the available inventory, the system prompts the customer to adjust the quantity.
 - 3a2. The customer adjusts the quantity and resubmits the request.

Use Case ID	06(Checkout An Order)		
Intent	The customer completes the purchase process by checking out		
	their shopping cart		
Role	Customer		
Pre-conditions	The customer has items in their shopping cart and is logged		
	into their account		
Post-conditions	The order is confirmed, payment is processed, and the		
	customer receives a confirmation information.		

- 1. The customer navigates to the shopping cart from any page.
- 2. The system displays the items in the cart along with the total cost.
- 3. The customer reviews the items and clicks on the "Proceed to Checkout" button.
- 4. The system prompts the customer for shipping details if not already provided.
- 5. The customer enters or confirms shipping information.
- 6. The system prompts the customer for payment details.
- 7. The customer enters or selects payment method and provides necessary payment information.
- 8. The system processes the payment and verifies its success.
- 9. The system generates an order confirmation number and sends it to the customer.
- 10. The customer confirms the order details after completing the checkout process.
- 11. The system updates the inventory and notifies the warehouse for order fulfillment.

Alternative Flow(s):

- 5a. Shipping details are incomplete:
- 5a1. If required shipping details are missing, the system highlights the missing fields and asks the customer to provide them.
 - 5a2. The customer fills in the missing information and resubmits.
- 7a. Payment processing fails:
 - 7a1. If payment fails, the system displays an error message indicating the failure reason.
- 7a2. The customer is given options to retry payment or select a different payment method. 10a. Incorrect order details:
- 10a1. If the customer notices any incorrect details, they can click "Edit Order" (if allowed) or contact customer support.
 - 10a2. The customer makes necessary changes and resubmits the order.

Use Case ID	07(L	ogin Administra	itor)					
Intent	The	administrator	logs	into	the	system	to	perform
	admi	nistrative tasks						

Role	Administrator
Pre-conditions	The administrator has a valid account with appropriate
	privileges within the system
Post-conditions	The administrator is logged into the system and can access
	administrative features

- 1. The administrator navigates to the login page of the web store.
- 2. The system displays the login form requesting the account number and password associated with the administrator's account.
- 3. The administrator enters their account number and password, then clicks the "Login" button.
- 4. The system validates the credentials provided by the administrator.
- 5. If the credentials are correct, the system logs in the administrator.
- 6. The system displays a welcome message along with options for administrative tasks.

Alternative Flow(s):

- 4a. Incorrect credentials:
- 4a1. The system returns an error message indicating that either the account number or password is incorrect.
 - 4a2. The administrator is given an option to try logging in again or recover their password.

Use Case ID	08(Logout Administrator)	
Intent	The administrator logs out of the system	
Role	Administrator	
Pre-conditions	The administrator is currently logged into the system	
Post-conditions	The administrator is logged out from the system	
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Basic Flow

- 1. The administrator selects the "Logout" option from the menu.
- 2. The system terminates the current session and clears any session-related data.
- 3. The system redirects the administrator to the login page or homepage.
- 4. The system displays a message confirming that the administrator has been successfully logged out.

Alternative Flow(s):

None

Use Case ID	09(Add User)
Intent	The administrator adds a new user account to the system
Role	Administrator
Pre-conditions	The administrator is logged into the system with privileges
Post-conditions	A new user account has been successfully created and added
	to the system
Basic Flow	·

- 1. The administrator navigates to the "User Management" section from the admin dashboard.
- 2. The system displays the list of existing users.
- 3. The administrator selects the "Add New User" option.
- 4. The system presents a form for entering new user details.
- 5. The administrator fills in the required information and clicks the "Submit" button.
- 6. The system validates the entered information.
- 7. If the information is valid, the system creates the new user account and assigns it the specified role.
- 8. The system displays a confirmation message indicating that the user has been successfully added.
- 9. The system updates the list of users to include the newly added user.

6a. Invalid input:

- 6a1. If any of the fields contain invalid data, the system returns an error message specifying which fields are incorrect.
 - 6a2. The administrator corrects the errors and resubmits the form.

Use Case ID	10(Remove User)	
Intent	The administrator removes an existing user account from the	
	system	
Role	Administrator	
Pre-conditions	The administrator is logged into the system with privileges	
Post-conditions	The specified user account has been successfully removed	
	from the system	

Basic Flow

- 1. The administrator navigates to the "User Management" section from the admin dashboard.
- 2. The system displays the list of existing users.
- 3. The administrator selects the user they wish to remove from the list.
- 4. The administrator clicks the "Remove User" option or icon next to the selected user.
- 5. The system prompts for confirmation to remove the selected user.
- 6. The administrator confirms the removal.
- 7. The system deletes the user account and updates the user list accordingly.
- 8. The system displays a confirmation message indicating that the user has been successfully removed.

Alternative Flow(s):

5a. Cancel removal:

5a1. If the administrator cancels the removal process, the system returns to the user list without making any changes.

7a. Deletion fails:

- 7a1. If there is an issue deleting the user account, the system logs the error and displays an error message.
 - 7a2. The administrator may retry the operation.

Use Case ID	11(Change User Properties)		
Intent	The administrator change the properties of an existing user		
	account		
Role	Administrator		
Pre-conditions	The administrator is logged into the system with privileges.		
	The target user account exists in the system		
Post-conditions	The specified user account's properties have been successfully		
	updated		

- 1. The administrator navigates to the "User Management" section from the admin dashboard.
- 2. The system displays the list of existing users.
- 3. The administrator selects the user whose properties they wish to change.
- 4. The system displays the current details of the selected user.
- 5. The administrator clicks on the "Edit User" option or icon next to the selected user.
- 6. The system presents a form for editing the user's details.
- 7. The administrator makes necessary changes and clicks the "Save Changes" button.
- 8. The system validates the entered information.
- 9. If the information is valid, the system updates the user account with the new details.
- 10. The system displays a confirmation message indicating that the user's properties have been successfully updated.

Alternative Flow(s):

6a. Invalid input:

- 6a1. If any of the fields contain invalid data, the system returns an error message specifying which fields are incorrect.
 - 6a2. The administrator corrects the errors and resubmits the form.

9a. Update fails:

- 9a1. If there is an issue updating the user account, the system logs the error and displays an error message.
 - 9a2. The administrator may retry the operation.

Use Case ID	12(Install Plug-ins)
Intent	The administrator installs a plug-in to extend the functionality
	of the system
Role	Administrator
Pre-conditions	The administrator has valid credentials and access to the
	system. The plug-in file is available and verified as safe
Post-conditions	The plug-in is successfully installed, and the system is updated
	with the new functionality

- 1. The administrator logs into the system.
- 2. The system displays the "System Management" section.

- 3. The administrator selects the "Install Plug-in" option.
- 4. The system prompts the administrator to upload the plug-in file.
- 5. The administrator uploads the plug-in file.
- 6. The system verifies the plug-in file.
- 7. If the verification passes, the system initiates the installation process.
- 8. The system installs the plug-in.
- 9. The system notifies the administrator that the plug-in has been successfully installed.
- 10. The administrator reviews the system status to ensure everything is functioning correctly.

6a. Verification fails:

- 6a1. If the verification fails, the system displays an error message indicating the plug-in file is invalid or corrupted.
 - 6a2. The administrator retries uploading the plug-in file or contacts support for assistance.

8a. Installation fails:

- 8a1. If the installation fails, the system logs the error and displays an error message.
- 8a2. The administrator retries the installation or contacts support for assistance.

Use Case ID	13(Remove Plug-ins)
Intent	The administrator removes a plug-in from the system.
Role	Administrator
Pre-conditions	The administrator has valid credentials and access to the
	system. At least one plug-in is installed in the system
Post-conditions	The specified plug-in is successfully removed, and the system
	is updated without the plug-in

Basic Flow

- 1. The administrator logs into the system.
- 2. The system displays the "System Management" section.
- 3. The administrator selects the "Manage Plug-ins" option.
- 4. The system lists all installed plug-ins.
- 5. The administrator selects the plug-in to be removed.
- 6. The system prompts for confirmation.
- 7. The administrator confirms the removal.
- 8. The system removes the plug-in.
- 9. The system notifies the administrator that the plug-in has been successfully removed.
- 10. The administrator reviews the system status to ensure everything is functioning correctly.

Alternative Flow(s):

6a. No plug-ins installed:

- 6a1. If no plug-ins are installed, the system displays a message indicating there are no plugins to remove.
 - 6a2. The administrator returns to the previous screen or performs another action.

7a. Removal fails:

- 7a1. If the removal fails, the system logs the error and displays an error message.
- 7a2. The administrator retries the removal or contacts support for assistance.

Use Case ID	14(Manage Plug-in Options)
Intent	The administrator manages options for installed plug-ins.
Role	Administrator
Pre-conditions	The administrator has valid credentials and access to the
	system. At least one plug-in is installed in the system.
Post-conditions	The options for the specified plug-in are successfully
	managed, and the system is updated with the new settings.

- 1. The administrator logs into the system.
- 2. The system displays the "System Management" section.
- 3. The administrator selects the "Manage Plug-ins" option.
- 4. The system lists all installed plug-ins.
- 5. The administrator selects the plug-in whose options need to be managed.
- 6. The system displays the available options for the selected plug-in.
- 7. The administrator modifies the options as needed.
- 8. The administrator saves the changes.
- 9. The system updates the plug-in with the new settings.
- 10. The system notifies the administrator that the options have been successfully managed.
- 11. The administrator reviews the system status to ensure everything is functioning correctly.

Alternative Flow(s):

6a. No plug-ins installed:

- 6a1. If no plug-ins are installed, the system displays a message indicating there are no plugins to manage.
 - 6a2. The administrator returns to the previous screen or performs another action.

8a. Saving fails:

- 8a1. If saving the changes fails, the system logs the error and displays an error message.
- 8a2. The administrator retries saving the changes or contacts support for assistance.

Use Case ID	15(Install patch process)
Intent	The administrator installs a software patch to update the
	system
Role	Administrator
Pre-conditions	The administrator has valid credentials and access to the
	system. The patch file is available and verified as safe.
Post-conditions	The patch is successfully installed, and the system is updated
	with the latest version.

- 1. The administrator logs into the system.
- 2. The system displays the "System Management" section.
- 3. The administrator selects the "Install Patch" option.
- 4. The system prompts the administrator to upload the patch file.
- 5. The administrator uploads the patch file.

- 6. The system verifies the patch file.
- 7. If the verification passes, the system initiates the installation process.
- 8. The system installs the patch.
- 9. The system notifies the administrator that the patch has been successfully installed.
- 10. The administrator reviews the system status to ensure everything is functioning correctly.

6a. Verification fails:

- 6a1. If the verification fails, the system displays an error message indicating the patch file is invalid or corrupted.
 - 6a2. The administrator retries uploading the patch file or contacts support for assistance.

8a. Installation fails:

- 8a1. If the installation fails, the system logs the error and displays an error message.
- 8a2. The administrator retries the installation or contacts support for assistance.

Use Case ID	16(Login Sales Person)
Intent	The sales person logs into the system
Role	Sales Person
Pre-conditions	The sales person has valid credentials.
Post-conditions	The sales person is logged into the system and can access their
	dashboard

Basic Flow

- 1. The sales person navigates to the login page.
- 2. The system displays the login form.
- 3. The sales person enters their username and password.
- 4. The sales person clicks the "Login" button.
- 5. The system validates the entered credentials.
- 6. If the credentials are valid, the system logs in the sales person.
- 7. The system displays a welcome message or notification on the dashboard.

Alternative Flow(s):

5a. Invalid credentials:

- 5a1. If the credentials are invalid, the system returns an error message indicating that the username or password is incorrect.
 - 5a2. The sales person corrects the credentials and resubmits the form.

Use Case ID	17(Logout Sales Person)
Intent	The sales person logs out of the system
Role	Sales Person
Pre-conditions	The sales person is currently logged into the system
Post-conditions	The sales person are logged out from the system

- 1. The sales person selects the "Logout" option from the menu.
- 2. The system terminates the current session and clears any session-related data.
- 3. The system redirects the sales person to the login page.

4. The system displays a message confirming that the sales person has been successfully logged out.

Alternative Flow(s):

None

Use Case ID	18(Add Product)
Intent	The sales person adds a new product to the system.
Role	Sales Person
Pre-conditions	The sales person is logged into the system with appropriate
	privileges. The system has available categories and inventory
	management enabled.
Post-conditions	A request for adding a new product has been successfully
	submitted and awaits administrator approval.

Basic Flow

- 1. The sales person navigates to the "Product Management" section from their dashboard.
- 2. The system displays the list of existing products.
- 3. The sales person selects the "Request New Product Addition" option.
- 4. The system presents a form for entering product details.
- 5. The sales person fills in all required fields and provides a reason for the addition request.
- 6. The sales person clicks the "Submit Request" button.
- 7. The system validates the entered information.
- 8. If the validation passes, the system logs the product addition request and notifies the administrator.
- 9. The system displays a confirmation message indicating that the product addition request has been successfully submitted.

Alternative Flow(s):

7a. Invalid input:

- 7a1. If any required field is missing or contains invalid data (e.g., negative price, non-numeric stock), the system returns an error message specifying which fields are incorrect.
 - 7a2. The sales person corrects the errors and resubmits the form.

7b. Missing Reason:

- 7b1. If no reason is provided for the addition request, the system returns an error message asking for a valid reason.
 - 7b2. The sales person provides a valid reason and resubmits the form.

Use Case ID	19(Remove Product)
Intent	The sales person requests the removal of an existing product
	from the system
Role	Sales Person
Pre-conditions	The sales person is logged into the system with appropriate
	privileges. The target product exists in the system
Post-conditions	A request for the deletion of the specified product has been
	successfully submitted and awaits administrator approval

- 1. The sales person navigates to the "Product Management" section from their dashboard.
- 2. The system displays the list of existing products.
- 3. The sales person selects the product they wish to delete from the list.
- 4. The sales person clicks on the "Request Deletion" option or icon next to the selected product.
- 5. The system prompts the sales person for a reason for the deletion request.
- 6. The sales person provides a reason and submits the request.
- 7. The system logs the deletion request and notifies the administrator.
- 8. The system displays a confirmation message indicating that the deletion request has been successfully submitted.

Alternative Flow(s):

6a. Missing reasons:

- 6a1. If no reason is provided, the system returns an error message asking for a valid reason.
- 6a2. The sales person provides a valid reason and resubmits the request.

Use Case ID	20(Update Product)
Intent	The sales person requests changes to the information of an
	existing product
Role	Sales Person
Pre-conditions	The sales person is logged into the system with appropriate
	privileges. The target product exists in the system
Post-conditions	A request for updating the specified product's information has
	been successfully submitted and awaits administrator
	approval

Basic Flow

- 1. The sales person navigates to the "Product Management" section from their dashboard.
- 2. The system displays the list of existing products.
- 3. The sales person selects the product whose information they wish to update.
- 4. The sales person clicks on the "Request Update" option or icon next to the selected product.
- 5. The system presents a form for editing the product's details.
- 6. The sales person fills in the required changes and provides a reason for the update.
- 7. The sales person submits the request.
- 8. The system logs the update request and notifies the administrator.
- 9. The system displays a confirmation message indicating that the update request has been successfully submitted.

Alternative Flow(s):

6a. Invalid input:

- 6a1. If any fields contain invalid data (e.g., negative price), the system returns an error message specifying which fields are incorrect.
 - 6a2. The sales person corrects the errors and resubmits the form.

7a. Missing Reason:

7a1. If no reason is provided, the system returns an error message asking for a valid reason.

7a2. The sales person provides a valid reason and resubmits the request.