# USE CASE DOCUMENT
# VERSION 1.0

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**Revision History**

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# 1. USE CASE MODEL

## USE CASE DIAGRAM (HIGH LEVEL)

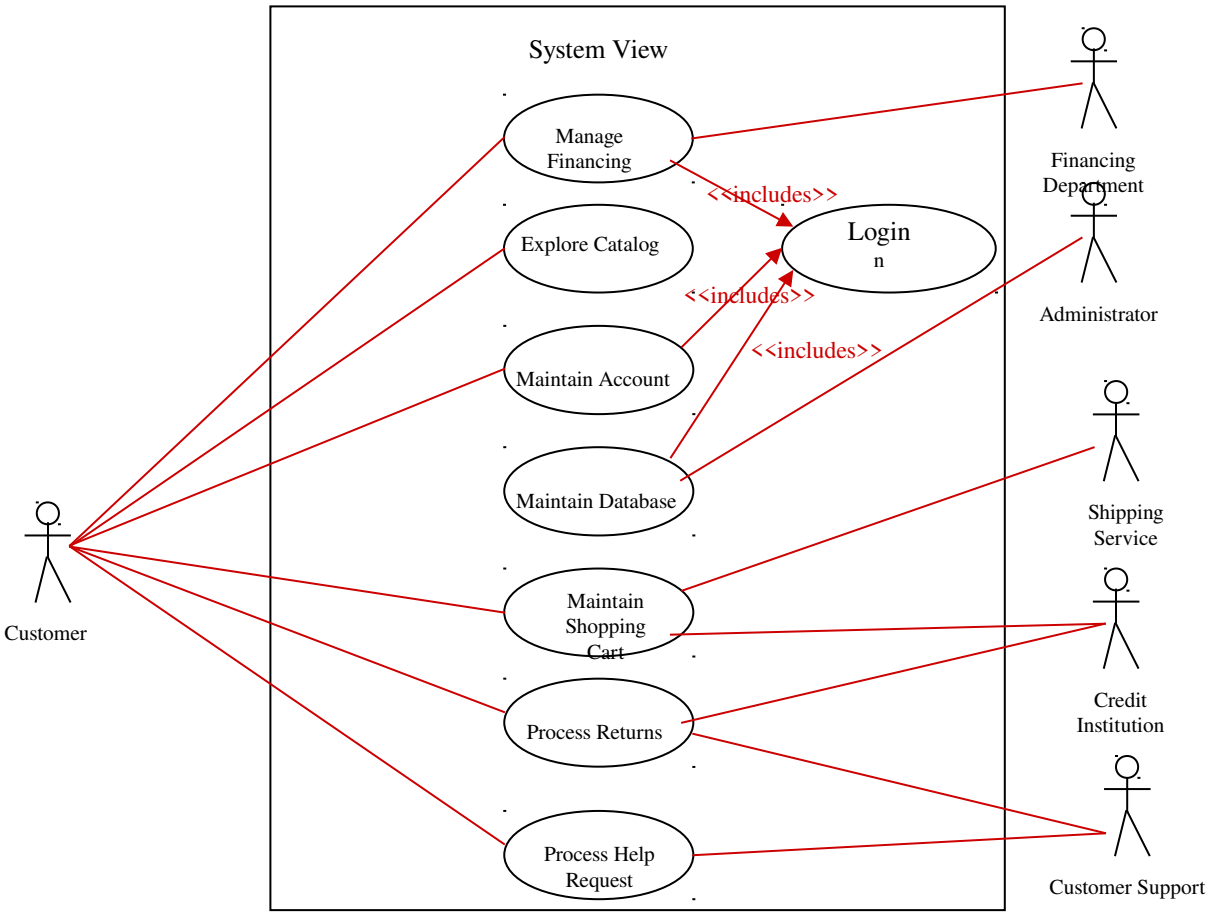
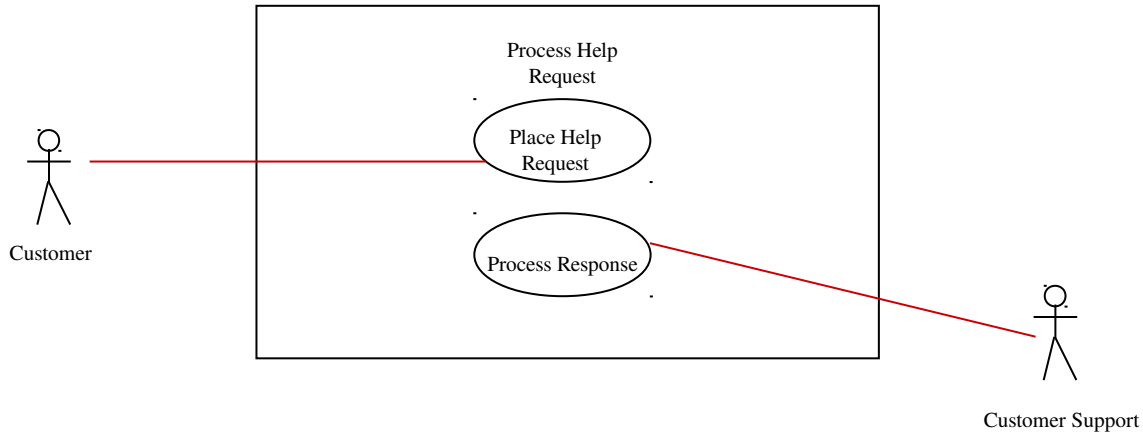


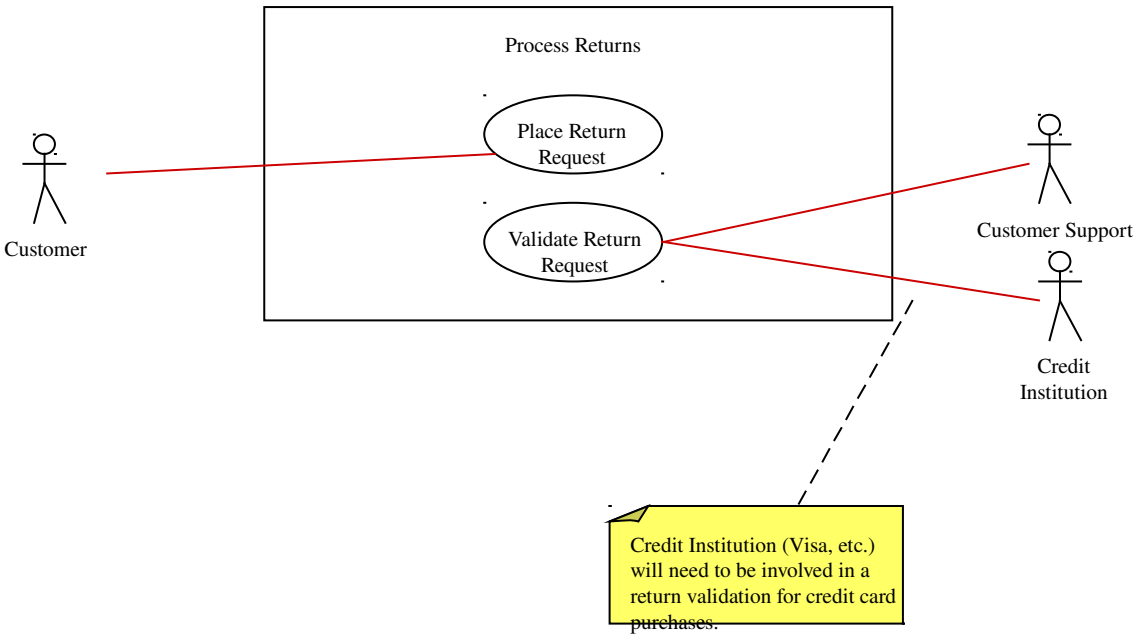

**Figure 1: High Level Use Case Diagram**

## USE CASE DIAGRAM (LOW LEVEL)

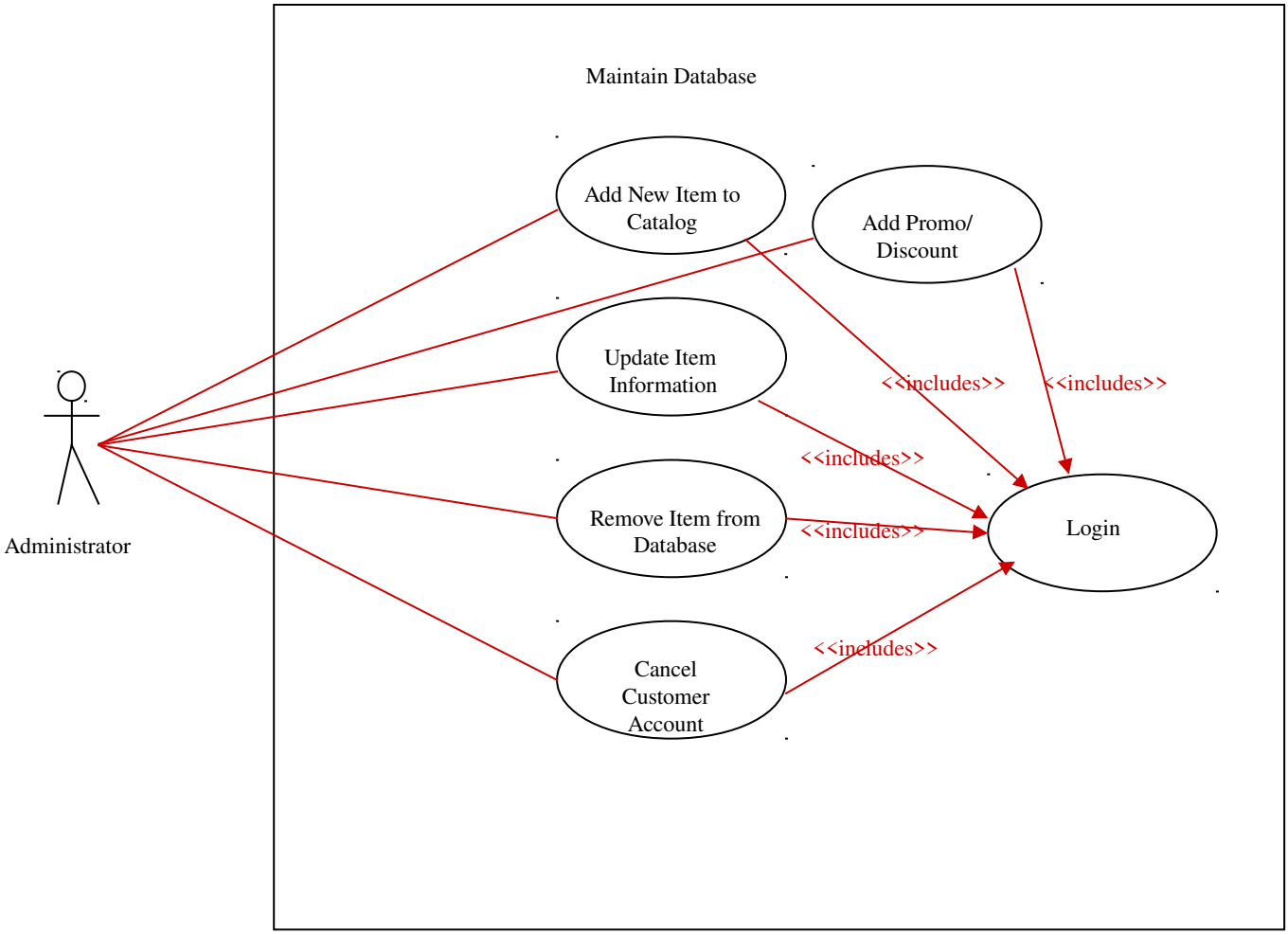
### 1.2.1 Process Help Request



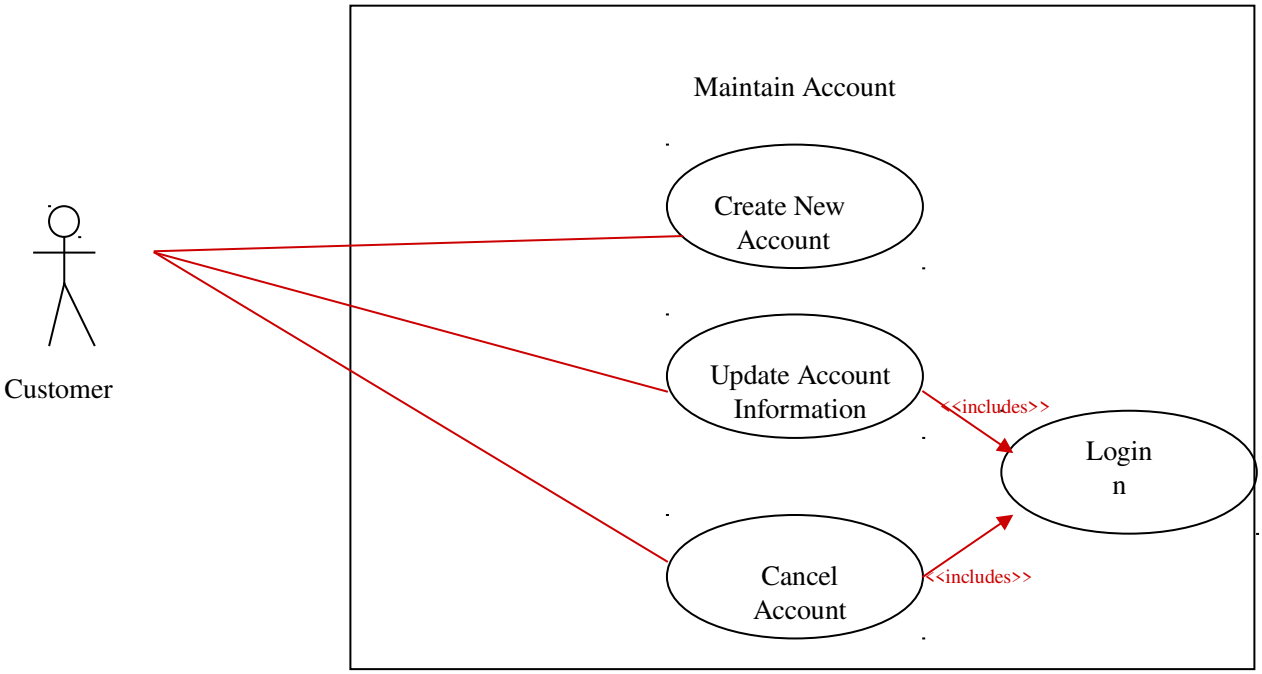
### 1.2.2 Process Returns



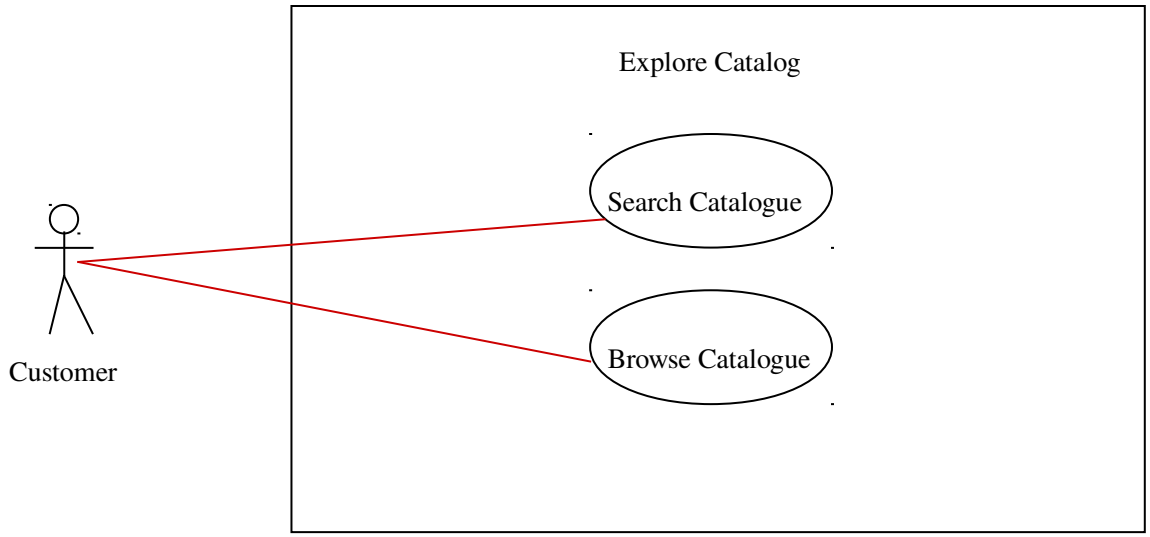

### 1.2.3 Maintain Shopping Cart


Maintain Database
Add New Item to Catalog
Add Promo/ Discount
Update Item Information
Remove Item from Database
Cancel Customer Account
Login
<<includes>>
<<includes>>
<<includes>>
<<includes>>
<<includes>>
Administrator

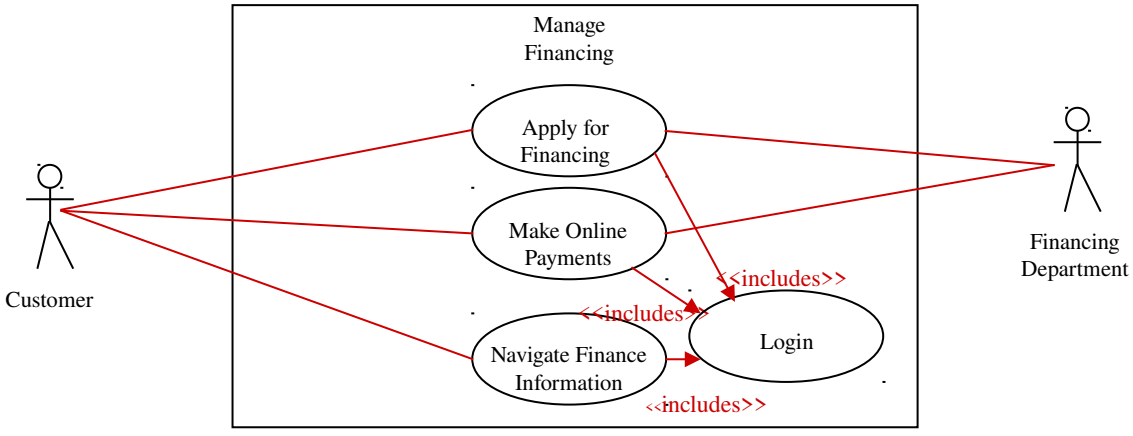
### 1.2.4 Maintain Account



### 1.2.5 Explore Catalog




### 1.2.6 Manage Financing



# 2. USE CASE DESCRIPTIONS – FUNCTIONAL REQUIREMENT

## 2.1 USE CASE UC1: BROWSE CATALOG

**Description:** This use case describes how the User can search/browse the e-store catalog.

**Primary Actor**: User

**Stakeholders and Interests**:
- **User**: Wants user-friendly interface and fast browsing speed.
  Wants to browse the catalog and add items to the cart successfully.
- **Company**: Wants to satisfy user interests.

**Preconditions**: None

**Success Guarantee (Post Conditions)**:
- 'Product Screen' displays items and corresponding list prices for a chosen product.
- Item Screen' displays detailed information about an individual item for sale, including a photo, if one is available.
- 'Cart Screen' displays the various items added to the cart, the quantity and list price of each item and the Subtotal.

**Basic flow**:
1. User opens a web browser, gives the URL for the 'Marvel e-store' website in and clicks on 'Go' button.
2. System launches the web site.
3. User clicks on any product link in the 'Product' list given in top-left corner.
4. System displays 'Category Screen' with the products available for the category chosen in Step 3.
5. User clicks on any product link in 'Products for this Category' list.
6. System displays 'Product Screen' with list of all of the items for the product chosen in Step 5 along with the price of each item and a link labeled 'Add to Cart' in right column of the list.
7. User clicks on any item link in 'Items for this Product' list.
8. System displays 'Item Screen' for the item chosen in Step 7, including a photo if one is available and an 'Add to Cart' link.

**Extensions (Alternate Flow)**:

3a. User navigates to category page of a particular type of product by clicking on any product in the image map located in the center of the page.

4a. User views the next few items from the list of all products in category by clicking on 'Next' link in the bottom right corner of product list and then navigates to 'Product Screen' of a particular product by clicking on that product link in 'Products for this Category' list.

## 2.2 USE CASE UC2: SEARCH CATALOG

**Description:** This use case describes how the User can search the e-store catalog.

**Primary Actor**: User

**Stakeholders and Interests**:

- **User**: Wants user-friendly interface and fast searching speed.
  Wants to find some specific product in catalog and add items to the cart successfully.
- **Company**: Wants to satisfy user interests.

**Preconditions**: None

**Success Guarantee (Post Conditions)**:

- 'Product Screen' displays items and corresponding list prices for the searched product.
- Item Screen' displays detailed information about an individual item for sale, including a photo, if one is available.
- 'Cart Screen' displays the various items added to the cart, the quantity and list price of each item and the Subtotal.

**Basic flow**:

1.User opens a web browser, gives the URL for the 'Marvel e-store' website in
and clicks on 'Go' button.
2. System launches the web site.
3. User enters text in text box next to Search button and clicks on Search button.
4. System displays the matching text products.
5. User clicks on the desired link. User can navigate back to the earlier pages if wishes.

**Extensions (Alternate Flow)**:

3a If search returns no results, System displays the message "No matches found for the entered text".

## 2.3 USE CASE UC3: Create New Account

**Description:** This use case describes how a new User can register with e-store

P**rimary Actor**: User

**Stakeholders and Interests**:

- **User**: Wants user-friendly interface and fast searching speed.
  Wants to register and create the account with ease and within a short time.
  **Company**: Wants to satisfy user interests and validate user information.

**Preconditions**: E-store website main page is loaded.

**Success Guarantee (Post Conditions)**:

- 'Account verification Screen' lets the user review his/her account details and then successfully register as a user of this site.

**Basic flow**:

1. The new use click on new 'create new Account link'.
2. The user is at Account Information screen.
3. The new use enters the following details in the Account Information Screen.
   Contact Information:
   a. First Name
   b. Last Name
   c. Street Address
   d. City
   e. State of Province
   f. Country
   g. Postal Code
   h. Telephone Number
   i. E-Mail Credit Card Information
   j. Card Number
   k. Card Type
   l. Card Expiry Date
4. The user clicks on Update and the system validates all the user information and displays the signing information page.
5. User enters the new Username and Password.
6. System validates that the Username is already in use. If not, system displays the new account confirmation page.
7. System sends an e-mail notification about new account creation to User.

## 2.4 USE CASE UC4: Update Account Information

**Description:** This use case describes how a User can update his account information with e-store

**Primary Actor**: User

**Stakeholders and Interests**:

- **User**: Wants user-friendly interface and fast searching speed.
  Wants to update the account with ease and within a short time.
- **Company**: Wants to satisfy user interests and validate user information.

**Preconditions**: E-store website main page is loaded.

**Success Guarantee (Post Conditions)**:

- 'Account Information Screen' lets the user review his/her account details and then successfully modifying its contents.

**Basic flow:**

1. User Clicks on the Signin Link
2. System displays the sign In screen
3. User enters the Username and Password
4. System displays the Account Information Page.
5. User can click on the "update Account" link
6. User is at Modifiable Account Information Page.
7. User modifies the account information and exits the page by clicking on "Finish".
8. System displays the confirmation message "Account Information is updated".

**Miscellaneous:**

Steps 1 and 2 in the Basic Flow are part of the 'Login' use case. The basic flow of this use case 'uses' or 'includes' the 'Login' use case.

## 2.5 USE CASE UC5: Cancel Account Information

**Description:** This use case describes how a User can cancel his account information with e-store

P**rimary Actor**: User

**Stakeholders and Interests**:

- **User**: Wants user-friendly interface and fast searching speed.
  Wants to cancel the account with ease and within a short time.
- **Company**: Wants to satisfy user interests and validate user information.

**Preconditions**: E-store website main page is loaded.

**Success Guarantee (Post Conditions)**:

- 'Account Information Screen' lets the user cancel his account.

**Basic flow**:

1. User Clicks on the Signing Link.
2. System displays the sign In screen.
3. User enters the Username and Password.
4. System displays the Account Information Page.
5. User can click on the "Cancel Account" link.
6. System displays the confirmation message "Account deleted".
7. System sends an e-mail to user confirming the cancellation of the account.

## 2.6 USE CASE UC6: Maintain Shopping Cart

**Description:** This use case describes how an actor can modify items in the shopping cart.

**Primary Actor**: User

**Stakeholders and Interests**:

**User:** Wants to browse/purchase electronic items from the Store.

**Marvel electronics Owner:** Every user who visits the site or makes a purchase has a direct bearing on the revenue and hence the profitability of the store owner.

**Pre-Condition:** The actor is on the Cart Screen and have already logged in.

**Post-Condition:** The user successfully modifies existing items in the cart or adds new items to the cart.

**Basic Flow**

1. The user clicks on one of the category in the left frame of the screen and navigates to the item he wishes to add to the cart and clicks on the "Add to Cart" link.
2. The system displays the Cart Screen with the all the old items and the newly added item. The subtotal field displays the total cost of the shopping cart.
3. The user repeats steps 3 and 4 for all the items he wants to add to the cart.
4. The user modifies the item quantity for one or multiple items and clicks "Update Cart".
5. The system updates the new quantity and displays the modified line item totals and sub-total to the user.
6. The user clicks the "Remove" link to remove any of the items in the cart.
7. The system deletes the item from the cart and adjusts the sub-total accordingly.

**Extensions (or Alternative Flows):**

a. User proceeds to adding Items to cart and modifying cart without logging in.
b. If the user enters a non-positive or non-integer quantity the system displays an appropriate error message.
c. If user closes the window without proceeding for payment, the cart is stored in the system for a pre-decided number of days, before getting flushed, so that the user can return to the cart in the future.
d. 'Refresh cart' feature is available for resetting the cart.

**Special Requirements:**

1. Multiple users should be able to add items to cart simultaneously.

**Technology and Data Variation List:**

None

**Frequency of Occurrence:**

There is a possibility that multiple users will add an item to the same cart simultaneously from different locations.

## 2.7 USE CASE UC7: Maintain Database

**Description:** This use case describes how the administrator of the system can add and delete items from the catalog and also manage the system users.

**Stakeholders and Interests:**

**Administrator:** Wants to add/modify items in the product catalog.
**User:** Wants updated product catalog.
**Owner:** Every user who visits the site or makes a purchase has a direct bearing on the revenue and hence the profitability of the store owner.

**Pre-Condition:** The Marvel electronic store product web page is loaded. The administrator is logged into the system.

**Post-Condition:** The user successfully manages the users and the catalog.

**Basic Flow**

1. The system prompts the user to select one of the following two options:
   - Manage Catalog
   - Manage Users
2. If the user selects the "**Manage Catalog**" option, the system prompts the user to select one of the following two options:
   - Add new item
   - Modify existing item, i.e., update or remove item.

2A. If the user selects the "***Add new item***" option,

2a. The system prompts the user to select an appropriate category and product (or create a new category/product if one does not exist) to place the item)
2b. The user select the appropriate category and product.
2c. The system prompts the user to enter the item details like Item Name, Quantity Available, Price and Item Image.
2d. The user keys in the requested item details and clicks "Submit".
2e. The system updates the item in the selected category/product in the database.

2B. If the user selects the "***Modify Existing Item***" option,

2a. The system prompts the user to navigate to the appropriate item.
2b. The user navigates to the item that he wants to modify.
2c. The user either removes the item from the catalog by clicking "Remove Item" or modifies the Item Name, List Price, Quantity or Item Image and clicks Update.
2d. The system updates the information in the database.

3. If the user selects the "**Manage Users**" option, the system prompts the user to select one of the following two options:
    - Add User
    - Modify User

    3A. If the user selects the "**Add User**" option,
        3a. The system displays the "Add new user" page to the user.
        3b. The user enters the user details like name, address, etc and selects the access right (normal user/ administrator) of the user and clicks Submit.
        3c. The system updates the new user details in the database.

    3B. If the user selects the "**Modify User**" option,
        3a. The system prompts the admin to search for the user.
        3b. The user searches for the user he wants to modify.
        3c. The system displays the user details to the admin.
        3d. The admin modifies any of the user details like name, address, card details, access rights and clicks Update.
        3e. The system updates the details in the database.

**Extensions (Alternative Flows):**

**2A. 2d 1 Incomplete Item Information**

If the user fails to enter any of the mandatory item information like Item Name, Quantity and Price then the system displays an appropriate error message to the user.

**3A. 3b.1 Incomplete User Information**

If the user fails to enter any of the mandatory user information like user Name or Password then the system displays an appropriate error message to the user.

**3 Incomplete Selection**

If the user does not select any of the options add user or modify user then the system displays an appropriate error message to the user.

## 2.8 USE CASE UC8: Apply For Financing

**Description:** This use case describes how the User of the system can apply for finance for buying the products.

**Primary Actor**: User

**Stakeholders and Interests**:
User: Wants better payment options.
Wants to buy the products on loan basis .
Company: Wants to satisfy user interests.

**Preconditions**: 'Marvel E-Store' page should be loaded.

**Success Guarantee (Post Conditions)**:
User placed an application successfully.
Application Id is generated by the system.
Confirmation e-mail is sent by the system to the User.

**Basic flow**:
1. User clicks on "Financing link".
2. System displays the "Financing" main page.
3. User clicks on 'Apply Now' link in the Screen.
4. System displays the 'Application Screen'.
5. User enters the following information.

Applicant Information:
First Name
Last Name
Street Address
City
State of Province
Country
Postal Code
Telephone Number
E-Mail
Current Annual income of household
Any loan rejected before
Installment option preferable(6months,1year,2year)

6. User clicks on 'Submit' button.
7. System displays 'Confirmation Application Submitted Screen' to the User with the Application ID.
8. System sends a confirmation e-mail to the User.

## 2.9 USE CASE UC9: Make Online Payments

**Description:** This use case describes how the User of the system can make payments for the loan.

**Primary Actors**: User

**Stakeholders and Interests**:

User: Wants better payment options.
Wants to pay for the loan online.
Company: Wants to satisfy user interests.

**Preconditions**: 'Marvel E-Store' page should be loaded.

**Success Guarantee (Post Conditions)**:

- User is able to pay online successfully.
- A Confirmation Id is generated by the system.
- Confirmation e-mail is sent by the system to the User.

**Basic flow**:

1. User clicks on "Financing link".
2. System displays the "Financing" main page.
3. User clicks on 'Make Payments' link in the Screen.
4. System displays the 'Payment Screen'.
5. User enters the following information.
   Applicant Information:
   - First Name
   - Last Name
   - Mode of Payment

   If mode of payment debit/credit card
   - Credit card number
   - Credit expiry Date
   - Card Type

   If mode of payment is cheque
   - Cheque Number
   - Routing Number
   - Bank Name
   - Account Number
6. User clicks on 'Submit' button.
7. System displays 'Confirm the payment information again' to the User.
8. User click on 'Confirm'.
9. System sends a confirmation e-mail to the User.

**Special Requirements**

1. If payment is done through the credit/debit card, there is a requirement of consulting the credit/debit company for confirming the account and payment.

## 2.10 USE CASE UC10: Navigating Finance Information

**Description:** This use case describes how the User of the system can navigate through the financing information.

**Primary Actor**: User

**Stakeholders and Interests**:

User: Wants easy accessibility of the financing information.
Company: Wants to satisfy user interests.

**Preconditions**: 'Marvel E-Store' page should be loaded.

**Success Guarantee (Post Conditions)**:
User is able to browse through the financing information successfully.
User can check his balance.
User can check the history information of his payments.

**Basic flow**:

1. User clicks on "Financing link".
2. System displays the "Financing" main page.
3. User clicks on 'History' link in the Screen.
4. System displays the 'Payment History Screen'showing the dates and amount of intallments.

**Extensions (Alternate Flow)**:

3a 1. User clicks on 'Balance' link in the Screen.
2. System displays the 'Balance Payment' screen showing the amount due on the user.

3b 1. User clicks on 'Financing Details' link in the Screen.
2. System displays the 'Details on loan' screen showing the loan details.

## 2.11 USE CASE UC11: Login/Registration

### Description

This use case describes how users gain access to the e-Store system through the login/registration (account creation) process.

### Primary Actors

Users (Customers, Administrators)

### Stakeholders and Interests

1. User: wants to gain access to the system for any number of reasons (e.g., maintain personal account, check order status, purchase items, administer system, etc.).
2. Marvel Electronics Owner: wants to ensure security of system.
3. Pre-Condition: the user is on the "Sign In" screen.
4. Post-Condition: the user is either logged in or failed to log in and is appropriately notified.

### Basic Flow (Returning User, Valid Username/Password)

1. The user browses to the "Sign In" page.
2. The user enters his/her username and password in the returning user section of the "Sign In" screen.
3. The system validates the username and password (successfully) and displays the user's account information page.

### Extensions (Alternative Flows):

1. The user browses to the "Sign In" page.
2. The user enters his/her username and password.
3. The system determines that the username or password is invalid and informs the user to try again.

### Returning User, Forgotten Username or Password

1. The user has forgotten his/her username, password, or both, and clicks the "Forgot Username/Password?" link
2. The system resets the users account and sends an e-mail notification with the new information
3. The user utilizes the new username/password information to log in following the basic flow

### New User

1. The user browses to the "Sign In" page.
2. The user chooses the "New User" link on the "Sign In" page.
3. The user enters his/her account information and chooses a username and password
4. The system validates the information entered
5. The system sends the user an e-mail invitation
6. The user must confirm their new account by clicking the link in the e-mail
7. The user is logged in and his/her account information page is displayed.

**System Administrator**

System administrators follow the basic flow for this use case when logging in to the system.

**Special Requirements**

- After three consecutive unsuccessful login attempts, the user's account will be locked and must be reset by a system administrator.
- Users may not login from multiple different computers simultaneously. If this condition is detected, the user will be notified with appropriate warning/error messages.

**Technology and Data Variation List**

None

**Frequency of Occurrence**

Users must log in to access their account information, to process a return request, and, optionally, to place an order. The system administrator must log in to administer the system.

## 2.12 USE CASE UC12: Process Returns

**Description**
This use case describes how customers can request Return Merchandise Authorizations (RMAs) using the e-Store system.

**Primary Actors**
Customers, Support Personnel, Shipping/Receiving Department, Card Payment Vendor

**Stakeholders and Interests**

Customer: wants to return an item (or items) purchased through the e-Store system. Pre-Condition: the customer has purchased an item and wishes to return it.Post-Condition: the customer has received either approval to return the item(s), or a denial of the return request.

**Basic Flow (RMA Granted)**

1. The customer logs in to the e-Store system.
2. The customer browses to the "Return Products" page and requests an RMA.
3. The customer logs out of the e-Store system (optionally).
4. The e-Store system notifies support personnel of the pending RMA.
5. Support personnel approve the RMA request.
6. The e-Store system notifies the customer of the request approval and sends further instructions via e-mail.
7. The customer ships the item(s) back to Marvel Electronics according to the instructions
8. The receiving department at Marvel Electronics acknowledges the receipt in the e-Store system
9. The e-Store system refunds the customer's payment
10. The e-Store notifies the customer of the receipt and refund via e-mail.

**Extensions (Alternative Flows):**

**RMA Denied**

1. The customer logs in to the e-Store system.
2. The customer browses to the "Return Products" page and requests an RMA.
3. The customer logs out of the e-Store system (optionally).
4. The e-Store system notifies support personnel of the pending RMA.
5. Support personnel deny the RMA request.
6. The e-Store system notifies the customer of the request denial via e-mail.

**RMA Approved, With Card Payment**

1. The customer logs in to the e-Store system.
2. The customer browses to the "Return Products" page and requests an RMA.
3. The customer logs out of the e-Store system (optionally).
4. The e-Store system notifies support personnel of the pending RMA.
5. Support personnel approve the RMA request.
6. The e-Store system notifies the customer of the request approval and sends further instructions via e-mail.
7. The customer ships the item(s) back to Marvel Electronics according to the instructions
8. The receiving department at Marvel Electronics acknowledges the receipt in the e-Store system
9. The e-Store system contacts the card payment vendor to refund the customer's payment to their credit card.
10. The e-Store system notifies the customer of the receipt and refund via e-mail.

**Special Requirements**

None

**Technology and Data Variation List**

None

**Frequency of Occurrence**

N/A

## 2.13 USE CASE UC13: Process HelpRequest

**Description**
This use case describes how customers can get service and support using the e-Store system.

**Primary Actors**
Customers, Support Personnel

**Stakeholders and Interests**

1. Customer: wants to get help/support with a product, service, or e-Store issue.
2. Marvel Electronics Owner: wants to ensure customer satisfaction.
3. Pre-Condition: none.
4. Post-Condition: The customer has received the desired help/support.

**Special Requirements**
None

**Technology and Data Variation List**
None

**Frequency of Occurrence**
N/A

## 2.14 USE CASE UC14: Accept Payment Online

**Description**
This use case describes how Financing Department can accept the payment from the e-Store system.

**Primary Actors** Financing Department

**Stakeholders and Interests**
**Financing** Department Easy browsing for payments details.

**Basic Flow:**
1. Financing Department Personnel can click on Financing Department page.
2. Click on 'E-Payment link'.
3. Click on 'Customer Payment' link.
4. System displays the Customer Payment Page.
5. Financing Department Person can view the details and accept the payment by clicking 'Payment Received'.

**Special Requirements**
Financing Department has access to all the credit/debit card companies and banks to confirm the e-payment given by customers.

**Technology and Data Variation List**
None

**Frequency of Occurrence**
N/A

## 2.15 USE CASE UC15: Grant Financing

**Description**
This use case describes how Financing Department can accept/reject the loan application from the customer who wishes to buy the product with financing option.

**Primary Actors** Financing Department

**Stakeholders and Interests**
**Financing** Department Easy browsing for details submitted by users.

**Basic Flow**:
1. Financing Department Personnel can click on Financing Department page.
2. Click on 'Application ' link.
3. System directs the Finance Department person to 'Application Review Page'.
4. Click on 'Grant Financing' link.
5. System displays the Financial Grant Page.
6. Financing Department Person can view the details of the Financial request applications.
7. Financing Person can accept or reject the loan application.
8. Financing Person can add the comments in the Application and click on 'Submit'.

**Special Requirements**
Financing Department has access to all the credit/debit card companies and banks to confirm the information given by Customer in the Application.

**Technology and Data Variation List**
None

**Frequency of Occurrence**
N/A