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System I

- Use-Case: Adding an external service 1.1.1-a Success Scenario
 - 1. Actor: system manager
 - 2. Preconditions:
 - 3. Parameters: New external service
 - 4. Postconditions: The system contains the new service
 - 5. Actions:
 - a. system manager: Requests to add a new external service to the system.
 - b. **system**: Request information regarding new service.
 - c. system manager: Enter relevant information.
 - d. **system**: Check that the new service does not already exist.
 - e. **system**: Add new service to list of services.

- Use-Case: Adding an external service 1.1.1-b Failure Scenario (Service exists in the system)
 - 1. Actor: system manager
 - 2. Preconditions:
 - 3. Parameters: Existing external service
 - 4. <u>Postconditions</u>: The system contains the existing service
 - 5. Actions:
 - a. system manager: Requests to add a new external service to the system.
 - b. **system**: Request information regarding new service.
 - c. **system manager**: Enter relevant information.

- d. **system**: Check that the new service does not already exist.
- e. system: Finds out the service already exists.
- f. system: Raises an error message to the user.
- Use-Case: Altering an external service 1.1.2-a Success Scenario
 - 1. Actor: system manager
 - 2. Preconditions:
 - 3. Parameters:
 - a. Identifier of the service to be altered.
 - b. New details for the service.
 - 4. Postconditions: The service was updated.
 - 5. Actions:
 - a. **system manager:** Requests to alter an existing service in the system.
 - b. system: prompt system manager for the identifier of the service to be altered and the new details for the service.
 - system manager: enter the identifier of the service to be altered
 and the new details for the service.
 - d. **system**: Look up the service by the service identifier.
 - e. **system**: replace current information of the service with new information.
- Use-Case: Altering an external service 1.1.2-b Failure Scenario (Service doesn't exist in the system)
 - 1. Actor: system manager
 - 2. Preconditions:
 - 3. Parameters:
 - a. Identifier of the service to be altered.
 - b. New details for the service.

4. Postconditions:

5. Actions:

- a. system manager: Requests to alter an existing service in the system.
- b. **system**: Prompt system manager for the identifier of the service to be altered and the new details.
- c. **system manager**: Enter the identifier of the service to be altered.
- d. **system**: Look up the service.
- e. **system**: Doesn't find the service, raises an error.

• Use-Case: Removing an external service 1.1.3-a — Success Scenario

- 1. Actor: system manager.
- 2. Preconditions:
- 3. Parameters: Identifier of the service to be removed.
- 4. <u>Postconditions</u>: service is not available in the system.
- 5. Actions:
 - a. **system manager:** Requests to remove a service from the system.
 - b. **system**: Request identifier of the service to be removed.
 - c. **system manager**: Enter identifier of the service to be removed.
 - d. system: Look up service by given identifier.
 - e. **system**: Remove service from list of services.

Use-Case: Removing an external service 1.1.3-b — Failure Scenario (Service doesn't exist in the system)

- 1. Actor: system manager.
- 2. Preconditions:
- 3. Parameters: Identifier of the service to be removed.
- 4. <u>Postconditions</u>: service is not available in the system.
- 5. Actions:

- a. **system manager:** Requests to remove a service from the system.
- b. **system**: Request identifier of the service to be removed.
- c. **system manager**: Enter identifier of the service to be removed.
- d. **system**: Look up service by the given identifier.
- e. **system**: The service does not exist in the system, return an error.
- Use-Case: Show notification for a logged-in user 1.4-a Success Scenario
 - 1. Actor: member
 - 2. Preconditions:
 - 3. Parameters: notification details.
 - 4. Postconditions:
 - 5. Expected result: Notification for the user.
 - 6. Actions:
 - a. system: Receive a notification for the member.
 - b. **system**: Verify that the member is logged-in.
 - c. system: Send notification to the member.
- Use-Case: Show notification for a logged-in user 1.4-b Failed Scenario
 (User is not logged in)
 - 1. Actor: member
 - 2. Preconditions:
 - 3. Parameters: notification details.
 - 4. <u>Postconditions</u>: member's notification is saved in the system.
 - 5. Expected result:
 - 6. Actions:
 - a. **system**: Receive a notification for the member.
 - b. **system**: Verify that the member is logged-in.
 - c. system: Recognizes member isn't logged in
 - d. **system:** saves the notification.

- Use-Case: Show notifications for returning user 1.5 Success Scenario
 - 1. Actor: member
 - 2. <u>Preconditions</u>: member received a notification while being logged off.
 - 3. Parameters:
 - 4. Postconditions: There are no new notifications to show the user.
 - 5. <u>Expected result</u>: Notifications that were received while the user was away.
 - 6. Actions:
 - a. member: Logs into the system.
 - b. **system**: Shows the user the notifications they received while away from the system.

Users II

- Use-Case: Entering the trading system 2.1.1-a Success Scenario
 - 1. Actor: guest
 - 2. Preconditions:
 - 3. Parameters:
 - 4. Postconditions:
 - a. The guest is connected to the system
 - b. The guest has an empty shopping cart.
 - 5. Expected result:
 - 6. Actions:
 - a. guest: Enters the system.
 - b. **system**: Assigns an empty shopping basket to the new guest.

Use-Case: Guest registration to the trading system 2.1.3-a — Success Scenario

- 1. Actor: guest
- 2. Preconditions: guest is connected to the system.
- 3. Parameters: user credentials.
- 4. <u>Postconditions</u>: new user is registered in the system with the given user credentials.

5. Actions:

- a. guest: Request to register to the system.
- b. **system**: Request user credentials from the guest.
- c. **guest**: Enter user credentials.
- d. **system**: Verify that user credentials are valid.
- e. **system**: Creates a new user with the given user credentials.
- Use-Case: Guest registration to the trading system 2.1.3-b Failed Scenario

(Entered user credentials are not valid)

- 1. Actor: guest
- 2. <u>Preconditions</u>: guest is connected to the system.
- 3. Parameters: user credentials.
- 4. Postconditions:
- 5. Actions:
 - a. guest: Request to register.
 - b. **system**: Request user credentials from the guest.
 - c. guest: Enters user credentials.
 - d. **system**: Verify that user credentials are valid.
 - e. system: Finds out that the user credentials are not valid
 - f. **system:** raises an error to the user.

- Use-Case: Guest login to the trading system 2.1.4-a Success Scenario
 - 1. Actor: guest
 - 2. <u>Preconditions</u>: guest is connected to the system.
 - 3. Parameters: user credentials
 - 4. <u>Postconditions</u>: The guest is logged as the member with the given user credentials.
 - 5. Actions:
 - a. guest: Request to login to the system.
 - b. **system**: Request user credentials from the guest.
 - c. guest: Enters user credentials.
 - d. **system**: Validates user credentials.
 - e. **system**: Logs in the guest as the member with the given user credentials.
- Use-Case: Guest login to the trading system 2.1.4-b Failure Scenario (User credentials are not valid)
 - 1. Actor: guest
 - 2. <u>Preconditions</u>: guest is connected to the system.
 - 3. Parameters: user credentials
 - 4. Postconditions:
 - 5. Actions:
 - a. **guest**: Requests to login to the system.
 - b. **system**: Request user credentials from the guest.
 - c. guest: Enters user credentials.
 - d. system: Validates user credentials.
 - e. system: Finds out that entered user credentials are not valid
 - f. **system:** raises an error message to the guest.

Use-Case: User receives information about stores 2.2.1.1-a — Success Scenario

- 1. Actor: user
- 2. Preconditions: user is connected to the system.
- 3. Parameters: —
- 4. Postconditions: —
- 5. Expected result: Relevant information about the stores in the system.
- 6. Actions:
 - a. **user**: Requests from the system for information about the stores in the system.
 - b. **system**: Show the user relevant information about the stores.
- Use-Case: user receives information regarding products in store 2.2.1.2-a —
 Success Scenario
 - 1. Actor: user
 - 2. <u>Preconditions:</u> user is connected to the system.
 - 3. Parameters: store identifier
 - 4. Postconditions:
 - 5. <u>Expected result:</u> Relevant information about products of the store with the given store identifier.
 - 6. Actions:
 - a. **user**: Request information regarding products in store.
 - b. **system**: Prompt user to enter store identifier.
 - c. user: Enter store identifier.
 - d. **system**: Validate the store identifier.
 - e. **system**: Send relevant information regarding products in the store with the given store identifier.

Use-Case: user receives information regarding products in store 2.2.1.2-b Failure Scenario (Store identifier is not valid)

- 1. Actor: user
- 2. Preconditions: user is connected to the system.
- 3. Parameters: store identifier
- 4. Postconditions:
- 5. Expected result:
- 6. Actions:
 - a. **user**: Request information regarding products in store.
 - b. **system**: Prompt user to enter store identifier.
 - c. user: Enter store identifier.
 - d. **system**: Validate the store identifier
 - e. system: Finds out that the given store identifier is not valid
 - f. system: raises an error.

• Use-Case: Searching for products 2.2.2.1-a — Success Scenario

- 1. Actor: user
- 2. <u>Preconditions</u>: user is connected to the system.
- 3. Parameters: search parameters and filters
- 4. Postconditions:
- 5. Expected result:
- 6. Actions:
 - a. **user**: Requests to search for products with the given search parameters and filters.
 - b. **system**: Looks up all products that pass the filters with the given search parameters.
 - c. **system**: Renders the list of passing products to the user.

Use-Case: Searching for products 2.2.2.1-b — Failed Scenario(No products that pass the filters)

- 1. Actor: user
- 2. Preconditions: user is connected to the system.
- 3. Parameters: search parameters and filters
- 4. Postconditions:
- 5. Expected result:
- 6. Actions:
 - a. **user**: Requests to search for products with the given search parameters and filters.
 - b. **system**: Looks up all products that pass the filters with the given search parameters.
 - c. **system**: Finds out that no products pass the filters with the given search parameters.
 - d. **system:** Raises an appropriate message.

Use-Case: Searching for products in a specific store 2.2.2.2-a — Success Scenario

- 1. Actor: user
- 2. <u>Preconditions</u>: user is connected to the system.
- 3. Parameters:
 - a. search parameters and filters
 - b. store identifier.
- 4. Postconditions:
- 5. Expected result:
- 6. Actions:
 - a. **user**: Requests to search for products with the given search parameters and filters in the store matching the store identifier.
 - b. **system**: Validates store identifier.

- c. **system**: Looks up all products in the store that pass the filters with the given search parameters.
- d. **system**: Renders the list of passing products to the user.
- Use-Case: Searching for products in a specific store 2.2.2.2-b Failed
 Scenario (store identifier is invalid)
 - 1. Actor: user
 - 2. Preconditions: user is connected to the system.
 - 3. Parameters:
 - a. search parameters and filters.
 - b. store identifier.
 - 4. Postconditions:
 - 5. Expected result:
 - 6. Actions:
 - a. **user**: Requests to search for products with the given search parameters and filters in the store matching the store identifier.
 - b. **system**: Validates store identifier.
 - c. system: Finds out given store identifier is invalid
 - d. system: raises an error.
- Use-Case: Searching for products in a specific store 2.2.2.2-c Failed
 Scenario (No products pass the filters)
 - 1. Actor: user
 - 2. <u>Preconditions</u>: user is connected to the system.
 - 3. Parameters:
 - a. search parameters and filters.
 - b. store identifier.
 - 4. Postconditions:
 - 5. Expected result:

6. Actions:

- a. **user**: Requests to search for products with the given search parameters and filters in the store matching the store identifier.
- b. **system**: Validates store identifier.
- c. **system**: Looks up all products that pass the filters with the given search parameters.
- d. **system**: Finds out that no products pass the filters with the given search parameters in the store with the given store identifier, raises an appropriate message.

• Use-Case: Adding a product to the store basket 2.2.3-a — Success Scenario

- 1. Actor: user
- 2. <u>Preconditions</u>: user is connected to the system.
- 3. Parameters:
 - a. product identifier
 - b. amount of product.
 - c. store identifier.
- 4. <u>Postconditions</u>: The specified amount of products with the given product identifier were added to the user's basket for the store with the given store identifier.
- 5. Expected result:
- 6. Actions:
 - a. **user**: Requests to add a product with product identifier to shopping basket of store with store identifier.
 - b. system: Validates store identifier.
 - c. system: Validates product identifier.
 - d. system: Validates amount of product.
 - e. **system**: Adds the specified amount of products to the store basket

- f. **system:** Updates the quantity of instances in the basket.
- Use-Case: Adding a product to the store basket 2.2.3-b Alternative
 Scenario(Basket of store with given store identifier doesn't exist)
 - 1. Actor: user
 - 2. <u>Preconditions</u>: user is connected to the system.
 - 3. Parameters:
 - a. product identifier.
 - b. amount of product.
 - c. store identifier.
 - 4. <u>Postconditions</u>: A new shopping basket is created for the store with the given store identifier, and the specified amount of products with the given product identifier were added to that basket.
 - 5. Expected result:
 - 6. Actions:
 - a. **user**: Requests to add a product with product identifier to shopping basket of store with store identifier.
 - b. **system**: Validates store identifier
 - c. system: Validates product identifier.
 - d. system: Validates amount of product.
 - e. **system**: Finds out the user doesn't yet have a basket for the store with the given store identifier.
 - f. **system:** creates a new basket for that store.
 - g. **system**: Adds the specified amount of products to the store basket.
 - h. system: updates the quantity of instances in the basket.

Use-Case: Adding a product to the store basket 2.2.3-c — Failed Scenario(Amount of product is invalid)

- 1. Actor: user
- 2. Preconditions: user is connected to the system.
- 3. Parameters:
 - a. product identifier.
 - b. amount of product.
 - c. store identifier.
- 4. Postconditions:
- 5. Expected result:
- 6. Actions:
 - a. user: Requests to add a product with product identifier to shopping basket of store with store identifier.
 - b. system: Validates store identifier
 - c. system: Validates product identifier.
 - d. system: Validates amount of product.
 - e. **system**: Finds out that the amount of product is invalid.
 - f. **system:** raises error.
- Use-Case: Adding a product to the store basket 2.2.3-d Failed
 Scenario(store identifier is invalid)
 - 1. Actor: user
 - 2. <u>Preconditions</u>: user is connected to the system.
 - 3. Parameters:
 - a. product identifier.
 - b. amount of product.
 - c. store identifier.
 - 4. Postconditions:
 - 5. Expected result:

- a. user: Requests to add a product with product identifier to shopping basket of store with store identifier.
- b. system: Validates store identifier.
- c. system: Finds out that store identifier is invalid
- d. system: raises error.
- Use-Case: Adding a product to the store basket 2.2.3-e Failed
 Scenario(product identifier is invalid)
 - 1. Actor: user
 - 2. <u>Preconditions</u>: user is connected to the system.
 - 3. Parameters:
 - a. product identifier.
 - b. amount of product.
 - c. store identifier.
 - 4. Postconditions:
 - 5. Expected result:
 - 6. Actions:
 - a. **user**: Requests to add a product with product identifier to shopping basket of store with store identifier.
 - b. **system**: Validates store identifier
 - c. system: Validates product identifier.
 - d. **system**: Finds out that product identifier is invalid
 - e. system: raises error.
- Use-Case: Observing the shopping cart 2.2.4.1-a Success Scenario
 - 1. Actor: user
 - 2. <u>Preconditions</u>: user is connected to the system.
 - 3. Parameters:

- 4. Postconditions:
- 5. <u>Expected result</u>: Relevant information regarding the user's shopping cart.
- 6. Actions:
 - a. **guest**: Request to observe the shopping cart.
 - b. **system**: Show relevant information regarding the user's shopping cart.
- Use-Case: Observing the shopping cart 2.2.4.1-b Failed Scenario (Shopping cart is empty)
 - 1. Actor: user
 - 2. Preconditions: user is connected to the system.
 - 3. Parameters:
 - 4. Postconditions:
 - 5. Expected result:
 - 6. Actions:
 - a. **guest**: Request to observe the shopping cart.
 - b. **system**: Finds out the shopping cart is empty.
 - c. system: sends an appropriate message to the user.
- Use-Case: Removing a product from the shopping cart 2.2.4.2-a Success
 Scenario
 - 1. Actor: user
 - 2. <u>Preconditions</u>: user is connected to the system.
 - 3. Parameters:
 - a. product identifier.
 - b. amount to remove
 - 4. <u>Postconditions</u>: for the shopping cart:

- 5. Expected result:
- 6. Actions:
 - a. **user**: Requests to remove the given amount of products with the given product identifier from his cart.
 - b. **system**: Validates the product identifier.
 - c. **system**: Validates the amount to remove.
 - d. **system**: Reduce the specified amount of products with the given product identifier from the user's cart.
- Use-Case: Removing a product from the shopping cart 2.2.4.3-a Failed
 Scenario (product identifier is not valid)
 - 1. Actor: user
 - 2. <u>Preconditions</u>: user is connected to the system.
 - 3. Parameters:
 - a. product identifier.
 - b. amount to remove.
 - 4. Postconditions:
 - 5. Expected result:
 - 6. Actions:
 - a. **user**: Requests to remove the given amount of products with the given product identifier from his cart.
 - b. system: Validates the product identifier.
 - c. system: Finds out product identifier is not valid
 - d. system: raises an error.
- Use-Case: Removing a product from the shopping cart 2.2.4.4-a Failed
 Scenario (amount to remove is not valid)
 - 1. Actor: user
 - 2. <u>Preconditions</u>: user is connected to the system.

3. Parameters:

- a. product identifier.
- b. amount to remove.
- 4. Postconditions:
- 5. Expected result:
- 6. Actions:
 - a. **user**: Requests to remove the given amount of products with the given product identifier from his cart.
 - b. **system**: Validates the product identifier.
 - c. **system**: Validates the amount to remove.
 - d. system: Finds out that the amount to remove is not valid
 - e. system: Raises an error.

• Use-Case: Payment 2.2.5-a — Success Scenario

- 1. Actor: user
- 2. Preconditions:
 - a. user is connected to the system.
 - b. user has a non-empty shopping cart.

3. Parameters:

- a. Payment method.
- b. Shopping cart.
- c. Payment details.

4. Postconditions:

- a. for each store in which a product was purchased:num_of_product_before num_purchased == num_of_product_after.
- The user is charged with the order's price according to the discount policy & purchase policy.
- c. Purchase info is logged in the system.
- 5. Expected result: Confirmation that the purchase was successful.

- a. user: Request to make a purchase for their shopping cart.
- b. system: Go over all shopping baskets in the user's shopping cart.for every shopping basket:
 - i. system: Checks if the store associated with the shopping basket exists in the system
 - ii. **system**: Checks if the store is open. If so, for every product in shopping basket:
 - ★ system: Checks if the specified amount of the product is available at the store.
 - iii. **system**: check that the store purchase policy is met.
- b. **system**: Requests for desired supply method.
- c. **user**: Enters desired supply method.
- d. **system**: Send the supply method and user's address to the external supply service.
- e. **system**: Request from the user for a payment method & payment details.
- f. **user**: Enters desired payment method & payment details.
- g. **system**: Send the payment method & payment details to the external payment service.
- h. **system**: Send the relevant package details & user details to the external delivery service.
- i. **system:** Updates store's supply.
- j. **system**: Logs purchase details in the system.
- k. **system**: Send confirmation to the user.
- Use-Case: Payment 2.2.5-b Failure Scenario (One of the stores is closed \
 does not exist in the system)
 - 1. Actor: user

2. Preconditions:

- a. user is connected to the system.
- b. user has a non-empty shopping cart.

3. Parameters:

- a. Payment method.
- b. Shopping cart.
- c. Payment details.
- 4. Postconditions:
- 5. Expected result:
- 6. Actions:
 - a. **user**: Request to make a purchase for their shopping cart.
 - b. system: Go over all shopping baskets in the user's shopping cart.for every shopping basket:
 - ★ system: Checks if the store associated with the shopping basket is open.
 - c. **system:** Find a closed store
 - d. **system:** Raise an error to the user

Use-Case: Payment 2.2.5-c — Failure Scenario (Insufficient amount of product)

- 1. Actor: user
- 2. Preconditions:
 - a. user is connected to the system.
 - b. user has a non-empty shopping cart.

3. Parameters:

- a. Payment method.
- b. Shopping cart.
- c. Payment details.
- 4. Postconditions:

- 5. Expected result:
- 6. Actions:
 - a. **user**: Request to make a purchase for their shopping cart.
 - b. system: Go over all shopping baskets in the user's shopping cart.for every shopping basket:
 - i. system: Checks if the store associated with the shopping basket exists in the system.
 - ii. **system:** Checks if the store associated is open.
 - iii. If so, for every product in shopping basket:
 - ★ system: Checks if the specified amount of the product is available at the store.
 - c. **system**: Raise an error to the user
- Use-Case: Payment 2.2.5-d Failure Scenario (Store purchase policy is not met)
 - 1. Actor: user
 - 2. Preconditions:
 - a. user is connected to the system.
 - b. user has a non-empty shopping cart.
 - 3. Parameters:
 - a. Payment method.
 - b. Shopping cart.
 - c. Payment details.
 - 4. <u>Postconditions</u>:
 - 5. Expected result:
 - 6. Actions:
 - a. **user**: Request to make a purchase for their shopping cart.
 - b. system: Go over all shopping baskets in the user's shopping cart.for every shopping basket:

- i. system: Checks if the store associated with the shopping basket exists in the system
- ii. **system**: Checks if the store is open. If so, for every product in shopping basket:
 - ★ system: Checks if the specified amount of the product is available at the store.
- iii. **system**: check that the store purchase policy is met.
- c. **system**: Raise an error to the user since there exists a store for which its purchase policy isn't met.
- Use-Case: Payment 2.2.5-e Failure Scenario (Supply method not supported by external service / not supported to user's address)
 - 1. Actor: user
 - 2. Preconditions:
 - a. user is connected to the system.
 - b. user has a non-empty shopping cart.
 - 3. Parameters:
 - a. Payment method.
 - b. Shopping cart.
 - c. Payment details.
 - 4. Postconditions:
 - 5. Expected result:
 - 6. Actions:
 - a. **user**: Request to make a purchase for their shopping cart.
 - b. system: Go over all shopping baskets in the user's shopping cart.for every shopping basket:
 - i. system: Checks if the store associated with the shopping basket exists in the system.

- ii. **system**: Checks if the store is open. If so, for every product in shopping basket:
 - system: Checks if the specified amount of the product is available at the store.
- iii. **system**: check that the store purchase policy is met.
- c. **system**: Requests for desired supply method.
- d. **user**: Enters desired supply method.
- e. **system**: Send the supply method and user's address to the external supply service.
- f. **system**: Raises an appropriate error stating that the selected supply method is not supported / not supported for his address.
- Use-Case: Payment 2.2.5-f Failure Scenario (External payment service fail)
 - 1. Actor: user
 - 2. Preconditions:
 - a. user is connected to the system.
 - b. user has a non-empty shopping cart.
 - 3. Parameters:
 - a. Payment method.
 - b. Shopping cart.
 - c. Payment details.
 - 4. Postconditions:
 - 5. Expected result:
 - 6. Actions:
 - a. **user**: Request to make a purchase for their shopping cart.
 - b. system: Go over all shopping baskets in the user's shopping cart.for every shopping basket:
 - i. system: Checks if the store associated with the shopping basket exists in the system.

- ii. **system**: Checks if the store is open. If so, for every product in shopping basket:
 - system: Checks if the specified amount of the product is available at the store.
- iii. **system**: check that the store purchase policy is met.
- c. **system**: Requests for desired supply method.
- d. user: Enters desired supply method.
- e. **system**: Send the supply method and user's address to the external supply service.
- f. **system**: Request from the user for a payment method & payment details.
- g. **user**: Enters desired payment method & payment details.
- h. **system**: Validates the payment method & Sends payment details to the external payment service.
- i. system: Raise an error to the user stating that the payment failed with an appropriate specification.
- Use-Case: logout 2.3.1-a Success Scenario
 - 1. Actor: member.
 - 2. <u>Preconditions</u>: member is logged in the system.
 - 3. Parameters:
 - 4. Postconditions:
 - a. member shopping cart has been saved.
 - b. user is now a guest and has an empty shopping cart.

- a. **member**: Requests from the system to logout.
- b. **System:** Saves member's shopping cart.
- c. **System:** Logs the member out.

• Use-Case: Opening Store 2.3.2-a — Success Scenario

- 1. Actor: member.
- 2. Preconditions: member is logged in.
- 3. Parameters: store credentials.
- 4. <u>Postconditions</u>: new store is created, and member is its owner.
- 5. Actions:
 - a. **member**: Requests the system to open a new store.
 - b. **system**: Requests the member to enter store credentials.
 - c. **member**: Enters store credentials.
 - d. **system**: Validates store credentials.
 - e. **system**: Creates a new store with the given store credentials
 - f. **system:** Saves it into the system.
 - g. system: Defines the member to be the store's owner.

Use-Case: Opening Store 2.3.2-b — Failed Scenario (store credentials are not valid)

- 6. Actor: member.
- 7. <u>Preconditions</u>: member is logged in to the system.
- 8. Parameters: store credentials.
- 9. Postconditions:

- a. **member**: Requests the system to open a new store.
- b. **system**: Requests the member to enter store credentials.
- c. member: Enters store credentials.
- d. system: Validates store credentials.
- e. system: Find out that the store credentials are invalid
- f. **system:** Raises an error.

• Use-Case: storage management- add product 2.4.1-a — Success Scenario

1. Actor: store owner | store manager

2. Preconditions:

- a. store owner | store manager is logged in to the system.
- b. store with the given store identifier exists and is open.
- c. store owner | store manager owns | manages the store with the given identifier.
- d. store manager has permission to add products to the store with the given store identifier.

3. Parameters:

- a. product credentials.
- b. amount of product.
- c. store identifier.
- 4. <u>Postconditions</u>: The product was added to the store with the given store identifier.

- a. **store owner | store manager**: Request the system to add a product to store with the given store identifier a product.
- b. **system**: Requests the store owner to enter product credentials.
- c. **store owner | store manager**: Enters product credentials.
- d. **system**: Validates product credentials.
- e. **system**: Requests for the desired amount of the product.
- f. **store owner | store manager**: Enters the desired amount of the product.
- g. **system**: Validates the entered amount.
- h. **system**: Adds the amount of product according to the product credentials to the store with the given store identifier.

- Use-Case: storage management- add product 2.4.1-b Failed Scenario (product credentials are not valid)
 - 1. Actor: store owner | store manager

2. Preconditions:

- a. store owner | store manager is logged in to the system.
- b. store with the given store identifier exists and is open.
- c. store owner | store manager owns | manages the store with the given identifier.
- d. store manager has permission to add products to the store with the given store identifier.

3. Parameters:

- a. product credentials.
- b. amount of product.
- c. store identifier.

4. Postconditions:

5. Actions:

- a. **store owner | store manager**: Request the system to add a product to store with the given store identifier a product.
- b. **system**: Requests the store owner to enter product credentials.
- c. **store owner | store manager**: Enters product credentials.
- d. **system**: Validates product credentials.
- e. system: Finds out product credentials are invalid
- f. **system:** Raises an error.
- Use-Case: storage management- add product 2.4.1-c Failed Scenario (amount of product is not valid)
 - 1. Actor: store owner | store manager

2. Preconditions:

a. store owner | store manager is logged in to the system.

- b. store with the given store identifier exists and is open.
- c. store owner | store manager owns | manages the store with the given identifier.
- d. store manager has permission to add products to the store with the given store identifier.

3. Parameters:

- a. product credentials.
- b. amount of product.
- c. store identifier.

4. <u>Postconditions</u>:

5. Actions:

- a. **store owner | store manager**: Request the system to add a product to store with the given store identifier a product.
- b. **system**: Requests the store owner to enter product credentials.
- c. **store owner | store manager**: Enters product credentials.
- d. **system**: Validates product credentials.
- e. **system**: Requests for the desired amount of the product.
- f. **store owner | store manager**: Enters the desired amount of the product.
- g. **system**: Validates the entered amount.
- h. system: Finds out that the amount of product is not valid
- i. **system:** Raises an error.

• Use-Case: changing store purchase policy 2.4.2.1-a — Success Scenario

1. Actor: store owner | store manager.

2. Preconditions:

- a. store owner | store manager is connected to the system.
- b. store with the given store identifier exists and is open.

- c. store owner | store manager owns | manages the store with the given identifier.
- d. store manager has permission to change the store's purchase policy of the store with the given store identifier.

3. Parameters:

- a. store identifier.
- b. purchase policy information.
- 4. <u>Postconditions</u>: purchase policy is defined by the given information.

5. Actions:

- a. **store owner | store manager**: Requests the system to change purchase policy in store with the given store identifier.
- b. **system**: Prompts the store owner to enter purchase policy information.
- c. **store owner | store manager**: Enters purchase policy information.
- d. **system**: Validates purchase policy information.
- e. **system**: Replace the existing purchase policy at the store with the given store identifier with a new purchase policy which is defined according to the given information.

Use-Case: changing store purchase policy 2.4.2.1-b — Failed Scenario (purchase policy information is not valid)

1. Actor: store owner.

2. Preconditions:

- a. store owner | store manager is connected to the system.
- b. store with the given store identifier exists and is open.
- c. store owner | store manager owns | manages the store with the given identifier.

d. store manager has permission to change the store's purchase policy of the store with the given store identifier.

3. Parameters:

- a. store identifier.
- b. purchase policy information.

4. Postconditions:

5. Actions:

- a. **store owner | store manager**: Asks system to change purchase policy in store with the given store identifier.
- b. **system**: Prompt user to enter purchase policy information.
- c. **store owner | store manager**: Enter purchase policy information.
- d. **system**: Validates purchase policy information.
- e. **system**: Finds out that the purchase policy information is not valid
- f. system: Raises an error.

• Use-Case: changing store purchase types 2.4.2.2-a — Success Scenario

1. Actor: store owner | store manager.

2. Preconditions:

- a. store owner | store manager is connected to the system.
- b. store with the given store identifier exists and is open.
- c. store owner | store manager owns | manages the store with the given identifier.
- d. store manager has permission to change the store's purchase types of the store with the given store identifier.

3. Parameters:

- a. store identifier.
- b. purchase types information.

4. <u>Postconditions</u>: purchase types in the store with the given store identifier are defined by the given types.

5. Actions:

- a. **store owner | store manager**: Requests the system to change purchase types in store with the given store identifier.
- b. **system**: Prompts the store owner to enter purchase types information.
- c. **store owner | store manager**: Enters purchase types information.
- d. **system**: Validates the given purchase types information.
- e. **system**: Replace the purchase types in the store with the given store identifier with purchase types which are defined by the given information.
- Use-Case: changing store purchase types 2.4.2.2-b Failed Scenario
 (purchase types information is not valid)
 - 1. Actor: store owner.

2. Preconditions:

- a. store owner | store manager is connected to the system.
- b. store with the given store identifier exists and is open.
- c. store owner | store manager owns | manages the store with the given identifier.
- d. store manager has permission to change the store's purchase types of the store with the given store identifier.

3. Parameters:

- a. store identifier.
- b. purchase types information.
- 4. Postconditions:
- 5. Actions:

- a. **store owner | store manager**: Requests the system to change purchase types in store with the given store identifier.
- system: Prompts the store owner to enter purchase types information.
- c. **store owner | store manager**: Enters purchase types information.
- d. **system**: Validates the given purchase types information.
- e. **system**: Finds out that the given purchase types information is not valid.
- f. **system**: Raises an error.

• Use-Case: changing store discount types 2.4.2.3-a — Success Scenario

1. Actor: store owner | store manager.

2. Preconditions:

- a. store owner | store manager is connected to the system.
- b. store with the given store identifier exists and is open.
- c. store owner | store manager owns | manages the store with the given identifier.
- d. store manager has permission to change the store's discount types of the store with the given store identifier.

3. Parameters:

- a. store identifier.
- b. discount types information.
- 4. <u>Postconditions</u>: discount types in the store with the given store identifier are defined by the given types.

5. Actions:

a. **store owner | store manager**: Requests the system to change discount types in store with the given store identifier.

- system: Prompts the store owner to enter discount types information.
- c. **store owner | store manager**: Enters discount types information.
- d. **system**: Validates the given discount types information.
- e. **system**: Replace the discount types in the store with the given store identifier with discount types which are defined by the given information.

Use-Case: changing store discount types 2.4.2.3-b — Failed Scenario (discount types information is not valid)

- 1. Actor: store owner | store manager.
- 2. Preconditions:
 - a. store owner | store manager is connected to the system.
 - b. store with the given store identifier exists and is open.
 - c. store owner | store manager owns | manages the store with the given identifier.
 - d. store manager has permission to change the store's discount types of the store with the given store identifier.

3. Parameters:

- a. store identifier.
- b. discount types information.
- 4. Postconditions:

- a. **store owner | store manager**: Requests the system to change discount types in store with the given store identifier.
- system: Prompts the store owner to enter discount types information.
- c. **store owner | store manager**: Enters discount types information.
- d. **system**: Validates the given discount types information.

- e. **system**: Finds out that the given discount types information is not valid.
- f. system: Raises an error.

• Use-Case: changing store discount policy 2.4.2.4-a — Success Scenario

1. Actor: store owner | store manager.

2. Preconditions:

- a. store owner | store manager is connected to the system.
- b. store with the given store identifier exists and is open.
- c. store owner | store manager owns | manages the store with the given identifier.
- d. store manager has permission to change the store's discount policy of the store with the given store identifier.

3. Parameters:

- a. store credentials.
- b. discount policy information.
- 4. <u>Postconditions</u>: discount policy is defined by the given information.

- a. **store owner | store manager**: Requests the system to change the discount policy in store with the given store identifier.
- b. **system**: Prompts the store owner to enter discount policy information.
- c. **store owner | store manager**: Enters discount policy information.
- d. **system**: Validates discount policy information.
- e. **system**: Replace the existing discount policy at the store with the given store identifier with a new discount policy which is defined according to the given information.

- Use-Case: changing store discount policy 2.4.2.4-b Failed Scenario
 (discount policy information is not valid)
 - 1. Actor: store owner | store manager.

- a. store owner | store manager is connected to the system.
- b. store with the given store identifier exists and is open.
- c. store owner | store manager owns | manages the store with the given identifier.
- d. store manager has permission to change the store's discount policy of the store with the given store identifier.

3. Parameters:

- a. store credentials.
- b. discount policy information.

4. Postconditions:

5. Actions:

- a. **store owner | store manager**: Requests the system to change the discount policy in store with the given store identifier.
- b. **system**: Prompts the store owner to enter discount policy information.
- c. **store owner | store manager**: Enters discount policy information.
- d. system: Validates discount policy information.
- e. **system**: Finds out that the given discount policy information is not valid.
- f. system: raises an error.

• Use-Case: appointing another store owner 2.4.3-a — Success Scenario

- 1. Actor: store owner.
- 2. <u>Preconditions</u>:

- a. store owner is connected to the system.
- b. store with the given store identifier exists and is open.
- c. store owner owns the store with the given identifier.

- a. store identifier.
- b. member identifier.
- 4. <u>Postconditions</u>: store owner promotion proposal is sent to the member with the given member identifier.

5. Actions:

- a. **store owner**: Requests from the system to add an additional store owner to the store with the given store identifier.
- b. system: Prompts store owner to enter member identifier.
- c. store owner: Enters member's identifier.
- d. system: Validates member identifier.
- e. **system**: Verifies that he is not already a store owner of the store with the given store identifier.
- f. **system**: Sends notification to member with the given member identifier, asking if they agree to the promotion.
- Use-Case: appointing a store owner 2.4.3-b Failed Scenario (invalid member credentials)
 - 1. Actor: store owner.

2. Preconditions:

- a. store owner is connected to the system.
- b. store with the given store identifier exists and is open.
- c. store owner owns the store with the given identifier.

- a. store identifier.
- b. member identifier.

4. Postconditions:

- a. **store owner**: Requests from the system to add an additional store owner to the store with the given store identifier.
- b. **system**: Prompts store owner to enter member identifier.
- c. store owner: Enters member's identifier.
- d. system: Validates member identifier.
- e. system: Finds out member identifier is not valid
- f. system: Raises error.
- Use-Case: appointing another store owner 2.4.3-c Failed Scenario
 (member with the given identifier is already store owner)
 - 1. Actor: store owner.
 - 2. Preconditions:
 - a. store owner is connected to the system.
 - b. store with the given store identifier exists and is open.
 - c. store owner owns the store with the given identifier.
 - 3. Parameters:
 - a. store identifier.
 - b. member identifier.
 - 4. Postconditions:
 - 5. Actions:
 - a. **store owner**: Requests from the system to add an additional store owner to the store with the given store identifier.
 - b. **system**: Prompts store owner to enter member identifier.
 - c. store owner: Enters member's identifier.
 - d. system: Validates member identifier.
 - e. **system:** Verifies that he is not already a store owner of the store with the given store identifier.

- f. **system**: Finds out that the member with the given member identifier is already a store owner of the store with the given store identifier.
- g. **system:** Raises an error.

• Use-Case: accepting promotion to store owner 2.4.3-a — Success Scenario

1. Actor: member

2. Preconditions:

- a. member is logged in the system.
- b. member got offered by a store owner with the given store owner identifier to be store owner of store with given store identifier.
- c. member is not a store owner of the store with the given store identifier.
- d. store with the given store identifier exists and is open.
- e. store owner with the given store identifier owns the store with the given store identifier.

3. Parameters:

- a. store owner promotion offer notification information.
- b. store identifier.
- c. store owner identifier.

4. Postconditions:

- a. member is now a store owner of the store with the given store identifier.
- b. store owner with the given store owner identifier is the one who hired the member.
- c. store owner with the given store owner identifier got sent a notification stating the member accepted the promotion.

- a. **system:** Renders member store owner promotion offer notification information.
- b. **member**: accepts the promotion.
- c. **system**: Assigns the member the role of a store owner of the store with the given store identifier.
- d. **system**: Assigns the store owner with the given store owner identifier to be the one who hired member to be store owner of the store with the given store identifier.
- e. **system**: Sends a notification to the store owner with the given store owner identifier stating that the member accepted the promotion.
- Use-Case: accepting promotion to store owner 2.4.3-b Failed Scenario (member rejects offer)
 - 1. Actor: member

- a. member is logged in the system.
- b. member got offered by a store owner with the given store owner identifier to be store owner of store with given store identifier.
- c. member is not a store owner of the store with the given store identifier.
- d. store with the given store identifier exists and is open.
- e. store owner with the given store identifier owns the store with the given store identifier.

- a. store owner promotion offer notification information.
- b. store identifier.
- c. store owner identifier.

4. <u>Postconditions</u>: the store owner with the given store owner identifier got sent a notification stating the member rejected the promotion.

5. Actions:

- a. **system:** Renders member store owner promotions offer notification information.
- b. **member**: Rejects the promotion.
- c. **system**: Sends the store owner with the given store owner identifier a notification stating that the member rejected the promotion.

• Use-Case: appointing a store manager 2.4.6-a — Success Scenario

1. Actor: store owner | store manager.

2. Preconditions:

- a. store owner | store manager is connected to the system.
- b. store with the given store identifier exists and is open.
- c. store owner | store manager owns | manages the store with the given identifier.
- d. store manager has permissions of adding store managers to the store with the given store identifier.

3. Parameters:

- a. store identifier.
- b. member identifier.
- c. manager permissions.
- 4. <u>Postconditions</u>: manager owner promotion proposal is sent to the member with the given member identifier.

5. Actions:

a. store owner | store manager: Requests from the system to add an additional store manager to the store with the given store identifier.

- b. system: Prompts store owner to enter member identifier.
- c. **store owner | store manager**: Enters member's identifier.
- d. system: Validates member identifier.
- e. **system:** Verifies that he is not already a store owner / store manager of the store with the given store identifier.
- f. **system**: Requests for manager permissions.
- g. **store owner | store manager**: Enters manager permissions.
- h. system: Validates manager permissions.
- i. system: Sends notification to the member with the given member identifier, asking if they agree to the promotion.

Use-Case: appointing a store manager 2.4.6-b — Failed Scenario (invalid member credentials)

- 1. Actor: store owner.
- 2. Preconditions:
 - a. store owner | store manager is connected to the system.
 - b. store with the given store identifier exists and is open.
 - c. store owner | store manager owns | manages the store with the given identifier.
 - d. store manager has permissions of adding store managers to the store with the given store identifier.

- a. store identifier.
- b. member identifier.
- c. manager permissions.
- 4. Postconditions:
- 5. Actions:

- a. **store owner | store manager**: Requests from the system to add an additional store manager to the store with the given store identifier.
- b. **system**: Prompts store owner to enter member identifier.
- c. **store owner | store manager**: Enters member's identifier.
- d. **system**: Validates member identifier.
- e. **system**: Finds out that the given member identifier is not valid
- f. system: Raises error.
- Use-Case: appointing a store manager 2.4.6-c Failed Scenario (member is already store owner / store manager)
 - 1. Actor: store owner.
 - 2. Preconditions:
 - a. store owner | store manager is connected to the system.
 - b. store with the given store identifier exists and is open.
 - c. store owner | store manager owns | manages the store with the given identifier.
 - d. store manager has permissions of adding store managers to the store with the given store identifier.

- a. store identifier.
- b. member identifier.
- c. manager permissions.
- 4. <u>Postconditions</u>:
- 5. Actions:
 - a. **store owner | store manager**: Requests from the system to add an additional store manager to the store with the given store identifier.
 - b. **system**: Prompts store owner to enter member identifier.

- c. **store owner | store manager**: Enters member's identifier.
- d. system: Validates member identifier.
- e. **system:** Verifies that he is not already a store owner / store manager of the store with the given store identifier.
- f. **system**: Finds out that the member with the given member identifier is already a store owner / store manager of the store with the given store identifier
- g. system: Raises an error.
- Use-Case: appointing a store manager 2.4.6-d Failed Scenario (manager permissions are not valid)
 - 1. Actor: store owner.
 - 2. Preconditions:
 - a. store owner | store manager is connected to the system.
 - b. store with the given store identifier exists and is open.
 - c. store owner | store manager owns | manages the store with the given identifier.
 - d. store manager has permissions of adding store managers to the store with the given store identifier.

- a. store identifier.
- b. member identifier.
- c. manager permissions.
- 4. <u>Postconditions</u>:
- 5. Actions:
 - a. **store owner | store manager**: Requests from the system to add an additional store manager to the store with the given store identifier.
 - b. **system**: Prompts store owner to enter member identifier.

- c. **store owner | store manager**: Enters member's identifier.
- d. system: Validates member identifier.
- e. **system:** Verifies that he is not already a store owner / store manager of the store with the given store identifier.
- f. system: Requests for manager permissions.
- g. store owner | store manager: Enters manager permissions.
- j. **system**: Validates manager permissions.
- k. **system**: Finds out that the given manager permissions are not valid.
- I. system: Raises an error.

• Use-Case: accepting promotion to store manager 2.4.6-a — Success Scenario

1. Actor: member

2. Preconditions:

- a. member is logged in the system.
- b. member got offered by a store owne | store managerr with the identifier to be store manager of store with given store identifier and have the given permissions.
- c. the given manager permissions are valid.
- d. member is not a store owner | store manager of the store with the given store identifier.
- e. store with the given store identifier exists and is open.
- f. store owner | store manager with the given identifier owns | manages the store with the given store identifier.

- a. store manager promotion offer notification information.
- b. store identifier.
- c. store owner | store manager identifier (will be referred as "identifier").

d. manager permissions.

4. Postconditions:

- a. member is now a store manager of the store with the given store identifier, and has the given permissions.
- b. store owner | store manager with the given identifier is the one who hired the member.
- c. store owner | store manager with the given identifier got sent a notification stating the member accepted the promotion.

5. Actions:

- a. system: Renders member store manager promotion offer notification information.
- b. **member**: Accepts the promotion.
- c. system: Assigns the member the role of a store manager of the store with the given store identifier with the given manager permissions.
- d. **system**: Assigns the store owner | store manager with the given identifier to be the one who hired member to be store manager of the store with the given store identifier.
- e. system: Sends a notification to the store owner | store manager with the given identifier stating that the member accepted the promotion.
- Use-Case: accepting promotion to store manager 2.4.6-b Failed Scenario (member rejects the offer)
 - 1. Actor: member

2. Preconditions:

a. member is logged in the system.

- b. member got offered by a store owne | store manager with the identifier to be store manager of store with given store identifier and have the given permissions.
- c. the given manager permissions are valid.
- d. member is not a store owner | store manager of the store with the given store identifier.
- e. store with the given store identifier exists and is open.
- f. store owner | store manager with the given identifier owns | manages the store with the given store identifier.

- a. store manager promotion offer notification information.
- b. store identifier.
- c. store owner | store manager identifier (will be referred as "identifier").
- d. manager permissions.
- 4. <u>Postconditions</u>: store owner | store manager with the given identifier got sent a notification stating the member rejected the promotion.

5. Actions:

- a. system: Renders member store manager promotion offer notification information.
- b. **member**: Rejects the promotion.
- system: Sends a notification to the store owner | store manager with the given identifier stating that the member rejected the promotion.

• Use-Case: change store manager permissions 2.4.7-a — Success Scenario

1. Actor: store owner | store manager.

2. Preconditions:

a. store owner | store manager is connected to the system.

- b. store with the given store identifier exists and is open.
- c. store owner | store manager is an owner | manager of the store with the given store identifier.
- d. store manager has permission to change store manager permissions to the store managers he hired for store with the given store identifier.

- a. store manager identifier.
- b. store identifier.
- c. manager permissions.
- 4. <u>Postconditions</u>: store manager permissions were changed to be the given manager permissions.

- a. **store owner | store manager**: Requests to change manager permissions for manager of store with store identifier.
- b. **system**: Requests for the store manager identifier.
- c. **store owner**: Enters store manager identifier.
- d. **system**: Validates store manager identifier.
- e. **system**: Validate that the store owner | store manager hired the store manager with the given store manager identifier to the store with the given store identifier.
- f. **system**: Requests for new manager permissions.
- g. **store owner | store manager**: Enters manager permissions.
- h. **system**: Validates manager permissions.
- system: Updates the manager permissions of store manager with the given store manager identifier at store with the given store identifier to be the given manager permissions.

- Use-Case: change store manager permissions 2.4.7-b Failed Scenario (store manager identifier not valid)
 - 1. Actor: store owner | store manager.

- a. store owner | store manager is connected to the system.
- b. store with the given store identifier exists and is open.
- c. store owner | store manager is an owner | manager of the store with the given store identifier.
- d. store manager has permission to change store manager permissions to the store managers he hired for the store with the given store identifier.

3. Parameters:

- a. store manager identifier.
- b. store identifier.
- c. manager permissions.
- 4. <u>Postconditions</u>:

- a. **store owner | store manager**: Requests to change manager permissions for manager of store with store identifier.
- b. **system**: Requests for the store manager identifier.
- c. store owner: Enters store manager identifier.
- d. **system**: Validates store manager identifier.
- e. **system**: Finds out that the given store manager identifier is not valid.
- f. **system:** Raises an error.
- Use-Case: change store manager permissions 2.4.7-c Failed Scenario (store owner | store manager didn't hire the store manage)
 - 1. Actor: store owner | store manager.

- a. store owner | store manager is connected to the system.
- b. store with the given store identifier exists and is open.
- c. store owner | store manager is an owner | manager of the store with the given store identifier.
- d. store manager has permission to change store manager permissions to the store managers he hired for store with the given store identifier.

3. Parameters:

- a. store manager identifier.
- b. store identifier.
- c. manager permissions.

4. Postconditions:

5. Actions:

- a. **store owner | store manager**: Requests to change manager permissions for manager of store with store identifier.
- b. **system**: Requests for the store manager identifier.
- c. **store owner**: Enters store manager identifier.
- d. system: Validates store manager identifier.
- e. **system**: Validate that the store owner | store manager hired the store manager with the given store manager identifier to the store with the given store identifier.
- f. system: Finds out that the store manager with the given store identifier was not hired by the store owner | store manager that initiated the request.
- g. system: Raises an error.

Use-Case: closing a store 2.4.9-a — Success Scenario

1. Actor: store owner

- a. store owner is connected to the system.
- b. store with the given store identifier exists and is open.
- c. store owner is the founder of the store with the given identifier.
- 3. Parameters: store identifier.

4. Postconditions:

- a. The store with the given store identifier is closed.
- All other store owners | store managers of the store with the given store identifier were sent a notification that the store is closed.

5. Actions:

- a. **store owner**: Requests the system to close the store with the given store identifier.
- b. **system**: Validates the store identifier.
- c. **system**: Sets the store with the given store identifier as closed.
- d. **system**: Notifies all store owner | store managers of the store with the given store identifier that the store is closed.

Use-Case: view information regarding store employees 2.4.11-a — Success Scenario

1. Actor: store owner | store manager.

2. Preconditions:

- a. store owner | store manager is connected to the system.
- b. store with the given store identifier exists and is open.
- c. store owner | store manager is an owner | manager of the store with the given identifier.
- d. store manager has permissions to view information regarding store employees.
- 3. Parameters: store identifier.

- 4. Postconditions: —
- 5. <u>Expected result</u>: relevant information regarding the employees of the store with the given store identifier.

- a. **store owner | store manager**: Requests the system for details about the store employees.
- b. **system**: Prompts the user to enter the store identifier.
- c. store owner: Enters the store identifier.
- d. **system**: Validates the given store identifier.
- e. **system**: Returns relevant information regarding the employees of the store with the given store identifier.
- Use-Case: view information regarding store employees 2.4.11-b Failed
 Scenario (store identifier is not valid)
 - 1. Actor: store owner | store manager.
 - 2. Preconditions:
 - a. store owner | store manager is connected to the system.
 - b. store with the given store identifier exists and is open.
 - c. store owner | store manager is an owner | manager of the store with the given identifier.
 - d. store manager has permissions to view information regarding store employees.
 - 3. Parameters: store identifier.
 - 4. Postconditions: —
 - 5. Actions:
 - a. store owner | store manager: Requests the system for details about the store employees.
 - b. **system**: Prompts the user to enter the store identifier.
 - c. store owner: Enters the store identifier.

- d. system: Validates the given store identifier.
- e. system: Finds out that the given store identifier is not valid .
- f. **system:** Raises an error.

Use-Case: Getting information about the purchases history in a store

2.4.13-a — Success Scenario

- 1. Actor: store owner | store manager.
- 2. Preconditions:
 - a. store owner | store manager is connected to the system.
 - b. store with the given store identifier exists and is open.
 - c. store owner | store manager is an owner | manager of the store with the given identifier.
 - d. store manager has permissions to view information regarding store employees.
- 3. Parameters: store identifier
- 4. Postconditions: —
- 5. <u>Expected result</u>: relevant details of all purchases of customers in the store.
- 6. Actions:
 - a. **store owner | store manager**: Requests system to view purchases history of the store with the given store identifier.
 - b. system: Validates the store identifier.
 - c. **system**: Returns the relevant information of purchases history for the store with the given store identifier.

• Use-Case: closing a store 6.1

- 1. Actor: system manager.
- 2. Preconditions:
 - a. user is connected to the system.

- b. store is open.
- 3. Parameters: store credentials.
- 4. Postconditions:
 - a. the store is deleted.
 - b. store employees are demoted.

5. Actions:

- a. **system manager**: Asks system to close a store.
- b. **system**: Prompts User to enter store credentials.
- c. system manager: Enters store credentials.
- d. system: Validates store credentials.
- e. system: Closes the store.
- f. **system**: Notifies the store employees and demotes them.

• Use-Case: deleting a system member 6.2

- 1. Actor: system manager.
- 2. Preconditions:
 - a. user is connected to the system.
 - b. The system manager is online.
- 3. Parameters: member name.
- 4. <u>Postconditions</u>:
 - a. member is no longer registered to the system.
 - b. if the member was a store owner, then every employee that member appointed will be demoted.
 - c. if the member was a store founder, then their store is deleted and the employees are demoted.

- a. system manager: Asks to delete a member.
- b. **system**: Validates member name.
- c. **system**:

- i. if member is store founder, delete the stores that were founded by them and demote their employees.
- ii. else if member is a store owner, demote all employees appointed by the member.
- d. system: delete member.

• Use-Case: reading message inbox 6.3

- 1. Actor: system manager.
- 2. Preconditions:
 - a. user is connected to the system.
- 3. Parameters: —
- 4. Postconditions: —
- 5. Actions:
 - a. **system manager**: Asks the system to view the message inbox.
 - b. **system**: Show system manager the message inbox.

• Use-Case: sending messages to members 6.3

- 1. Actor: system manager.
- 2. Preconditions:
 - a. user is connected to the system.
- 3. Parameters:
 - a. recipients (member name).
 - b. message text.
- 4. Postconditions: message delivered.
- 5. Actions:
 - a. **system manager**: Asks the system to send a message.
 - b. **system**: Prompt user to enter message and recipients.
 - c. **system manager**: Enter required information.
 - d. **system**: Validate members' names.

- e. **system**: send messages.
- Use-Case: Getting information about the purchases history of a member in the system 2.6.4-a — Success Scenario
 - 1. Actor: system manager.
 - 2. <u>Preconditions</u>: system manager is connected to the system.
 - 3. Parameters: user identifier
 - 4. Postconditions: —
 - 5. <u>Expected result</u>: relevant details of all purchases of user with the given user identifier.
 - 6. Actions:
 - a. **system manager**: Requests system for details regarding the purchase history of the user with the given user identifier.
 - b. system: Verifies user identifier.
 - c. **system**: Returns relevant details of all purchases of user with the given user identifier.
- Use-Case: Getting information about the purchases history of a member in the system 2.6.4-b — Failed Scenario (user identifier is not valid)
 - 1. Actor: system manager.
 - 2. <u>Preconditions</u>: system manager is connected to the system.
 - 3. Parameters: user identifier
 - 4. Postconditions: —
 - 5. Actions:
 - a. **system manager**: Requests system for details regarding the purchase history of the user with the given user identifier.
 - b. **system**: Verifies user identifier.
 - c. **system**: Finds out that the given user identifier is not valid.
 - d. system: Raises an error.

- Use-Case: Getting information about the purchases history in a store 2.6.4-a
 - Success Scenario
 - 1. Actor: system manager.
 - 2. <u>Preconditions</u>: system manager is connected to the system.
 - 3. Parameters: store identifier
 - 4. Postconditions: —
 - 5. <u>Expected result</u>: relevant details of all purchases in the store with the given store identifier.
 - 6. Actions:
 - a. **system manager**: Requests system for details regarding the purchase history in the store with the given store identifier.
 - b. **system**: Verifies store identifier.
 - c. **system**: Returns relevant details of all purchases in the store with the given store identifier.
- Use-Case: Getting information about the purchases history in a store in the system 2.6.4-b — Failed Scenario (store identifier is not valid)
 - 1. Actor: system manager.
 - 2. <u>Preconditions</u>: system manager is connected to the system.
 - 3. Parameters: store identifier
 - 4. Postconditions: —
 - 5. Actions:
 - a. **system manager**: Requests system for details regarding the purchase history in the store with the given store identifier.
 - b. **system**: Verifies store identifier.
 - c. **system**: Finds out that the given store identifier is not valid and raises an error.

• Use-Case: Getting information about the system 6.5

- 1. Actor: system manager.
- 2. <u>Preconditions</u>: user is connected to the system.
- 3. Parameters: —
- 4. Postconditions: —
- 5. Expected result: predefined details about the system.
- 6. Actions:
 - a. **system manager**: Asks system for the wanted details.
 - b. **system**: Returns the requested details.