**Use Case Templates – Inventory Management System**

Each template follows the structure:

1. **Use Case Name**

2. **Brief Description**

3. **Actor**

4. **Pre Conditions**

5. **Basic Flow**

6. **Alternative Flow**

7. **Exception Flow**

8. **Post Conditions**

**1. Login**

**Brief Description**

Allows the user to enter valid credentials and gain access to the system’s features.

**Actor**

• Administrator

• Inventory Manager

**Pre Conditions**

• The user has a valid username and password.

• The system and database are online.

**Basic Flow**

1. The user enters the web application and the login page pops up.

2. The user enters their username and password.

3. The system verifies the credentials.

4. If valid, the system grants access and displays the main dashboard.

**Alternative Flow**

• If the user enters incorrect credentials, the system displays an error and prompts for re-entry.

**Exception Flow**

• If the system is offline or cannot connect to the database, the user sees a “Service Unavailable” message.

**Post Conditions**

• The user is successfully logged in and can use the system according to their role.

**2. Set Budget**

**Brief Description**

Allows the Administrator to set or update the overall budget for inventory spending.

**Actor**

• Administrator

**Pre Conditions**

• The Administrator is logged in.

**Basic Flow**

1. The Administrator navigates to the “Budget Settings.”

2. The Administrator enters a new budget amount.

3. The system saves the new budget.

4. The system confirms the update.

**Alternative Flow**

• If the Administrator cancels the action, no change is made to the budget.

**Exception Flow**

• If the budget amount is in an invalid format, the system prompts the Administrator to correct it.

**Post Conditions**

• A new or updated budget is stored in the system and used for future spending comparisons.

**3. View Spending Reports**

**Brief Description**

Allows the Administrator to view detailed spending information, possibly comparing it to the set budget.

**Actor**

• Administrator

**Pre Conditions**

• The Administrator is logged in.

• (Optionally) A budget is already set for meaningful comparison.

**Basic Flow**

1. The Administrator goes to “Spending Reports.”

2. The system prompts for a date range or other criteria.

3. The Administrator selects the desired criteria.

4. The system retrieves the relevant data and displays the report.

**Alternative Flow**

• If no data exists for the chosen criteria, the system shows a “No Data Found” message.

**Exception Flow**

• If the system cannot retrieve the data due to a database error, it displays an error message.

**Post Conditions**

• The Administrator can see a breakdown of spending and make informed decisions.

**4. Manage Inventory**

**Brief Description**

Allows the Inventory Manager to search, view, and update items in the inventory.

**Actor**

• Inventory Manager

**Pre Conditions**

• The Inventory Manager is logged in.

**Basic Flow**

1. The Inventory Manager opens the “Inventory” section.

2. The system displays a list of products or a search bar.

3. The Inventory Manager searches for a product or selects one from the list.

4. The Inventory Manager updates the product details if needed (e.g., name, quantity, price).

5. The system saves the changes and confirms the update.

**Alternative Flow**

• If the search returns no matching items, the Manager can add a new product or adjust the search criteria.

**Exception Flow**

• If the system fails to save the updates (e.g., database error), it displays an error message.

**Post Conditions**

• The inventory data is up to date with any changes made.

**5. Manage Shopping List**

**Brief Description**

Enables the Inventory Manager to create or modify a list of items that need to be purchased or restocked.

**Actor**

• Inventory Manager

**Pre Conditions**

• The Inventory Manager is logged in.

**Basic Flow**

1. The Manager opens the “Shopping List” feature.

2. The system displays the current shopping list (if any).

3. The Manager adds items from the inventory or creates new items if they do not exist.

4. The system updates and saves the shopping list.

**Alternative Flow**

• The Manager may remove items from the list if they are no longer needed.

**Exception Flow**

• If the system cannot save the updated list, an error is displayed.

**Post Conditions**

• The shopping list reflects the latest items needed for purchase.

**6. Register New Purchases**

**Brief Description**

Allows the Inventory Manager to record new purchases, update stock levels, and track spending.

**Actor**

• Inventory Manager

**Pre Conditions**

• The Inventory Manager is logged in.

• Purchase invoice existing.

**Basic Flow**

1. The Manager goes to “Register New Purchases.”

2. The system prompts for purchase details (e.g., product, quantity, purchase invoice).

3. The Manager confirms the purchase.

4. The system updates the inventory stock and spending records.

**Alternative Flow**

• If the purchased item is not in the inventory, the Manager may add it manually before proceeding.

**Exception Flow**

• If mandatory purchase details are missing or invalid, the system requests correction.

**Post Conditions**

• The inventory reflects the new stock levels, and the total spending data is updated accordingly.

**7. Track Product Usage**

**Brief Description**

Enables the Inventory Manager to log how products are consumed or used, affecting stock levels.

**Actor**

• Inventory Manager

**Pre Conditions**

• The Inventory Manager is logged in.

• Relevant products exist in the inventory.

**Basic Flow**

1. The Manager opens “Track Product Usage.”

2. The Manager selects the product and enters usage details (e.g., quantity used, date).

3. The system updates the product’s usage log and adjusts the stock.

**Alternative Flow**

• If the Manager attempts to log usage greater than the available stock, the system warns of insufficient stock.

**Exception Flow**

• If the system cannot update the usage log (database error), an error message is displayed.

**Post Conditions**

• The product’s stock level and usage records accurately reflect the consumption.

**8. View Budget Spending**

**Brief Description**

Allows the Inventory Manager to see how much of the budget has been used and how much remains.

**Actor**

• Inventory Manager

**Pre Conditions**

• The Inventory Manager is logged in.

• A budget is already set (by the Administrator).

**Basic Flow**

1. The Inventory Manager opens “View Budget Spending.”

2. The system retrieves current spending and the set budget.

3. The system displays the remaining budget or any overspending.

**Alternative Flow**

• If no budget is set, the system indicates that no budget is available for comparison.

**Exception Flow**

• If the system cannot retrieve spending or budget data, an error message is displayed.

**Post Conditions**

• The user can see the current budget usage status and plan purchases accordingly.

**Note:**

We sent an email to you inquiring whether it was necessary to create a separate template for every single use case or if it would suffice to develop templates for the primary use cases only. Since we did not receive a response, we have decided to create templates solely for the main use cases. The secondary use cases are integrated into these templates through the basic, alternative, and exception flows.