Use Case Name: User Login

Actors: Employee, Manager

Preconditions:

The user must have a registered account in the Expense Management System for their respective roles.

Postconditions:

If credentials are valid, the user gains access to their respective dashboard.

Main Success Scenario:

1. User accesses the login page.
2. User enters their registered email/username and password.
3. System validates the entered credentials.

[Extension point : Registration check]

4. the system grants access to the user's dashboard according to their roles.

Alternate Flows:

2a. If the entered email or password is incorrect, display an error message and prompt the user to re-enter the information.

At extension point – Registration check:

If the user is not registered, refer Use Case 'User Registration' (UC-2).

Use Case Name: User Registration

Actors: Employee, Manager

Preconditions:

The user must not have an existing account in the Expense Management System.

Postconditions:

The user's profile is created in the System.

Main Success Scenario:

1. User accesses the registration page.
2. User provides necessary information e.g. username, name, email, password, and role (employee/manager).
3. System validates the provided information.
4. System creates a new user profile with the provided information.

Alternate Flows:

2a. If the provided registration information is incomplete or invalid display an error message and prompt the user to provide the necessary details again.

Use Case Name: Project Creation and Employee Invitation

Actors:

Manager

Employee

Preconditions:

- The manager is logged into their profile.
- The manager has appropriate permissions to create a new project.
- The manager has the necessary information for project creation (e.g., project name, description, budget, alert limit).

Main Flow:

1. The manager navigates to the "Projects" section of the application.
2. The manager selects the option to "Create New Project".
3. The manager fills in the project details, including:
    a. Project Name
    b. Description
    c. Budget
    d. Alert Limit
4. After creating the project, the manager is presented with an option to invite employees.
5. The manager selects the employees they wish to invite to the project.
6. The manager submits the invitation.
7. The invited employee receives a notification indicating they have been invited to join a project.
8. The notification contains details about the project, including the project name, description, budget, and alert limit.
9. The employee sees the pending project invitation and chooses to accept it.

Alternate Flow:

At any point during the project creation process, the manager may choose to cancel. The system discards the entered project details and returns the manager to the main dashboard.

3a. The manager does not enter the required details thereby halting the project creation.

9a. The employee does not accept the invitation to join the project within 2 day's time span. The expired invitations are automatically removed from the system.

Post Conditions:

- The project is created with the specified details.
- The invited employee is now a member of the project.

Use Case Name: Add Expense

Use Case Description:
This use case describes adding an expense to an expense tracker application. Users can add their expenses, categorize them, and provide additional details for better financial management.

Actors:

Employee: The person using the expense tracker application.

Preconditions:
The user is logged into the expense tracker application.
The application is running and accessible.

Main Flow:

1. The employee initiates expense addition.

2. The user opens the expense tracker application and navigates to the "Add Expense" feature.

3. Enter expense details:

The application presents a form to the user to enter the expense details, which typically include:

Expense amount
Date of the expense
Expense category (e.g., groceries, utilities, entertainment)
Add receipt
Description of expense (optional)

4. The user selects a predefined expense category from a dropdown list.

5. Submit the expense: After entering all required information, the user clicks the "Submit" or "Save" button to record the expense.

6. Validation:

The application validates the entered data, ensuring the expense amount is numeric and not negative.
If validation errors occur (e.g., missing data, invalid date), the application provides error messages and prompts the user to correct them.

7. Confirmation:

Upon successful submission and validation, the application displays a confirmation message indicating that the expense has been added to the user's expense history.

Postconditions:

The newly added expense is saved in the user's expense history within the application and can also view the status of the added expense.

Alternative Flows:

Cancel Expense Addition:

At any point during the expense addition process, the user can cancel and return to the main screen without saving the expense. The application should ask for confirmation before discarding any entered data.

Exceptions:

Data Validation Errors:

Suppose the entered data does not meet the validation criteria (e.g., negative expense amount, missing required fields). In that case, the application displays appropriate error messages and prevents the user from submitting until the issues are resolved.

System Failure:

Suppose the application encounters a technical issue or system failure during the expense addition process. In that case, it should display an error message and provide guidance on what the user should do next.

Use Case Name: Accepting/Rejecting a Request for Approval

Actors:

Employee
Manager

Preconditions:

1. The system must be operational and accessible to both the employee and the manager.
2. The employee must have logged into the system.
3. The employee must have submitted an expense request.
4. The manager must have the necessary permissions and access rights to review the documents and make decisions on approval requests.

Main Flow:

1. The Manager logs into the system.
2. The Manager navigates to the “Expense" section of the system.
3. The system displays a list of pending approval requests to manager submitted by the employees.
4. The Manager decides whether to:
   a. Accept the request.
   b. Reject the request.
5. If the Manager chooses to accept the request:
   a. The system prompts the manager to confirm their decision.
   b. Upon confirmation, the system updates the status of the request to "Approved."
   c. The system may trigger additional processes or notifications based on the approval, such as notifying relevant employee or initiating further actions related to the approved request.
6. If the Manager chooses to reject the request:
   a. Upon confirmation, the system updates the status of the request to "Rejected."
   b. The system may trigger additional processes or notifications based on the rejection, such as notifying the employee about the rejection.
7. The system logs all actions taken by the employee and the manager and timestamps them for auditing and tracking purposes.
8. The Manager may continue to manage other approval requests or log out of the system.

Alternate Flow:

If the Manager encounters technical issues while attempting to accept or reject the request, they may contact technical support for assistance.

Post-Conditions:

1. The status of the request is updated to either "Approved" or "Rejected" based on the action taken by the Manager.
2. If the request is approved, any associated processes or notifications related to approval are initiated.
3. If the request is rejected, any associated processes or notifications related to rejection are initiated.
4. The system records all actions taken during the approval process for audit and tracking purposes.
5. The employees are informed of the decision (approval or rejection) through notifications or communication channels defined in the system.

Use Case Name: Expense Report Generation

Actors:

- Manager
- Employee

Preconditions:

- The manager is logged into their profile.
- The manager has the necessary permissions to generate expense reports.
- Relevant projects and expenses have been created by employees.

Main Flow:

1. The manager navigates to the "Projects" section of the application.
2. The manager selects the desired project for which they want to generate an expense report.
3. Within the selected project, the manager chooses the option to "Generate Expense Report."
4. The system presents the manager with options to customize the report, such as specifying the date range or expense categories.
5. The manager configures the report settings, including: a. Date Range b. Expense Categories (if applicable)
6. The manager submits the request to generate the expense report.
7. The system processes the request and compiles a detailed report based on the specified criteria.
8. The manager is presented with the generated expense report, which includes category-wise expenses incurred by employees in the selected project.

Alternate Flow:

1a. The manager cancels the report generation at any point during the configuration. - The system discards the entered settings and returns the manager to the main dashboard.

Post Conditions:

- The expense report is generated for the selected project.
- The manager can view and download the report, containing category-wise expenses incurred by employees within the specified date range.