EXPENSE TRACKER SYSTEM – DOCUMENTATION

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1. Introduction

The **Expense Tracker** is a web-based application designed to help users manage their personal finances effectively. It allows users to track their expenses, categorize spending, visualize financial data through charts, and set budgets.

The application is built using **HTML**, **CSS**, and **JavaScript**, with a focus on simplicity, usability, and responsiveness. It leverages modern web technologies like **Chart.js** for data visualization and **local storage** for data persistence.

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2. Vision Document

2.1. Problem Statement

Managing personal finances can be challenging, especially when users lack a clear overview of their spending habits. Many individuals struggle to track their expenses manually, leading to overspending, poor budgeting, and financial stress. There is a need for a simple, intuitive, and accessible tool that helps users monitor their expenses, categorize spending, and visualize financial data to make informed decisions.

2.2. Business Opportunity

The **Expense Tracker** addresses a growing demand for personal finance management tools. With increasing awareness of financial literacy, individuals are seeking solutions to manage their money effectively. This application can attract a wide range of users, including students, professionals, and families, who want to track their expenses without relying on complex financial software.

2.3. Objectives

- Provide users with an easy-to-use interface for tracking expenses.
- Allow users to categorize expenses and visualize spending patterns.
- Enable users to set budgets and receive alerts when they exceed their limits.
- Ensure the application is accessible on both desktop and mobile devices.
- Use local storage to save user data without requiring a backend server.

2.4. Scope

The **Expense Tracker** will include the following features:

- Add, edit, and delete expenses.
- Categorize expenses (e.g., Food, Transport, Entertainment).
- Visualize spending patterns using charts (e.g., pie charts).
- Set and track budgets.
- Dark/light mode for improved user experience.
- Responsive design for compatibility with all devices.

2.5. Constraints

- The application will not include user authentication or cloud storage.
- Data will be stored locally using browser storage, which limits accessibility across devices.
- The application will not support advanced financial features like tax calculations or investment tracking.

2.6. Stakeholder and User Descriptions

2.6.1. Market Demographics

- **Primary Users**: Individuals who want to track their personal expenses, including students, professionals, and families.
- **Secondary Users**: Small business owners who need a simple tool to monitor business expenses.

2.6.2. Stakeholder Summary

- **Developers**: Responsible for designing, developing, and maintaining the application.
- **End Users**: Individuals who will use the application to track their expenses.
- **Course Instructors**: Evaluate the project as part of the course.

2.6.3. User Environment

- The application will be used on web browsers (Chrome, Firefox, Safari, etc.) on both desktop and mobile devices.
- Users are expected to have basic knowledge of using web applications.

2.6.4. Stakeholder Profiles

- **Students**: Need a simple tool to manage their limited budgets.
- **Professionals**: Want to track daily expenses and set financial goals.
- **Families**: Need to monitor household spending and plan budgets.

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3. System Requirements Specification

3.1. System Features

1. **Expense Management**:
    - Add, edit, and delete expenses.
    - Categorize expenses into predefined or custom categories.
2. **Budget Tracking**:
    - Set a monthly or weekly budget.
    - Display a progress bar to track spending against the budget.
3. **Data Visualization**:
    - Generate pie charts to visualize spending by category.
4. **User Interface**:
    - Responsive design for desktop and mobile devices.
    - Dark/light mode toggle for improved usability.
5. **Local Storage**:
    - Save expense data in the browser's local storage for persistence.

3.2. Functional Requirements

3.2.1. Product Requirements / Organizational Requirements

- The application must be accessible via a web browser without requiring installation.
- The application must support adding, editing, and deleting expenses.
- The application must allow users to categorize expenses and visualize spending patterns.
- The application must provide a budget tracking feature with visual indicators.
- The application must save user data locally and retain it even after the browser is closed.

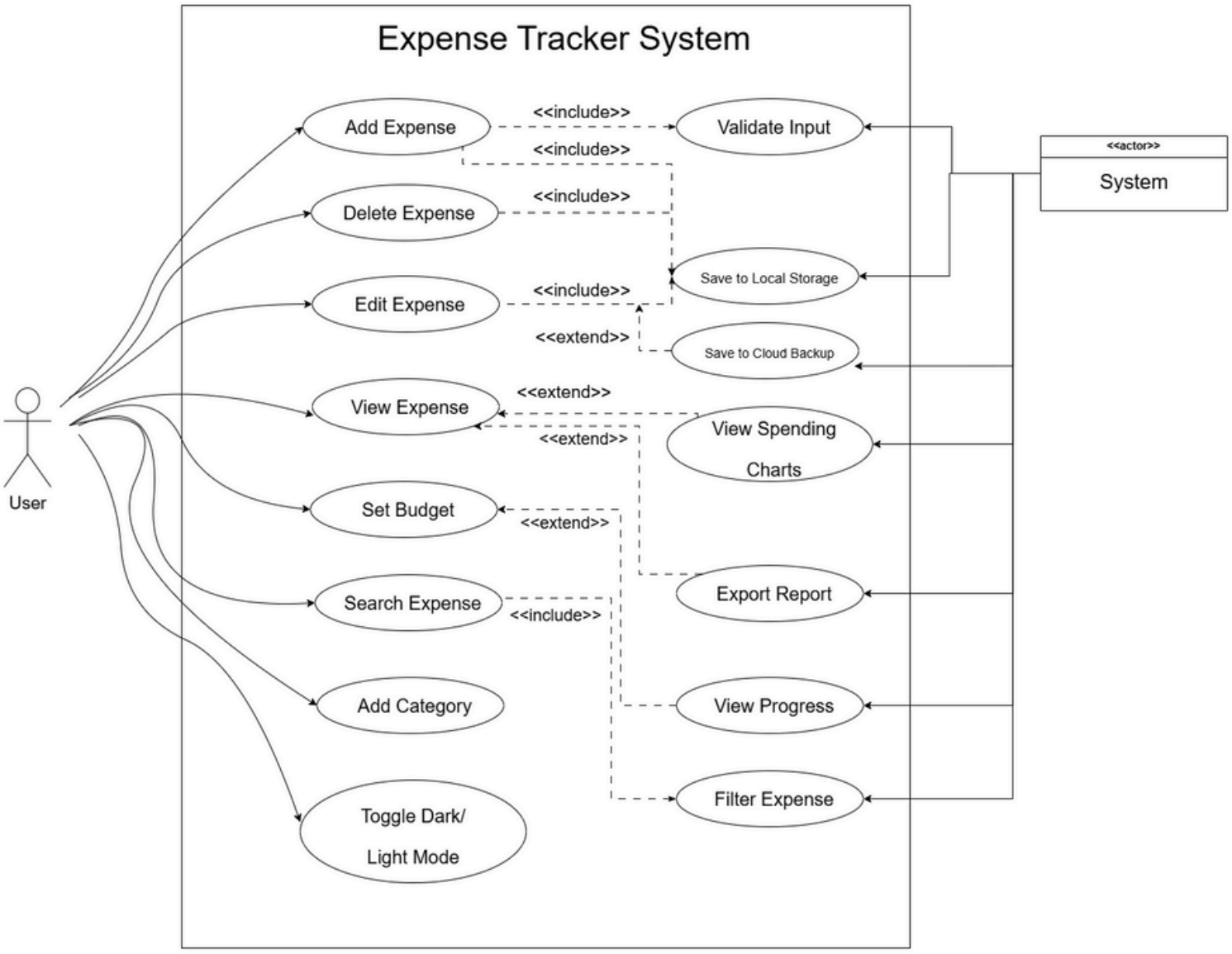
3.2.2. Business Requirements

- The application must be simple and intuitive to attract a wide range of users.
- The application must be free to use, with no hidden costs or subscriptions.
- The application must be developed using open-source technologies to minimize costs.

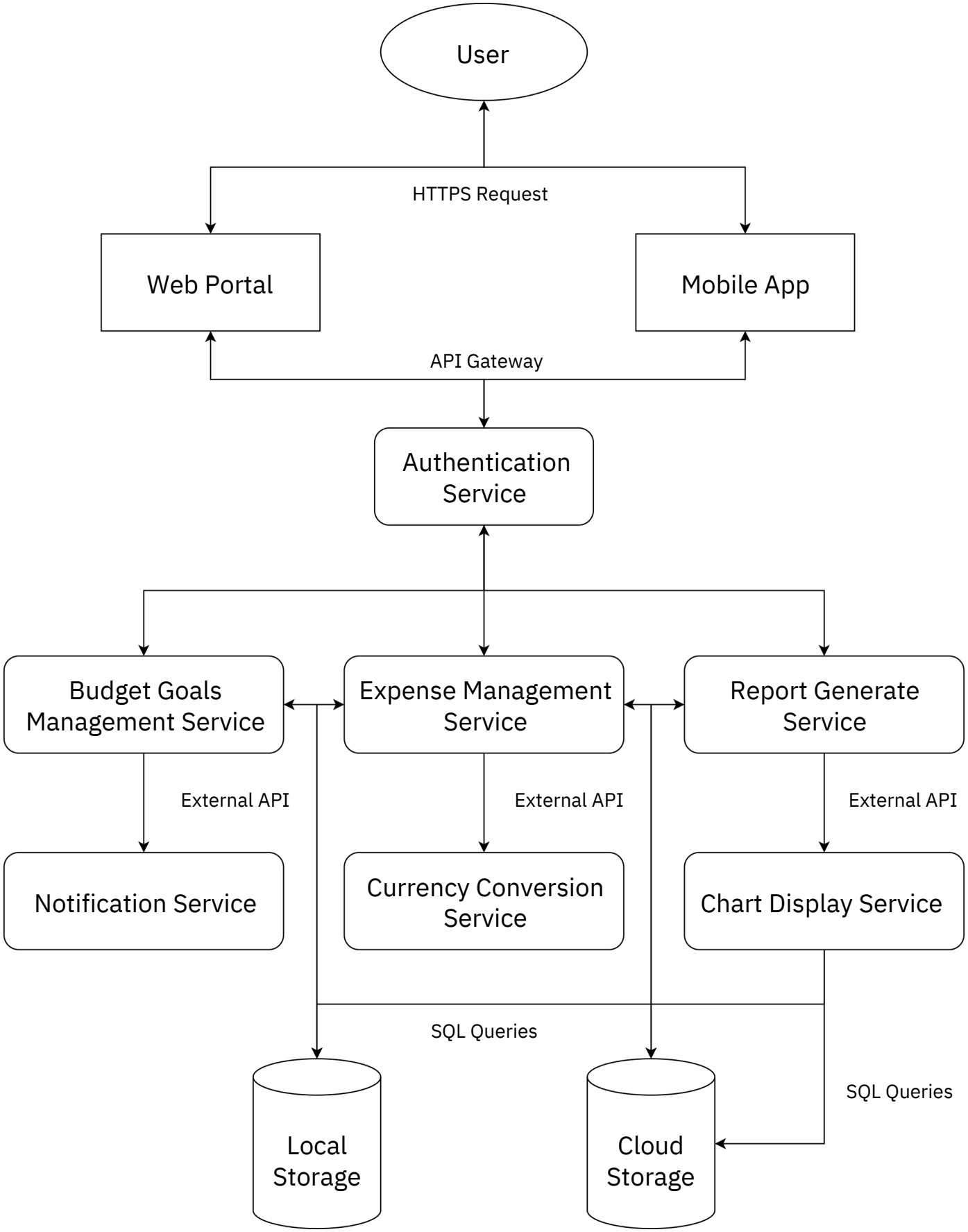
3.3. Non-Functional Requirements

1. **Usability**:
    - The application must have a user-friendly interface with clear instructions.
    - The application must be accessible to users with no technical background.
2. **Performance**:
    - The application must load quickly and respond to user actions within 1 second.
    - The application must handle up to 1,000 expense entries without performance degradation.
3. **Compatibility**:
    - The application must work on all major web browsers (Chrome, Firefox, Safari, Edge).
    - The application must be responsive and function seamlessly on both desktop and mobile devices.
4. **Security**:
    - The application must store data locally and not transmit it over the internet.
    - The application must not require sensitive user information (e.g., passwords, bank details).
5. **Maintainability**:
    - The code must be well-documented and modular for easy maintenance and future enhancements.

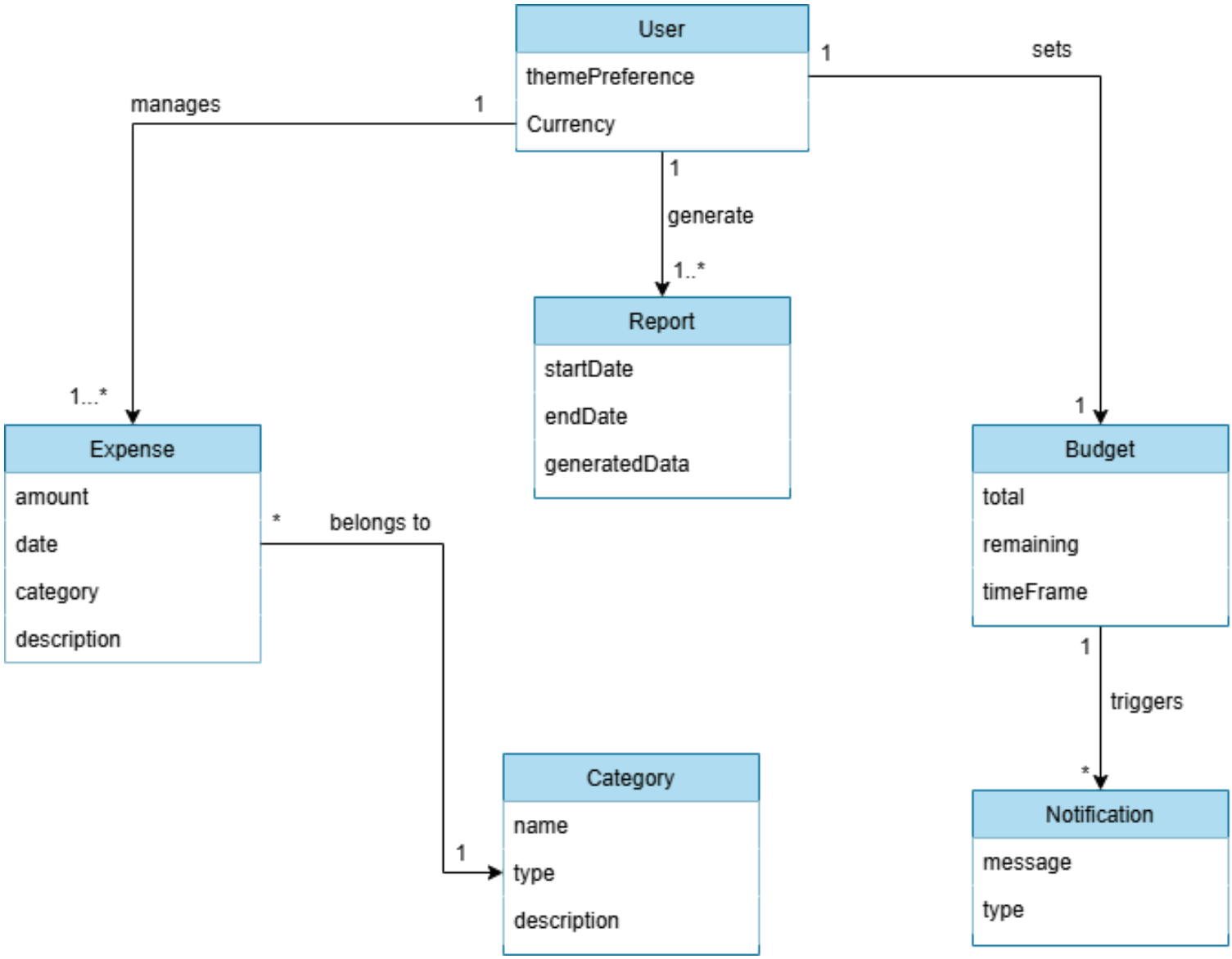
1. USE CASE DIAGRAM



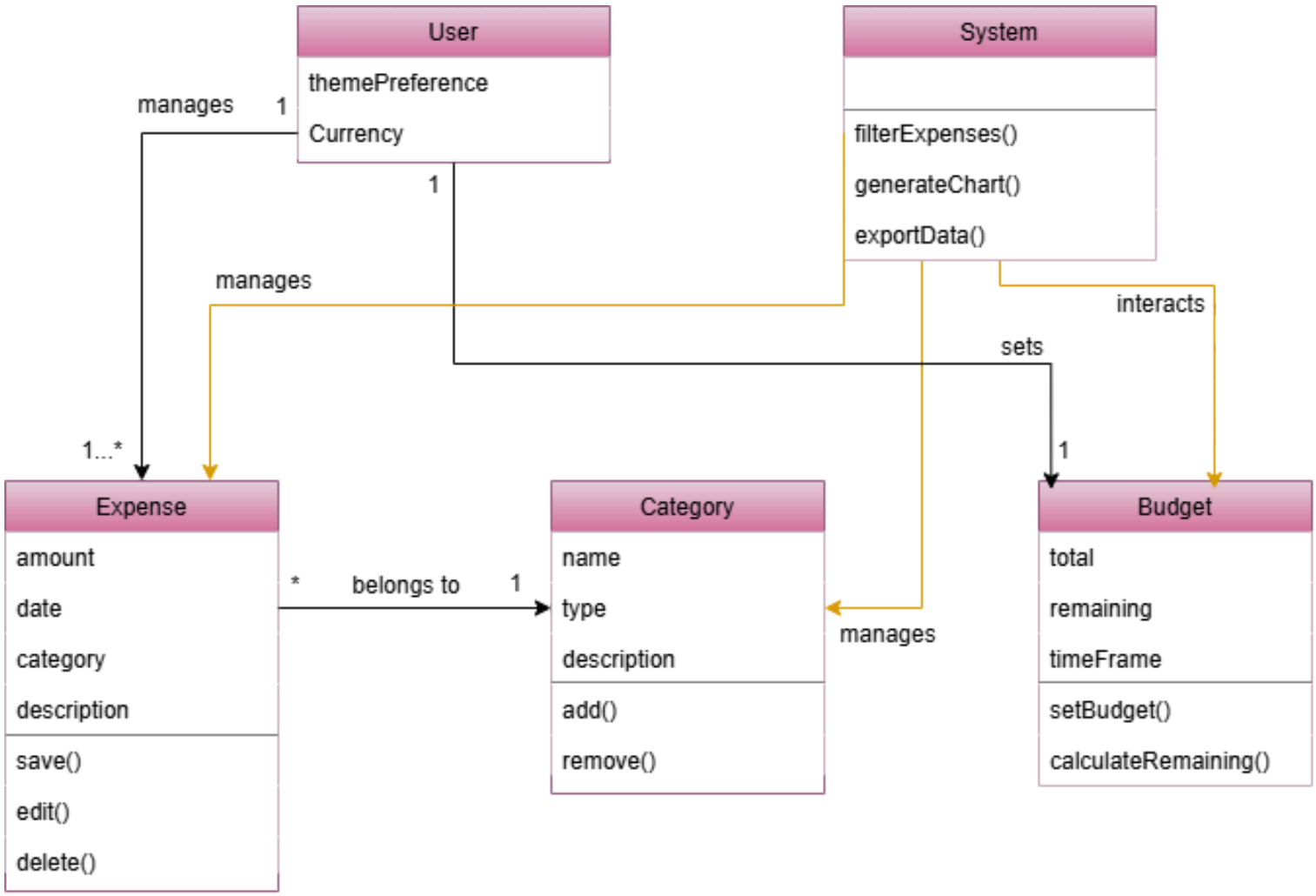
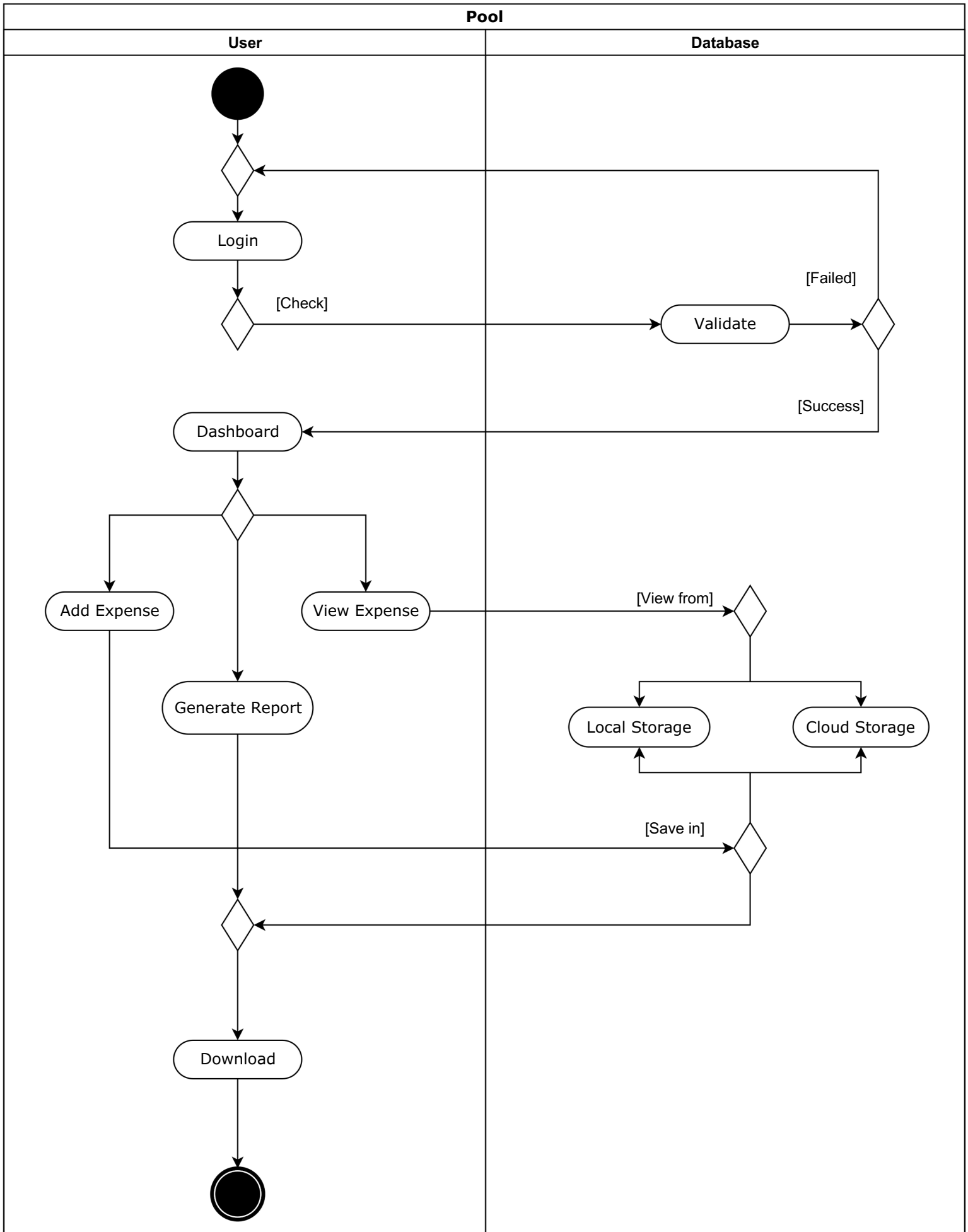
2. SYSTEM ARCHITECTURE DIAGRAM



3. DOMAIN MODEL DIAGRAM



4. CLASS DIAGRAM



5. ACTIVITY DIAGRAM