1. Title: Personal Finance Tracker

2. Project Statement:

Build a system to track personal finances and view expense details for individual users. Users can register, log in, add expenses, and view their financial summary. The application should alert users on high expenses and provide a comprehensive overview of their spending habits. The application will contain sections for user authentication, expense management, and financial reporting.

Outcomes: Our objective is to provide users with a comprehensive and user-friendly personal finance tracking system
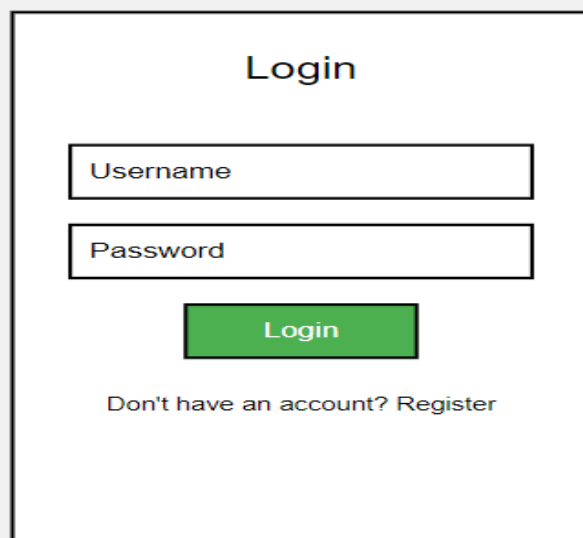
3. Modules to be implemented

- As a user, I should be able to register with the application so that I can login and use the functionalities of the application.

- As a user, I should be able to login with my username and password to access the functionalities of the application.

- As a user, I should be able to add, update, and delete expense entries.

- As a user, I should be able to view a list of all my expenses.

- As a user, I should be able to generate a financial report of my expenses.

- As a user, I should be able to logout from the application.

4. Week-wise module implementation and high-level requirements with output screenshots

Milestone 1: Weeks 1-3

Module 1: User Authentication

- Implement user registration functionality.

- Develop user login mechanism.

- Implement logout functionality.

- After login, display the user's dashboard.

- Write test cases for authentication views.

- Implement form validations for all authentication services.

- Output screenshot:

Register

Username:

Password:

Re-Type Password:

Submit   Login

Module 2: Expense Management

- Design database like PostgreSQL or MySQL for storing expense information.

- Develop an interface for users to add new expenses.

- Implement backend functionality to manage and update expense details.

- Create views for listing all expenses for a user.

- Implement expense deletion and updating features.

- Write test cases using Django's testing framework for all the expense-related services.

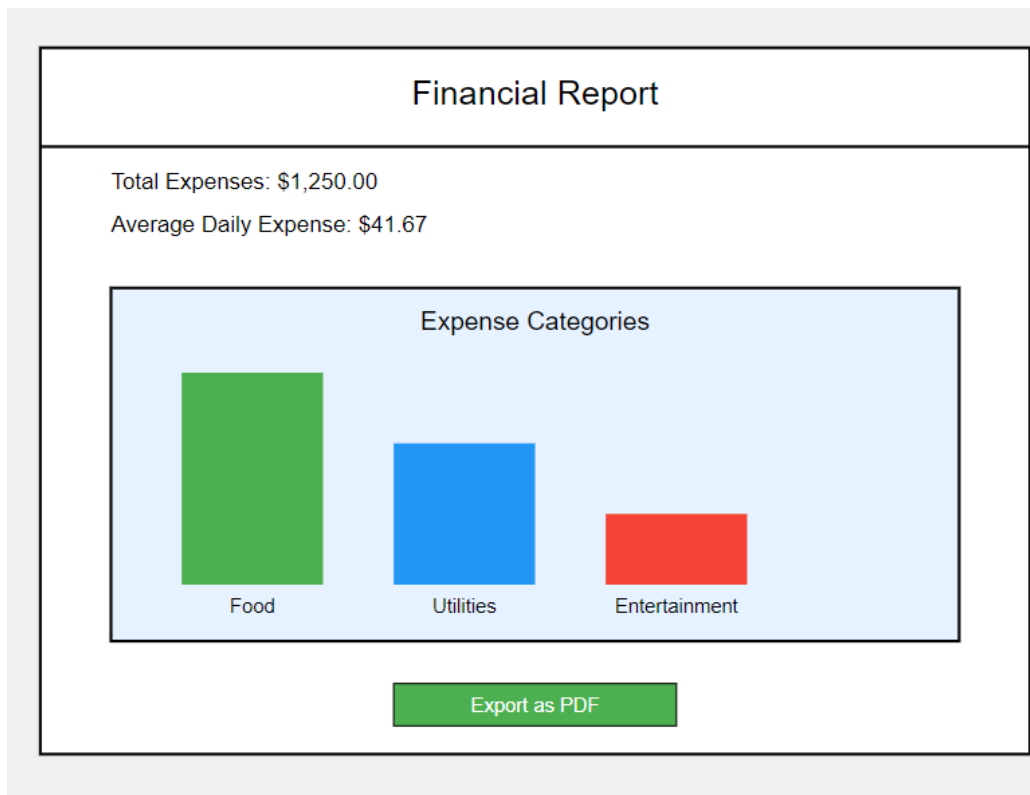- Implement form validations for all expense management services

- Output screenshot:

Milestone 2: Weeks 4-5

Module 3: Financial Reporting

- Design and develop the interface for generating financial reports.

- Implement functionality for users to select date ranges for reports.

- Develop backend logic for calculating totals and averages of expenses.

- Create visualizations (e.g., charts or graphs) to represent spending patterns.

- Implement the ability to export reports as PDFs.

- Write test cases for all reporting services.

- Implement form validations for report generation parameters.

- Output screenshot:

Financial Report

Total Expenses: $1,250.00

Average Daily Expense: $41.67

Expense Categories

Food   Utilities   Entertainment

Export as PDF

Milestone 3: Weeks 6-7

Module 4: Dashboard and Data Visualization

- Design and implement a user dashboard with key financial metrics.

- Develop interactive charts and graphs to visualize spending trends.

- Implement filters for viewing expenses by category or date range.

- Create a budget tracking feature with visual indicators for overspending.

- Integrate real-time updates for the dashboard as new expenses are added.

- Write test cases for dashboard components and data visualization features.

- Ensure responsive design for various screen sizes.

- Output Screenshot:

Financial Dashboard

Monthly Overview

75%
Budget Used

Expense Categories

Food   Utilities   Other

Recent Transactions

2024-09-15	Grocery Shopping	$75.50
2024-09-14	Electricity Bill	$120.00
2024-09-13	Restaurant Dinner	$45.75
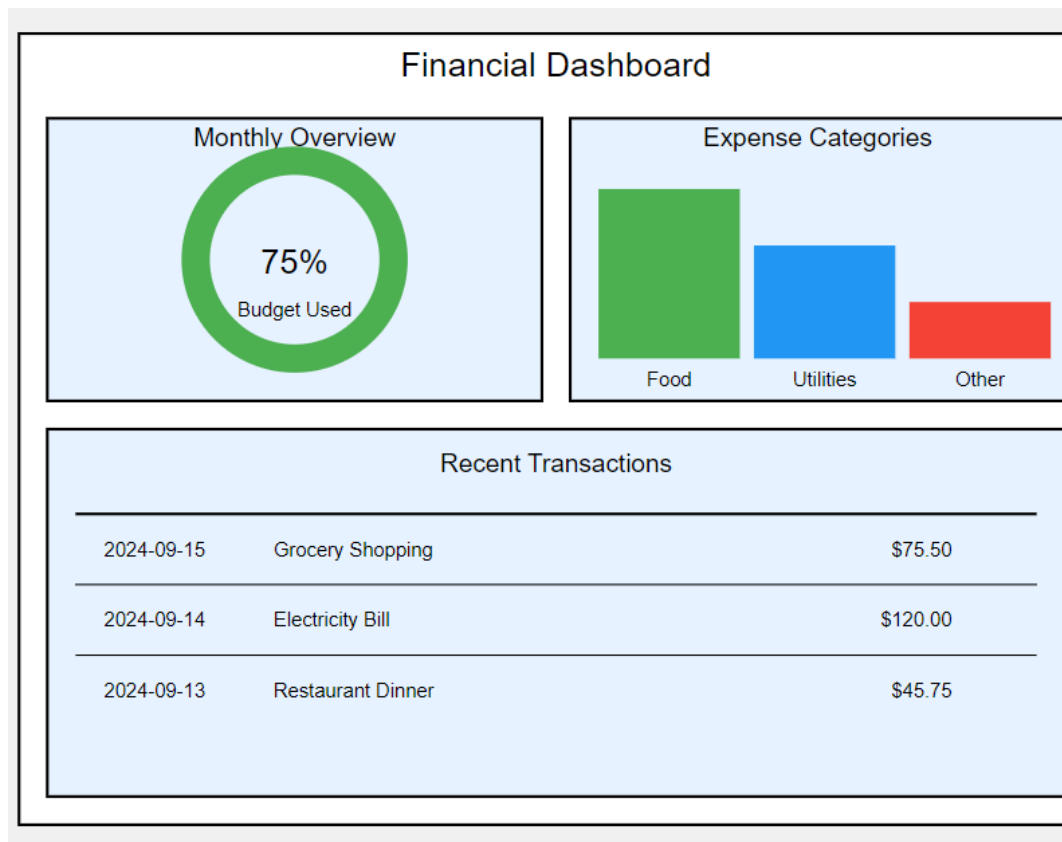
Milestone 4: Weeks 8-10

Module 5: Budget Planning and Alerts

- Develop functionality for users to set budget limits for different expense categories.

- Implement an alert system to notify users when they approach or exceed budget limits.

- Create a budget vs. actual spending comparison feature.

- Implement a feature for setting financial goals and tracking progress.

- Write test cases for budget planning and alert features.

- Ensure proper error handling and user feedback for budget-related actions.

- Output Screenshot:
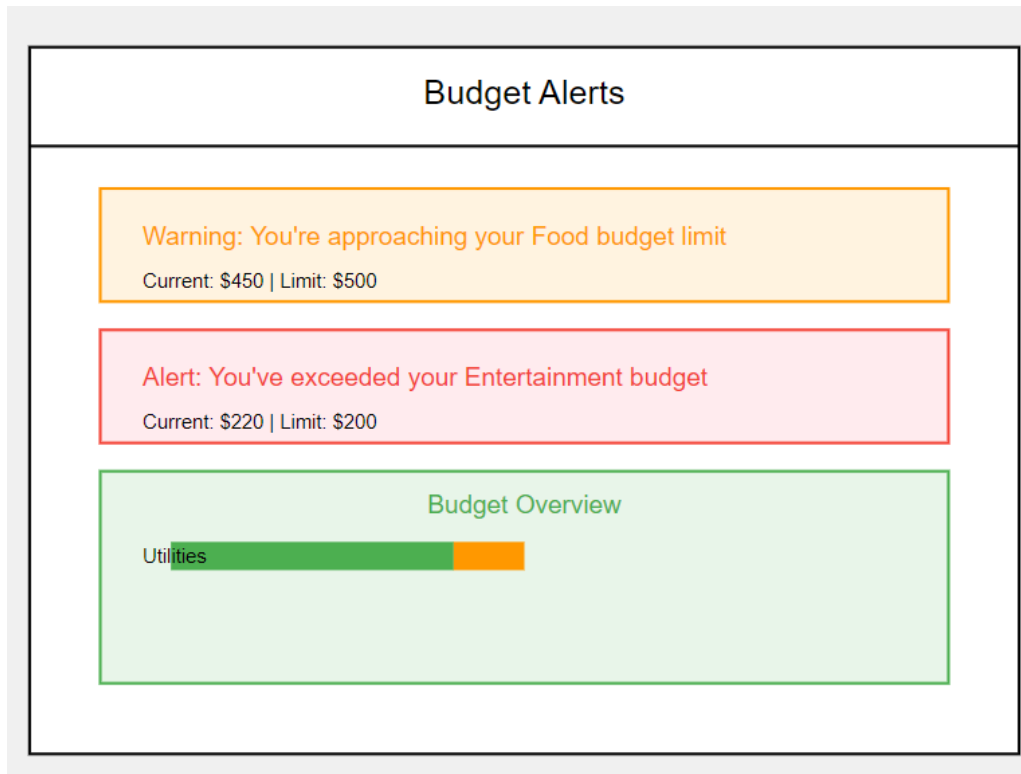
Evaluation Criteria:

Milestone 1 Evaluation (Week 3):

- Completion of user authentication system (registration, login, logout).

- Successful implementation of basic expense management functionalities (add, view, update, delete expenses).

Milestone 2 Evaluation (Week 5):

- Successful implementation of the financial reporting feature, including PDF export functionality.

- Proper calculation and display of financial summaries and visualizations.

Milestone 3 Evaluation (Week 7):

- Completion of the user dashboard with interactive charts and graphs.

- Successful implementation of filters and real-time updates for the dashboard.

Milestone 4 Evaluation (Week 10):

- Successful implementation of budget planning and alert system.

- Proper functioning of budget vs. actual spending comparison feature.

- Implementation of financial goal setting and tracking

5. Design diagrams

Class Diagram: