

WRSPM - Expense Manager

The Expense Manager is a tool designed to help individuals manage their finances more effectively. By providing a comprehensive platform to track income, expenses, and budgets, the Expense Manager empowers users to gain control over their financial well-being and make informed financial decisions.

World Assumptions (W):

- Users have access to the internet and appropriate devices (e.g., smartphones, computers).
- Users manage various expenses including subscriptions, bills, and payments.
- Users are motivated to track and manage their expenses efficiently.

User Requirements (R):

- Easy to Use Interface: The system should provide a user-friendly interface for managing expenses.
- Expense Categorization: Users should be able to categorize expenses (e.g., bills, subscriptions, car payments).
- Expense Tracking: Users need to track expenses over time and view historical data.
- Notifications: Users should receive notifications for upcoming due dates.
- Budget Planning: Users should be able to create and manage budgets for regular expenses and big purchases.
- Budget Alerts: Users should receive alerts when they are nearing their budget limits.

System Specifications (S):

- Expense Entry: The system should allow users to enter expense details, including name, amount, category, and due date.
- Budget Entry: The system should allow users to set up budgets for different categories and big purchases.
- Data Storage: Expenses should be stored securely in Firebase.
- User Authentication: The system should use Firebase Authentication for secure user login.
- Notifications: The system should send notifications based on due dates for expenses.
- Reporting: The system should provide visual reports and summaries of expenses over time.

Program and Hardware (P):

- Programming Language: The application will be developed using Java with JavaFX for the frontend.
- Database: Firebase Firestore will be used for storing expense data and budget data.
- Authentication: Firebase Authentication will be used for managing user logins and security.
- Devices: The application should run on standard desktops and laptops with internet access.

Model (M):

- User Interface (UI): JavaFX will be used to create an intuitive and user-friendly interface.

- Backend Integration: Firebase will handle data storage and user authentication.
- Notifications System: The application will include a notifications system for due dates and budget alerts.
- Reports and Analysis: The application will generate visual reports using JavaFX charts to help users analyze their spending patterns.