

CAPSTONE PROJECT

PROJECT TITLE: PERSONAL BUDGET TRACKER
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ABSTRACT

THE PERSONAL BUDGET TRACKER IS A FULL-STACK STYLE WEB APPLICATION THAT EMPOWERS INDIVIDUALS TO MANAGE THEIR FINANCIAL ACTIVITIES EFFECTIVELY. THE SYSTEM ENABLES USERS TO LOG INCOMES AND EXPENSES, SET BUDGETS, VIEW FINANCIAL TRENDS, AND MANAGE GROUP-BASED SHARED EXPENSES.

THE APP INCLUDES AUTHENTICATION, ENSURING EACH USER MAINTAINS THEIR OWN ISOLATED FINANCIAL DATA. IT PROVIDES DATA VISUALIZATION USING INTERACTIVE CHARTS, AND OFFERS GROUP EXPENSE TRACKING WITH SETTLEMENT CALCULATIONS, MAKING IT SUITABLE FOR INDIVIDUALS AS WELL AS FAMILIES OR ROOMMATES. THIS PROJECT HIGHLIGHTS STRONG CRUD OPERATIONS, USER-FRIENDLY UI, AND SCALABILITY, WHILE BEING LIGHTWEIGHT ENOUGH TO RUN FULLY IN THE BROWSER WITH LOCAL STORAGE.

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INTRODUCTION

Personal financial management has become essential in today's fast-paced world. Many individuals fail to maintain proper records of their expenses, leading to overspending and poor savings habits.

The Personal Budget Tracker aims to solve this by providing a user-friendly, visually appealing, and reliable web-based solution. It offers:

- **Daily transaction management**
- **Category-based budgeting**
- **Visualization of financial data**
- **Authentication & secure storage**
- **Group expense handling with settlement**

OBJECTIVES

- **Enable daily logging of income and expenses.**
- **Support category-based budget setting and tracking.**
- **Provide real-time data visualization through charts.**
- **Generate financial summaries and insights.**
- **Manage user-specific data securely.**
- **Implement group expense management and settlements.**
- **Allow easy deployment and accessibility.**

SYSTEM ANALYSIS

Existing System

- Manual record-keeping (not efficient).
- Excel sheets (require technical skill).
- Mobile apps (often require cloud signup, ads, or subscriptions).

Proposed System

- Web-based, lightweight solution.
- Authentication ensures separate accounts.
- Charts and summaries for clear insights.
- Group management with settlements (missing in most free apps).
- Secure, local-storage based (can be extended to cloud).

SYSTEM REQUIREMENTS

Hardware

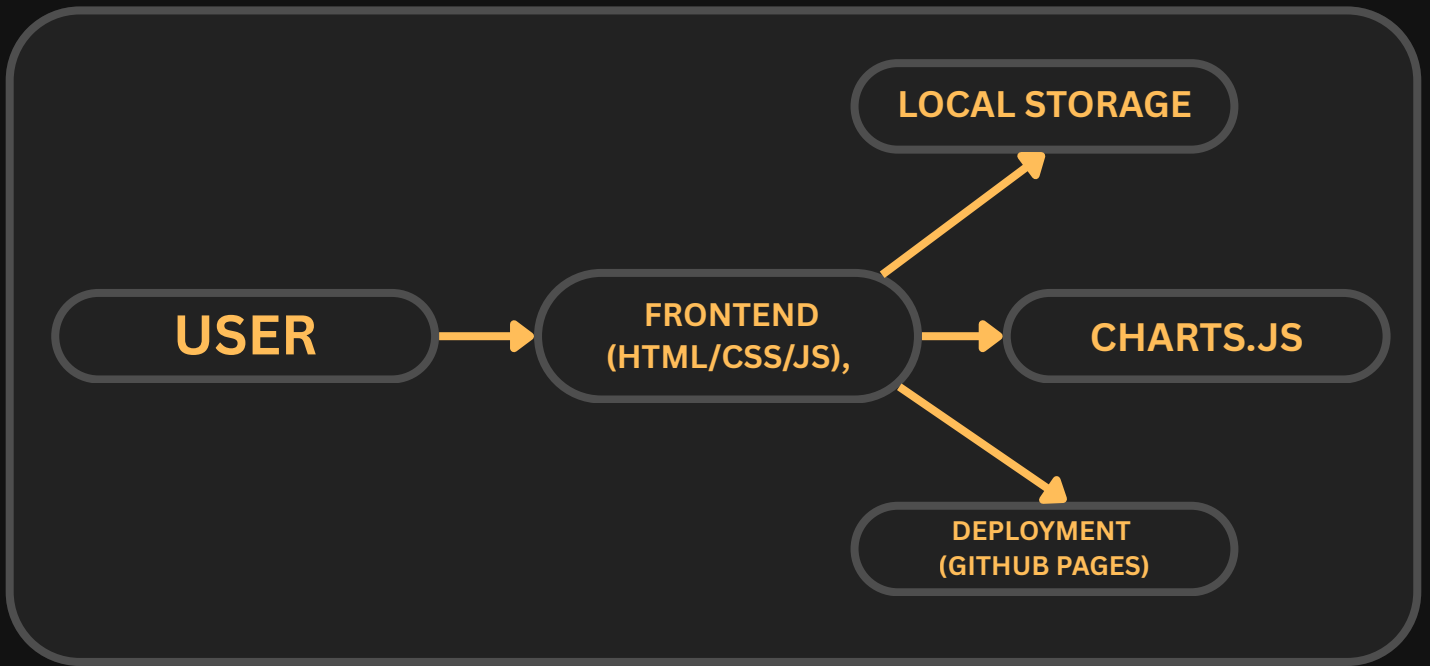
- Processor: Dual-core or higher
- RAM: 2GB+
- Storage: 100MB free space
- Display: 1024x768 resolution minimum

Software

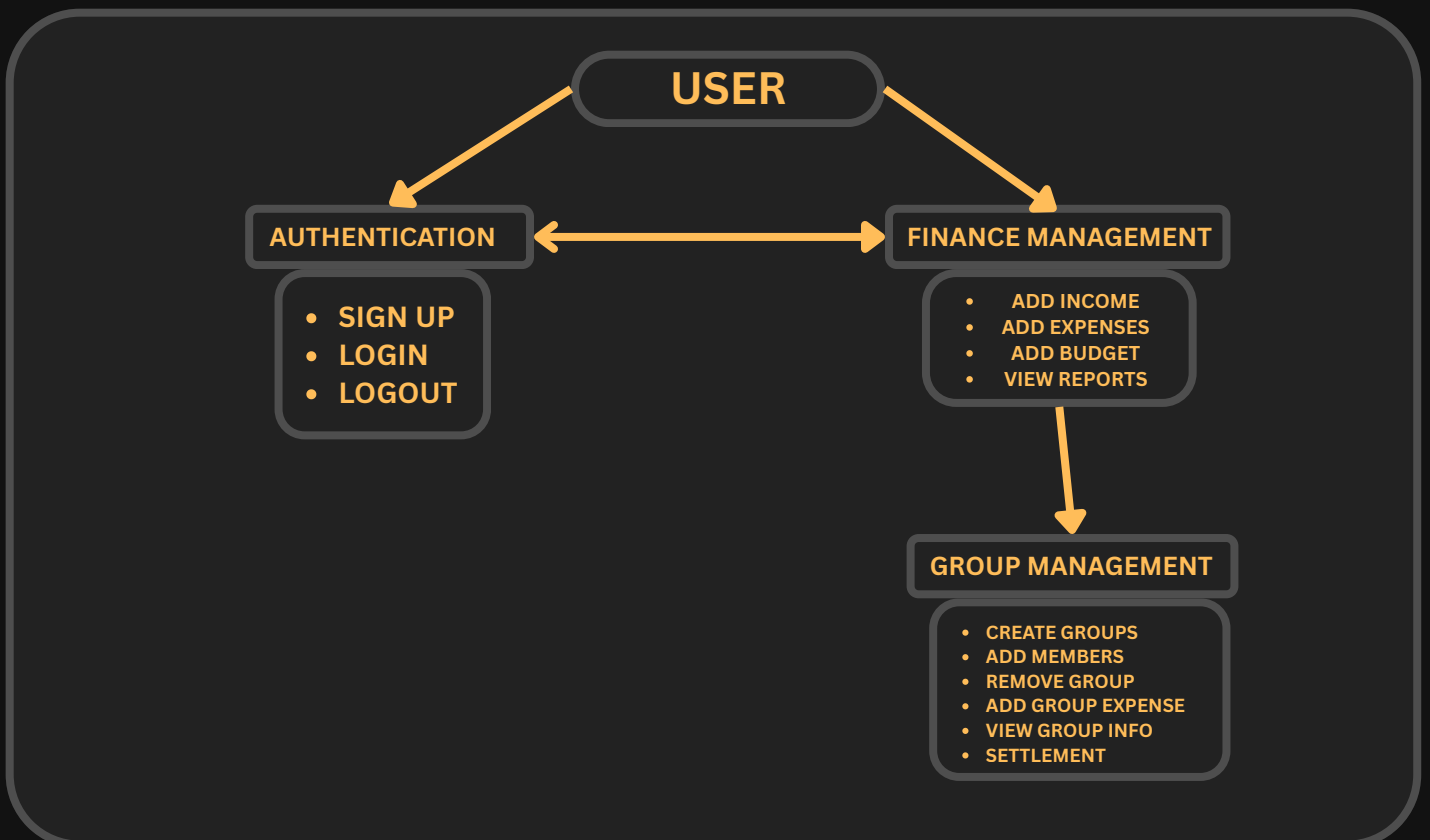
- OS: Windows/Linux/macOS
- Browser: Chrome, Firefox, or Edge (latest versions)
- Tools: HTML, CSS, JavaScript, Chart.js, GitHub Pages (for deployment)

SYSTEM DESIGN

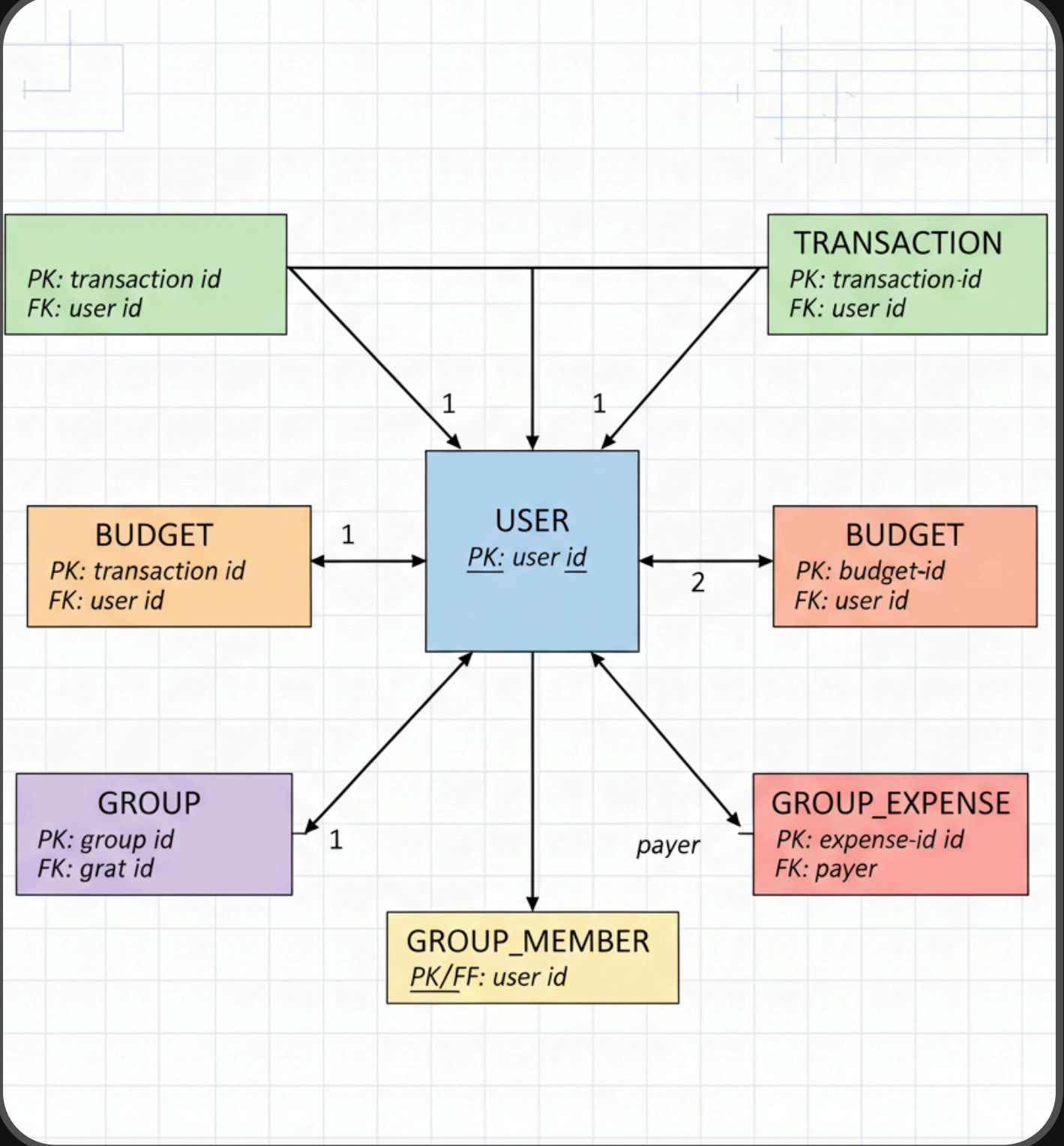
ARCHITECTURE DIAGRAM



USE CASE DIAGRAM

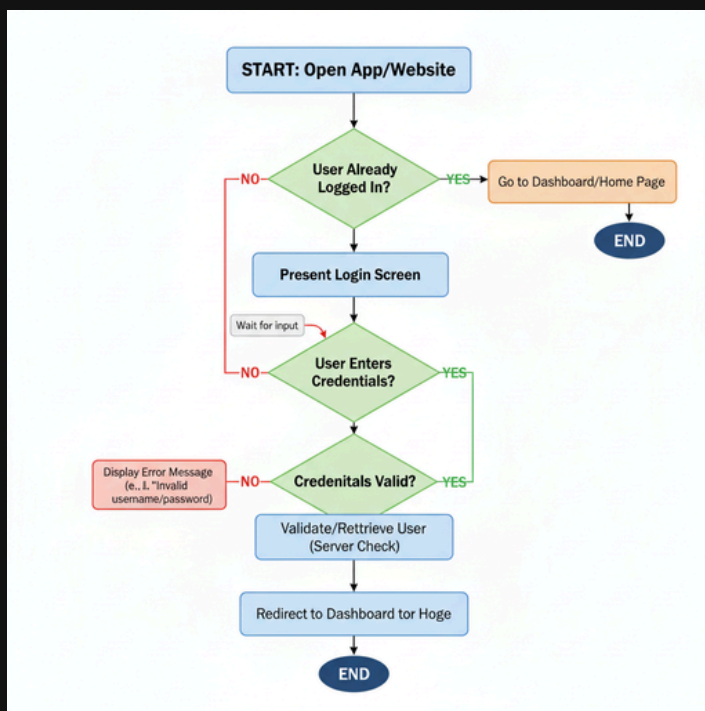


ER DIAGRAM

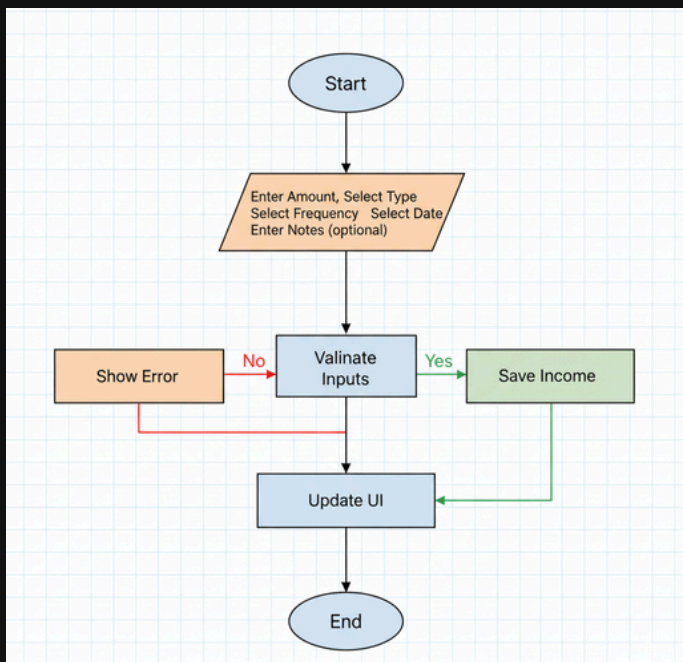


FLOWCHARTS

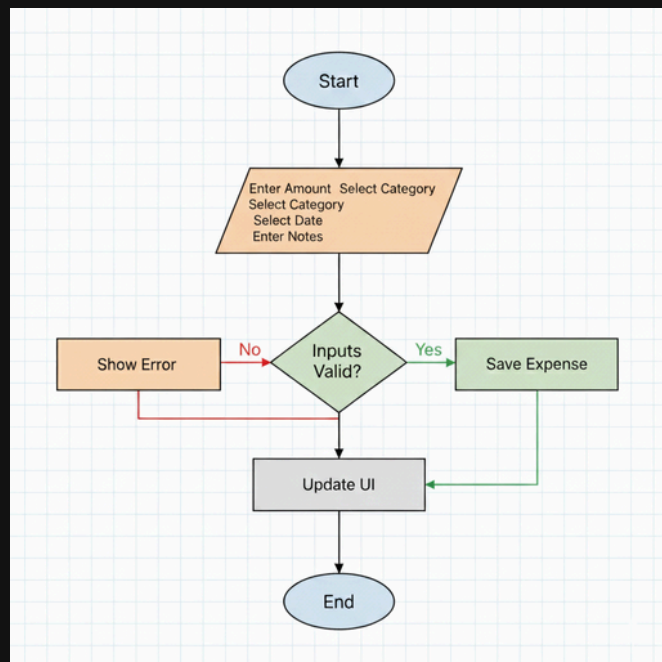
LOGIN FLOW



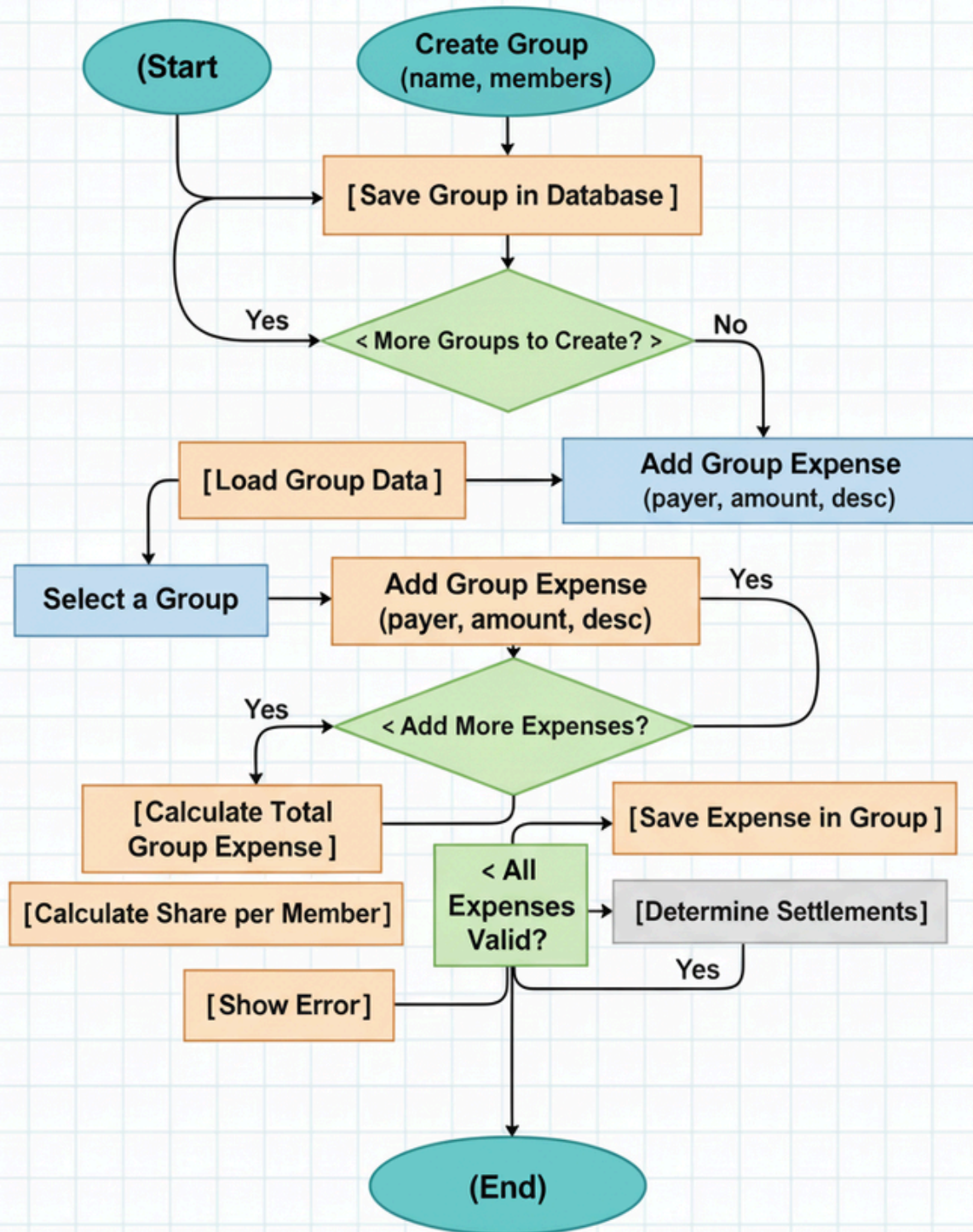
ADD INCOME FLOW



ADD EXPENSE FLOW



GROUP SETTLEMENT FLOW



IMPLEMENTATION

TECHNOLOGIES USED

- **FRONTEND: HTML, CSS, JAVASCRIPT**
- **VISUALIZATION: CHART.JS**
- **DATA STORAGE: LOCALSTORAGE (USER-BASED)**
- **HOSTING: GITHUB PAGES / NETLIFY**

KEY FEATURES

- **AUTHENTICATION (SIGN UP / LOGIN / LOGOUT)**
- **INCOME & EXPENSE TRACKING**
- **BUDGET MANAGEMENT**
- **DATA VISUALIZATION (BAR, PIE, LINE CHARTS)**
- **GROUP EXPENSE HANDLING (WITH SETTLEMENTS)**
- **EXPORT/BACKUP (OPTIONAL EXTENSION)**

SCREENSHOTS

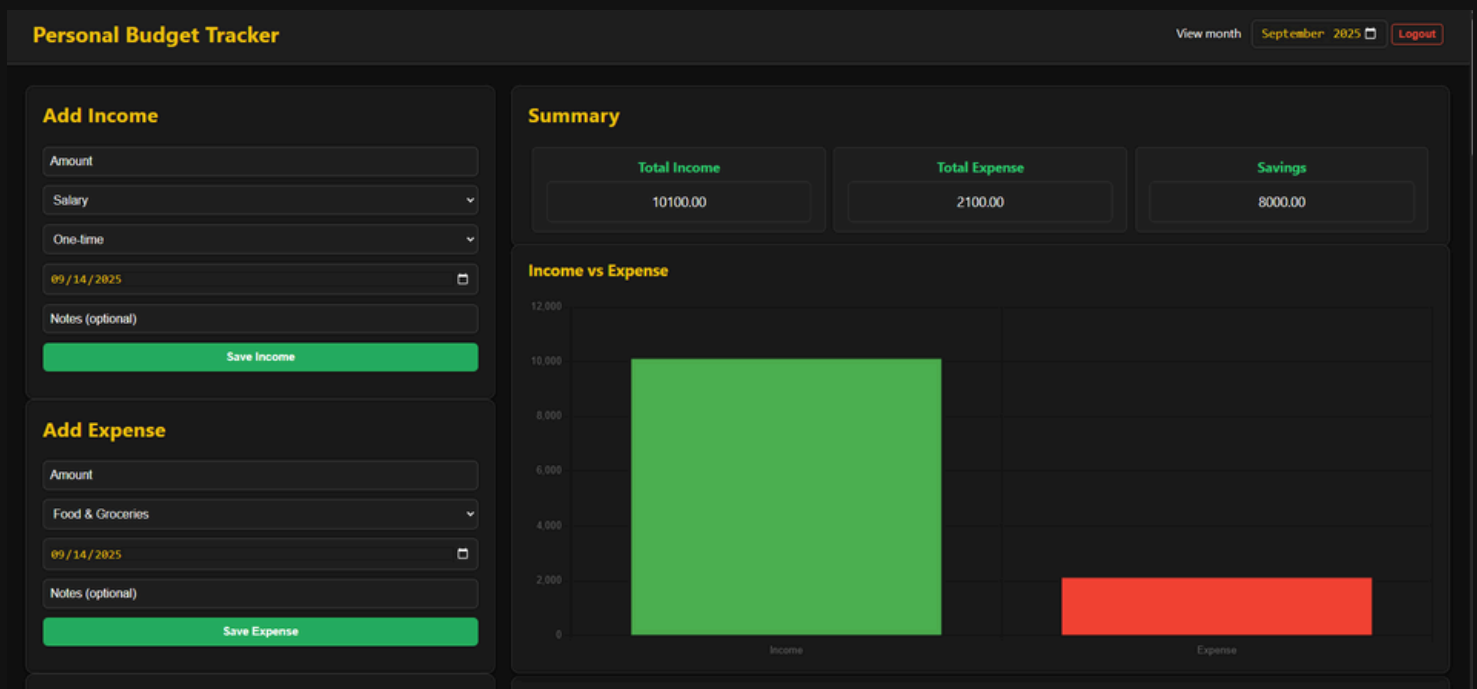
LOGIN PAGE

Login

Login

Don't have an account? [Sign up](#)

DASHBOARD WITH SUMMARY & CHARTS



ADD INCOME/EXPENSE FORM

Add Income



Save Income

Add Expense



Save Expense

BUDGET SETTING CARD

Set Budget



Save Budget

SUMMARY

Summary

Total Income

10100.00

Total Expense

2100.00

Savings

8000.00

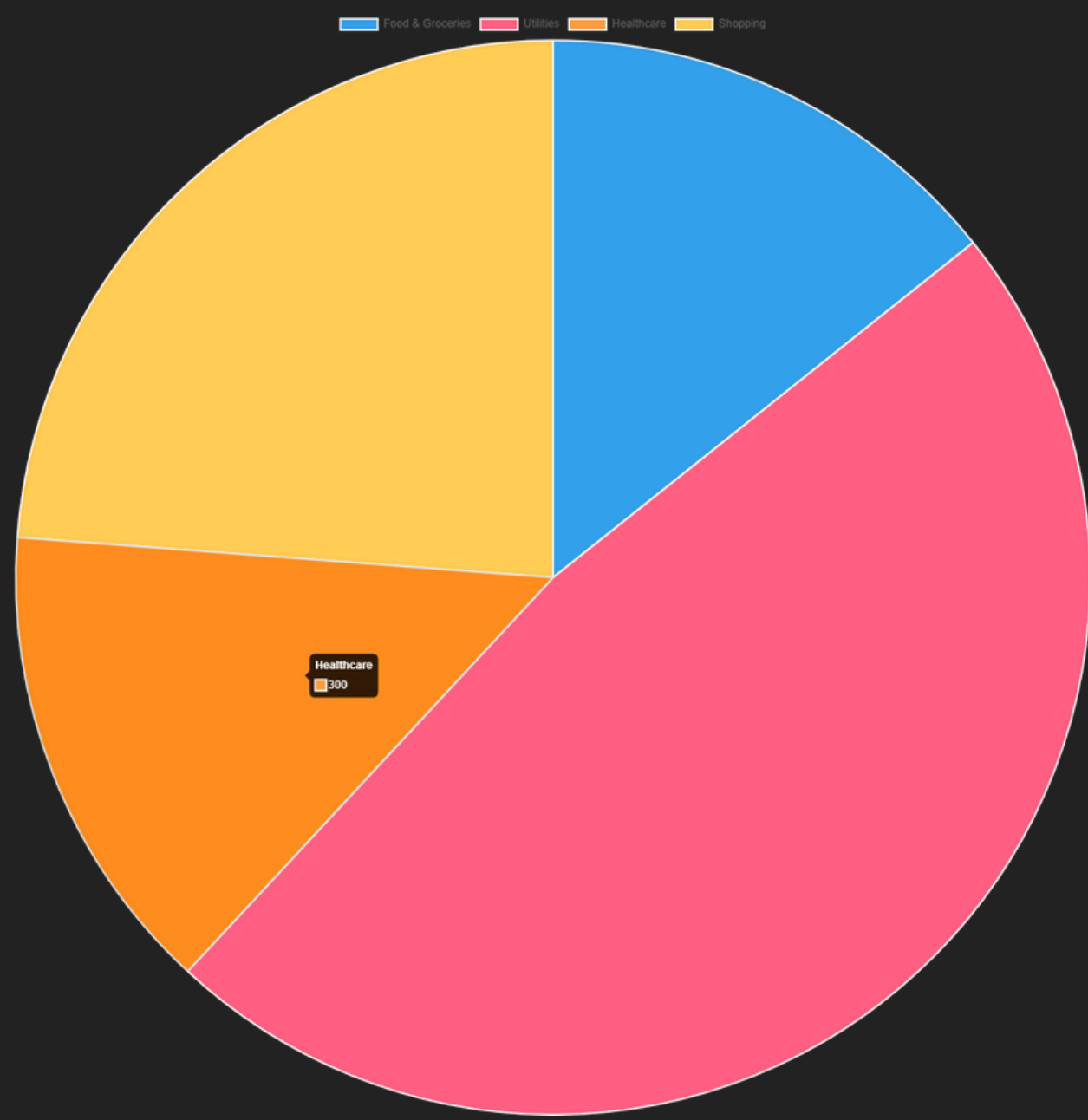
INCOME V/S EXPENSE

Income vs Expense



EXPENSE BY CATEGORY

EXPENSE BY CATEGORY



MONTHLY TREND

Monthly Trend



BUDGETS

Budgets

Utilities (2025-09)	1000.00 / 3000.00	Remove
Healthcare (2025-09)	300.00 / 2500.00	Remove
Shopping (recurring)	500.00 / 1000.00	Remove
Donations (2025-09)	0.00 / 1000.00	Remove

TRANSACTION HISTORY

Transaction History

+ 10000.00

undefined | salary
9/13/2025

- 200.00

Food & Groceries | burger
9/13/2025

- 1000.00

Utilities | tool box
9/13/2025

- 300.00

Healthcare | check up
9/13/2025

GROUP MANAGEMENT SECTION

Group Manager

Group Name

Members (comma-separate

Create Group

Add Group Expense

Trip to manali

Anant

Amount

Description

Add Expense

SETTLEMENT CALCULATION VIEW

Groups List

Trip to manali

(Anant, Aditya, Harsh)

Remove

Trip to manali

Members: Anant, Aditya, Harsh

Expenses:

- Anant paid ₹10000.00 for No description (2025-09-14)
- Harsh paid ₹3000.00 for No description (2025-09-14)

Settlement:

- Anant should receive ₹5666.67
- Aditya owes ₹4333.33
- Harsh owes ₹1333.33

Total spent: ₹13000.00, each share: ₹4333.33

RECENT TRANSACTIONS TABLE

Recent Transactions

Income

Amt	Type	Freq	Date	
10000.00	Salary	monthly	2025-09-13	Del
100.00	Rental	one-time	2025-09-11	Del

Expense

Amt	Cat	Date	
200.00	Food & Groceries	2025-09-13	Del
1000.00	Utilities	2025-09-13	Del
300.00	Healthcare	2025-09-13	Del
500.00	Shopping	2025-09-13	Del
100.00	Food & Groceries	2025-09-12	Del

TESTING

TEST CASES

Test Case	Input	Expected Output	Result
Login Valid	User: admin, Pass: 123	Dashboard loads	Pass
Login Invalid	User: test, Pass: wrong	Alert "Invalid credentials"	Pass
Add Expense	Amount: 200, Cat: Food	Expense saved & shown	Pass
Set Budget	Food = 5000	Progress bar updates	Pass
Group Expense	Payer: A, Amount: 1000	Reflected in settlement	Pass

RESULTS

ALL CRITICAL FEATURES TESTED SUCCESSFULLY.

DEPLOYMENT

TECHNOLOGIES USED

- THE APP CAN BE DEPLOYED ON:
- GITHUB PAGES (STATIC HOSTING)
- NETLIFY (AUTOMATIC DEPLOYMENT)
- RENDER (IF BACKEND ADDED IN FUTURE)
- STEPS:
- PUSH REPO TO GITHUB
- ENABLE GITHUB PAGES IN SETTINGS
- ACCESS VIA PUBLIC PROJECT LINK

USER MANUAL

- OPEN THE DEPLOYED LINK IN BROWSER.
- SIGN UP OR LOGIN.
- USE FORMS TO ADD INCOME, EXPENSES, AND BUDGETS.
- VIEW DASHBOARD FOR CHARTS AND SUMMARIES.
- CREATE GROUPS → ADD MEMBERS → RECORD GROUP EXPENSES.
- CHECK SETTLEMENT INFO UNDER GROUP DETAILS.
- LOGOUT AFTER USE.

FUTURE SCOPE

TECHNOLOGIES USED

- CLOUD SYNC FOR CROSS-DEVICE USAGE.
- MULTI-CURRENCY SUPPORT.
- AI-BASED FINANCIAL INSIGHTS.
- EXPORT/IMPORT AS CSV, PDF.
- MOBILE APP INTEGRATION.
- ENHANCED GROUP SETTLEMENT ALGORITHMS.

CONCLUSION

THE PROJECT SUCCESSFULLY DELIVERS A COMPREHENSIVE FINANCIAL TRACKING SOLUTION. IT BALANCES SIMPLICITY AND FUNCTIONALITY, ENSURING BOTH INDIVIDUALS AND GROUPS CAN MANAGE THEIR FINANCES EFFECTIVELY. THIS SYSTEM CAN SERVE AS A BASE FOR FUTURE FINTECH-GRADE APPLICATIONS BY ADDING SCALABILITY, REAL-TIME CLOUD SYNCING, AND ADVANCED ANALYTICS.

REFERENCES

CHART.JS DOCUMENTATION
MDN WEB DOCS (HTML, CSS, JS)
W3SCHOOLS TUTORIALS
SPLITWISE (CONCEPT INSPIRATION)
COURSE MATERIALS