

Design Document

Project Description

Timi Time Accounting is a streamlined financial management application designed for personal and family bookkeeping. Developed in response to a household need for better financial tracking, Timi helps users clearly understand their income and expenses. By recording daily spending, tracking income sources, and calculating savings, the app enables users to control their finances and improve their quality of life.

The application supports multi-account management, allowing users to categorize expenses and automatically calculate monthly surpluses. Timi adopts a MongoDB-based storage system for reliable data persistence and features a minimalist interface for ease of use, encouraging good financial habits.

Core Features

1. Income & Expense Management

- **Real-time Expense Tracking:** Enables users to log daily expenses with customizable categories, such as dining, shopping, rent, and utilities, for better financial awareness.
- **Income Management:** Supports recording multiple income sources, including salary, investment returns, and freelance earnings, ensuring a comprehensive financial overview.
- **CRUD Operations:** Allows users to add, view, update, and delete financial records, facilitating efficient bookkeeping.

2. Financial Overview and Budgeting

- **Spending Trends Analysis:** Provides visual representations of income and expense trends over a period, helping users identify spending patterns.

- Savings Calculation: Automatically calculates and displays savings based on income and expenses, enabling users to set realistic financial goals.
3. Data Persistence and Multi-Account Management
- MongoDB-based Storage: Ensures reliable and structured data storage, with two primary collections for accounts and transaction records.
 - Multi-Account Support: Allows users to create and manage multiple financial accounts, separating personal and household expenses for better organization.

User Personas

Han - Struggling Student (26 years old, financially conscious)

Goals:

1. Wants to understand exactly where money is going.
2. Aims to set savings goals for future investments or homeownership.
3. Uses intelligent financial analysis to optimize spending habits and reduce unnecessary expenses.

Pain Points:

1. Previously relied on intuition for saving money without a clear financial plan.
2. Often realizes overspending only at the end of the month.

Jack - Family Finance Manager (35 years old, married with children)

Goals:

1. Tracks household income and expenses, including mortgage, child education costs, and other family expenses.
2. Shares financial records with a spouse for better transparency.
3. Plans a family budget to allocate expenses and savings wisely.

Pain Points:

1. Household expenses are scattered, making it difficult to track total spending accurately.

2. Needs a system that supports multiple accounts and shared access.
3. Wishes to avoid financial disputes by maintaining clear and transparent records.

Lisa - Freelancer & Entrepreneur (30 years old, self-employed)

Goals:

1. Manages irregular income streams from multiple projects.
2. Tracks business expenses separately from personal spending.
3. Analyzes income trends to plan for slow business periods.

Pain Points:

1. Unpredictable income makes budgeting difficult.
2. Needs a system that categorizes personal and business transactions efficiently.
3. Lacks financial insights to ensure steady savings for taxes and future investments.

User Stories

1. Han – Struggling Student

As a financially conscious student, I want to:

Track my daily expenses in real-time, so that I can understand where my money is going.

Categorize my spending habits, so that I can identify areas where I can cut costs.

Set and track savings goals, so that I can plan for future investments or homeownership.

2. Jack – Family Finance Manager

As a family finance manager, I want to:

Track household income and expenses, so that I can manage finances efficiently.

Share financial records with my spouse, so that we can maintain financial transparency.

Check period income and expense reports to visually display spending trends.

Lisa – Freelancer & Entrepreneur

As a freelancer and entrepreneur, I want to:

Track irregular income from multiple projects, so that I can accurately update my financial records.

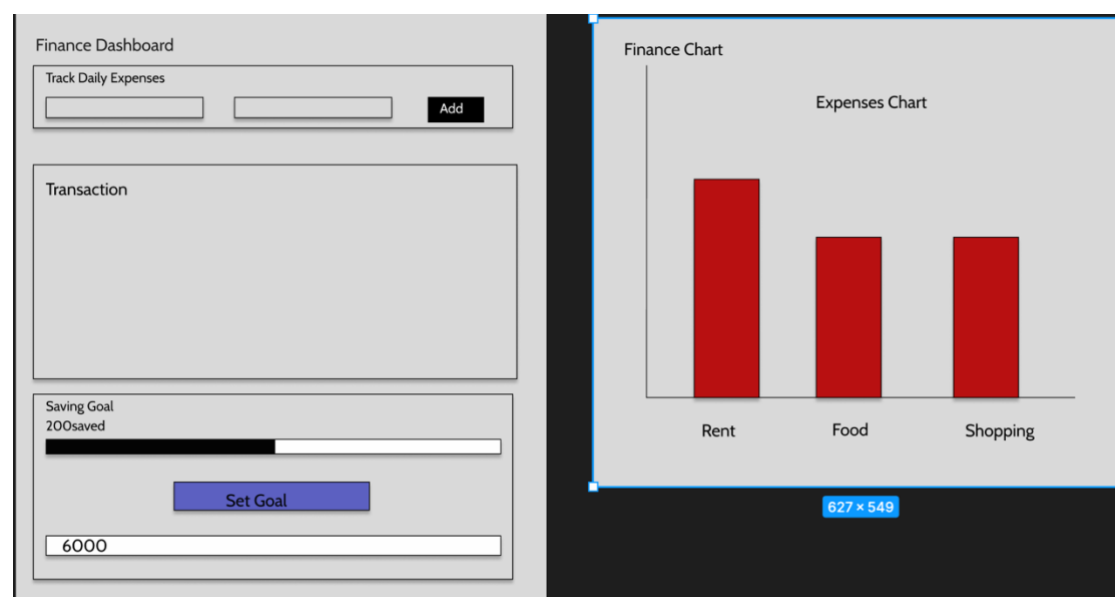
Modify unclear income entries, so that I can maintain precise financial documentation.

Delete duplicate income or expenses, so that I can ensure the accuracy of my financial records.

Design Mockup

Link: <https://www.figma.com/design/7wlJFyCrYhhax9ZyISNC7m/Timi-Time-Accounting?node-id=0-1&t=ESQBWjVGXJubUBrk-1>

Han



1. Track Daily Expenses

As a student, Han wants to record daily expenses in real time to clearly understand where the money is going. The interface allows users to enter the amount and description, and upon clicking the Add button, the transaction is instantly added to the list below.

2. Categorize Spending Habits

Han wants to categorize expenses (e.g., Rent, Food, Shopping) to identify areas where costs can be reduced. The bar chart on the right dynamically visualizes total spending by category, helping Han analyze financial habits.

3. Set and Monitor Savings Goals

Han aims to save for future plans. In the Saving Goal section, users can enter and set a savings target. The progress bar updates in real time based on saved amounts, offering motivation and clarity on savings progress.

Jack



1. Track Household Income and Expenses

Jack can easily record categorized income and expense data using the input form and toggle buttons. The account dashboard shows totals for income, expense, and balance, helping him manage the family budget efficiently.

2. Share Financial Records with Spouse

The Account Switcher and Manage Users features allow multiple users (e.g., Jack and his spouse) to maintain separate or shared records. Each user can be added or deleted via the modal, ensuring personalized access and collaboration.

3. Check Periodic Income and Expense Trends Visually

The Date Filter enables Jack to select a time range. The system dynamically updates the Income Chart and Expenses Chart, giving a clear view of financial behavior and helping identify trends like overspending in specific categories.

Lisa

Add Form

Amount

Category

Description

Date

Transaction

editdel

editdel

1. Track Irregular Income

The Add Form allows Lisa to enter any amount, category (e.g., "Project A", "Client

X"), and a specific date for each income. This flexibility helps her manage earnings from multiple freelance projects with varying amounts and timelines.

2. Modify Unclear Income Entries

Each transaction listed has an Edit button, enabling Lisa to revise details such as amount, description, or category. This helps keep records accurate when more information becomes available, or corrections are needed.

3. Delete Duplicate Entries

With the Delete button on each transaction, Lisa can remove mistakenly entered or duplicated records, ensuring that her overall income and expenses remain clean and reliable.