Capstone Project Proposal

Project Title

"MoneyMind: Personal Finance Tracker & Budgeting Web App"

Overview

MoneyMind is a full-stack personal finance management application designed to help individuals take control of their income, expenses, and budgeting goals. The app allows users to track transactions, categorize spending, set financial goals, and gain insights through data visualization. With built-in authentication and responsive design, users can manage their finances securely from any device.

In a time when financial stress is common, MoneyMind provides a centralized platform for self-accountability and financial literacy. It helps users make better money decisions by visualizing their cash flow and spending habits.

Core Features

- **User Authentication (with Passport.js)**

    - Secure signup and login with session handling

    - Password encryption and protected routes

- **Income & Expense Tracking (CRUD)**

    - Add, view, edit, and delete income and expense entries

    - Assign categories (e.g., Rent, Food, Entertainment)

    - Filter transactions by date, category, or amount

- **Budget Goals & Progress**

    - Set monthly budgets for categories

    - Track how much is spent vs. budgeted

    - Visual progress bars for budget usage

- **Dashboard & Reports**

  - Pie and bar charts showing spending by category

  - Monthly summaries of savings, expenses, and income

  - Net balance overview

- **Responsive UI with User-Friendly Design**

  - Mobile-first, clean design with Tailwind CSS

  - Optimized for performance with Vite + React

Target Audience

- Young adults learning to manage money independently

- Freelancers or gig workers with irregular income

- Anyone looking for a simpler, more private budgeting tool than third-party finance apps

- Users concerned about data privacy and seeking a self-hosted alternative to apps like Mint or YNAB

Technology Stack

Layer	Technology
Frontend	React + Vite, Tailwind CSS
Backend	Node.js, Express.js
Database	MongoDB with Mongoose
Authentication	Passport.js (Local Strategy)
Charts	Chart.js or Recharts
Deployment	Render
Dev Tools	Git, GitHub, Postman

Agile Development Plan

- **Sprint 1: Setup & Authentication**

  - Initialize project repo and basic layout

  - Build user registration and login system with Passport.js

  - Set up protected routes and sessions

- **Sprint 2: Income/Expense System**

  - Design and build MongoDB models for transactions

  - Implement CRUD API endpoints for income and expenses

  - Build frontend transaction form and list display

- **Sprint 3: Budgets & Dashboard**

  - Add ability to set and update budgets

  - Calculate spending progress

  - Integrate visual charts (pie, bar)

- **Sprint 4: Final Polish & Testing**

  - Responsive UI and UX improvements

  - Basic unit testing

  - Prepare demo and documentation

- **Sprint 5: Deployment & Submission**

  - Deploy full app (frontend and backend)

  - Create a live demo link

  - Submit project with README and project report

Success Criteria

- Fully deployed application with working login and secure routes

- Functional CRUD operations for income, expenses, and budgets

- Responsive and intuitive user interface

- Visual analytics that provide meaningful feedback

- Well-organized, clean, and maintainable code

- Evidence of Git commits, Agile workflow, and good software practices