Project Design Phase
Problem – Solution Fit Template

Date	3 April 2025
Team ID	SWTID1742834197
Project Name	Personal Expense Tracker App
Maximum Marks	2 Marks

Problem – Solution Fit Template:

Section	Details
Target Customer/User	College students, working professionals, and small business owners who want a simple and intuitive way to track and manage their daily expenses and income.
Problem (Observed Behaviour)	Users struggle to manually track expenses, categorize them, and view spending patterns over time. Most existing tools are either too complex or lack personalized insights and proper categorization.
Current Alternatives	Manual tracking with Excel sheets, basic mobile apps with limited filtering and category support, or complex accounting software that's not beginner-friendly.
What's Frustrating or Missing?	Lack of user-friendly dashboards, weak data visualizations, no proper filtering by date/type, no clear income/expense split, and limited or no route protection and data security in free apps.
Proposed Solution	A full-stack web app using MongoDB, Express.js, React.js, and Node.js that includes category management, filtering, personal dashboards, protected routes, JWT-based authentication, and intuitive UI via Tailwind CSS.
Unique Value Proposition	Combines modern tech (Redux, React Query, Tailwind) with practical features like categorized transactions, real-time filtering, JWT security, and insightful dashboards—all in one secure, browser-based app.
How It Solves the Problem	It simplifies financial management with clear visual feedback, intuitive interaction, and complete control over transactions. It also increases trust with secure login, protected pages, and real-time data sync using React Query.

Why Now?

As people grow more aware of financial literacy and budgeting, and with the rise of lightweight web tech, there's a strong demand for accessible, personal finance tools—especially post-pandemic when remote tracking is essential.

Problem-Solution fit canvas 2.0

Purpose / Vision

Define CS, fit into CC

1. CUSTOMER SEGMENT(S) — CS
- College students
- Working professionals
- Freelancers and small business owners

6. CUSTOMER CONSTRAINTS — CC
- Low technical skills
- Limited budget (prefer free or freemium apps)
- Poor network connectivity in some areas
- Use of only mobile or browser-based tools

5. AVAILABLE SOLUTIONS — AS
- Excel/Google Sheets (manual, error-prone)
- Mobile finance apps (limited features in free tier)
- Accounting software (complex for personal use)

Explore AS, differentiate

Focus on J&P, tap into BE, understand RC

2. JOBS-TO-BE-DONE / PROBLEMS — J&P
- Track income and expenses regularly
- Categorize transactions for clarity
- Understand monthly spending behavior
- Visualize savings/investments for budgeting

9. PROBLEM ROOT CAUSE — RC
- Lack of simple, accessible, and secure personal finance tools
- People don't track expenses until it becomes urgent
- Existing tools are either too complex or too limited

7. BEHAVIOUR — BE
- Keeps receipts or notes transactions manually
- Checks bank SMS/email statements
- Occasionally logs expenses in mobile apps
- Looks for "quick budget fix" YouTube videos

Focus on J&P, tap into BE, understand RC

Identify strong TR & EM

3. TRIGGERS — TR
- Sudden realization of overspending
- Personal goals like saving for a trip or loan repayment
- Recommendations from peers or influencers on finance tracking
- Awareness from news/articles on managing personal finances

4. EMOTIONS: BEFORE / AFTER — EM
- Before: Anxious, confused, disorganized
- After: Confident, in control, financially aware

10. YOUR SOLUTION — SL
- A MERN-based web app that:
  - Enables secure sign-up and login
  - Allows categorized transaction entries
  - Offers real-time filtering and dashboards
  - Uses React Query + Redux for performance
  - Styled with Tailwind CSS for ease and accessibility
  - Protects routes and data using JWT and auth middleware

8. CHANNELS of BEHAVIOUR — CH
8.1 ONLINE
- Watches YouTube tutorials on budgeting
- Searches for "best budget tracking tools"
- Uses browser-based tools (Chrome, mobile web)

8.2 :Offline:
- Discusses money habits with friends/family
- Jots expenses in diary/notebook
- Uses printed bank statements for reconciliation

Extract online & offline CH of BE

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