Business Requirements Document (BRD)

Project Title: Personal Finance Management System (PFMS)

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1. Introduction

1.1 Purpose of the Document

This document outlines the business requirements for developing a Personal Finance Management System (PFMS). The goal is to provide a platform for users to efficiently manage their personal finances by tracking income, expenses, budgets, savings, and financial insights.

1.2 Project Objectives

- Enable users to track and categorize their income and expenses.
- Provide tools for budget planning and monitoring.
- Facilitate goal setting and savings tracking.
- Deliver actionable financial insights through reports and dashboards.
- Offer secure integration with banking systems for transaction synchronization.
- Implement gamification to enhance user engagement.
- Support a split system to manage shared expenses effectively.

1.3 Scope

The system will cater to individual users looking to manage personal finances. Key features include:

- User authentication and account management.
- Manual and automated transaction tracking.
- Budget creation and monitoring.
- Savings goal management.
- Data visualization via reports and dashboards.
- Optional integration with external banking APIs.
- Gamification elements to reward financial achievements.
- Shared expense tracking and splitting functionality.

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2. Stakeholders

2.1 Primary Stakeholders

- **End Users:** Individuals managing personal finances.
- **Project Team:** Developers, product managers, and QA testers.

2.2 Secondary Stakeholders

- **Financial Institutions:** Banks and payment processors for API integrations.
- **Regulatory Bodies:** Compliance with data privacy and security regulations.

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3. Functional Requirements

3.1 User Management

- Users can create accounts with basic details (name, email, password).
- Authentication via username/password Tand optional multi-factor authentication (MFA).
- Roles: Regular user, premium user (additional)
- Profile customization: Preferred currency

Flexibility:

- Social login integration (e.g., Google, Apple) may be added later.

3.2 Income and Expense Tracking

- Users can add, edit, and delete income and expense records.
- Each record includes:
  - Category (e.g., salary, groceries, rent).
  - Subcategory (optional).
  - Amount, date, and payment method.
  - Tags for additional context.
- Support for recurring transactions.

Flexibility:

- Subcategories and tags can be optional initially.
- Expandable category lists.

3.3 Budget & Savings Goals Management

- Allow users to define budgets per category or set an **overall spending limit**.
- Notify users when their spending exceeds set limits.
- Display **progress bars** showing remaining budgets and savings goal completion.
- Enable users to set **target amounts and deadlines** for savings goals.
- Support managing **multiple budgets and goals simultaneously**.

Flexibility:

- **Overall spending limits** may be prioritized over category-based budgets initially.
- Advanced features like **goal prioritization** can be introduced later.

3.4 Reports and Insights

- Provide:
  - Spending trends (monthly/yearly).
  - Income vs. expense comparison.
  - Top categories of expenditure.
- Export reports to CSV/PDF.
- Interactive dashboards with visualizations (e.g., pie charts, bar graphs).

Flexibility:

- Basic summaries first; granular insights added later.
- Dashboards can initially have limited visuals.

3.5 Integration with Banks (Optional)

- Enable users to link accounts via APIs for automatic transaction imports.
- Manual data upload (e.g., CSV bank statements).

Flexibility:

- Bank integration can be added later as a premium feature.

3.6 Gamification

- Reward users with points, badges, or achievements for:
  - Meeting savings goals.
  - Staying within budgets.
  - Tracking expenses consistently.
  - Saving streaks
- Leaderboard feature for premium users.

Flexibility:

- Leaderboard and competitive features can be deferred.

3.7 Split System

- Allow users to create shared expense groups.
- Track contributions from each participant.
- Automatically calculate owed amounts and balances.

Flexibility:

- Advanced features like payment reminders can be added later.

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4. Assumptions and Constraints

- Users are assumed to have basic financial knowledge to use the platform effectively.
- Constraints include limited initial resources for advanced features like ML-based predictions.
- The system is intended for individual users managing personal finances, not businesses.
- Users will manually enter transactions unless banking integration is implemented.
- The database will store user financial data securely but will not handle real monetary transactions.

5. Future Considerations

- **Machine Learning:** Predict user spending patterns and suggest budgets.
- **Multi-Currency Support:** Handle multiple currencies and exchange rates.
- **Investment Tracking:** Extend functionality to include investment portfolio management.
- **Advanced Shared Expenses:** Add payment reminders and group analytics.

6. Sources, References and Thought Process

- **ChatGPT :** Used chatGPT to get an **initial version** of business requirements which we detailed and refined after multiple go throughs of the draft.
- Tried thinking of **real world problems** to inculcate into the business requirements.
- We adapted the business model by **removing redundant**, irrelevant and out of scope prospects, and focussed on expanding on the intricate details of what we will be able to **actually deliver** through our project.
- Once we finalized the initial functionalities, we proceeded to draft an E-R model.
- Then we **tested the functionality** of the drafted E-R model and **refined** it by adding new components as per requirements that we brainstormed further.
- We thought of edge cases to test the logical and functional soundness of our E-R model.
- Finally, we introduced **cardinality constraints** and other **dependencies** into our E-R model.