Business Requirement Document

Personal Expense Tracker

Version History

Version	Approved By	Revision	Date	Description of Change	Author
1.0	Sponsor	Initial	11/05/2024	Initial draft of the BRD	Tejashiwni
2.0	Sponsor	Updated	11/08/2024	Added detailed requirements	Tejashwini

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1. Executive Summary

As a company committed to empowering individuals to make informed financial decisions, SpendSmart aims to create an innovative personal expense tracking application. The purpose of this Business Requirements Document (BRD) is to outline the goals, objectives, and requirements necessary to develop a comprehensive solution that enables users to track daily expenses, categorize transactions, and predict future spending patterns.

The project will involve analysis of user spending habits through Exploratory Data Analysis (EDA), feature engineering, and predictive modeling to provide meaningful insights into personal finance. The scope includes functionalities such as expense logging, categorization, and visualization of financial patterns.

The main business drivers for this project are the growing need for financial literacy and the desire to provide users with tools to reduce unnecessary expenses and increase savings. The current process for expense tracking often involves manual entry or paper-based tracking, which lacks the necessary insights for informed decision-making. The proposed process will leverage advanced data analytics to offer automated expense categorization, interactive dashboards, and accurate monthly expense predictions.

The functional requirements detailed in this document include adding, editing, and deleting transactions, categorizing expenses, and providing interactive visualizations. With a focus on user satisfaction and improved financial well-being, the SpendSmart solution will provide intuitive tools for budget management and financial planning.

2. Project Objectives

Primary Objective:

Creating a web-based personal expense tracking tool that allows users to monitor their daily spending habits and visualize their financial patterns, thus enabling better budgeting and financial control.

Secondary Objectives:

- Predict the total monthly expense for the user based on historical spending data.
- Empower users with interactive data visualizations to make better spending decisions.

Project Purpose: The Personal Expense Tracker aims to help individuals gain control over their finances by tracking daily expenses, categorizing transactions, and predicting future spending patterns.

Current Process: Most users rely on manual methods, spreadsheets, or paper-based approaches, which are time-consuming and lack the insights needed for strategic financial planning.

Challenges:

- Lack of automation in tracking and categorization.
- Inadequate visualization and reporting for spending patterns.
- Limited tools to predict future expenses based on historical data.

Additional Goals and Objectives:

- To streamline the process of tracking expenses.
- Provide interactive and user-friendly dashboards for visualizing spending.
- Offer predictive insights to help users make informed financial decisions.

3. Project Scope

In Scope

Expense Tracking: Implement functionality for users to log daily expenses, categorize transactions, and access spending insights.

Categorization and Reporting: Automatically categorize expenses based on keywords and generate periodic reports.

Data Analysis and Visualization: Use EDA and feature engineering to analyze and visualize spending patterns on dashboards.

Predictive Modeling: Develop predictive models (Linear Regression, Random Forest, Gradient Boosting) to forecast monthly expenses.

User Interactions: Provide interactive visualizations that allow users to explore spending patterns, track savings, and view monthly predictions.

Out of Scope

Bank Integration: Integration with external banking systems or third-party financial services for real-time transaction imports.

Advanced Investment Tracking: Features for managing portfolios or wealth management.

Legal and Compliance Fees: Handling of any legal fees, regulatory compliance, or taxation advice.

Ongoing Maintenance and Support: Post-deployment maintenance, support costs, or infrastructure setup outside of the initial deployment.

4. Business Requirements

Functional Requirements:

- Users must be able to add, edit, and delete transactions.
- Users must be able to categorize transactions and add notes.
- System should automatically categorize expenses based on keywords.
- Users must have access to interactive dashboards that visualize spending patterns, income, and savings.
- Users must be able to view monthly reports and predictions for future spending based on historical data.

Non-functional Requirements:

- **Performance:** The tool should support up to 10,000 users simultaneously without performance degradation.
- **Security:** Data should be encrypted, and sensitive information must be securely stored.
- **Scalability:** The application should be scalable to accommodate more users and larger datasets.
- **Usability**: The interface should be intuitive, with easy navigation and responsive design.

5. Key Stakeholders

- Project Sponsor: SpendSmart Solutions - oversees and finances the project.

- End Users: Individuals looking to manage their personal finances better.

- Project Manager: Responsible for ensuring timely and quality delivery of the project.

- Development Team: Responsible for developing and deploying the solution.

- Data Analysts: Responsible for feature engineering, EDA, and building predictive models.

- Testing Team: Quality Assurance (QA) engineers responsible for testing the functionality and usability.

6. Project Constraints

- Time Constraints: Project to be delivered within 6 months from the start date.

- Budget Constraints: The total budget for the project is limited to $150,000.

- Technical Constraints: Application must use open-source tools for data analytics (Python, Tableau Public).

7. Cost-Benefit Analysis

- Benefits:

- Enhanced financial awareness for users leading to better budgeting habits.
- Potential reduction in unnecessary spending and improved savings.
- Predictive insights for future planning.

- Costs:

- Initial development and design cost.
- Ongoing maintenance cost.
- User support and cloud infrastructure costs.

8. Success Metrics and KPIs

User Engagement: Track the number of active users and their interaction with features such as predictive modeling and expense categorization.

Predictive Model Accuracy: Monitor the accuracy of monthly expense predictions, aiming for an R-squared value of at least 0.90.

Savings Growth: Measure the reduction in unnecessary spending and growth in user savings over time.

User Satisfaction: Surveys and feedback from users to determine usability and satisfaction levels.

9. Assumptions

- Users will have internet access to interact with the tool.
- Users will input transactions manually or through batch uploads.
- Users are comfortable with basic financial concepts such as budgeting and savings.

10. Approval and Sign-Off

Project Sponsor: Name

Project Manager: Name

Key Stakeholders: Sign-off details

11. Glossary

EDA: Exploratory Data Analysis, a process for analyzing datasets to summarize their main characteristics.

Predictive Modeling: The use of statistics to predict outcomes based on data.

R-squared: A statistical measure that represents the proportion of variance for a dependent variable explained by an independent variable.

Dashboard: A graphical representation of data using charts, tables, and visual elements to provide insights.

12. References

- SpendSmart Solutions internal project notes and documentation.

- User feedback surveys for personal finance applications.

- Research articles on personal finance management and data analytics.