Functional Document for Reverse Budgeting App

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### Introduction

The Reverse Budgeting App project aims to provide users with an automated, intuitive budget management and investment recommendation platform by integrating directly with HDFC Bank's API. The project focuses on enhancing financial management through technology.

### Product Goal

The primary goal is to implement secure, reliable user authentication and transaction synchronization that provides users with real-time financial insights and automated budgeting proposals.

### Demography (Users, Location)

#### Users

**Target Users**: Individuals seeking automated budgeting tools, financial enthusiasts, and potential investors.

**User Characteristics**: Users with varying financial literacy levels seeking to simplify and enhance their budget management and investment strategies.

#### Location

**Target Location**: Initially targeted at users in India with HDFC bank accounts, potentially scaling to other regions and banks.

### Business Processes

**User Authentication and Security**:   
Process for secure user registration and login with multi-factor authentication.

**Transaction Data Synchronization**:   
Automated process for fetching and synchronizing user transaction data from HDFC Bank.

**Budget Proposal Generation**:   
Automated analysis of transaction data to generate personalized budget recommendations.

**Investment Recommendation**:   
Process for suggesting viable investment options based on user transaction patterns and financial goals.

### Features

**Secure User Authentication:**Implementation of OAuth and multi-factor authentication for enhanced security.

**Real-time Transaction Synchronization:**Continuous data synchronization with HDFC Bank API to fetch the latest transaction data.

**Automated Budget Recommendations:**Use of machine learning algorithms to analyze spending habits and suggest budgets.

**Personalized Investment Suggestions**:  
Integration with financial market data APIs to provide personalized investment advice based on user profiles.

### Authorization Matrix

|  |  |
| --- | --- |
| **Role** | **Access Level** |
| Administrator | Full access to all backend systems, user management, and financial analysis tools. |
| Registered User | Access to personal financial data, budgeting tools, and investment recommendations. |
| Guest User | Limited access, can explore the app features but cannot view personalized data. |

### Assumptions

1. The HDFC Bank API will provide timely and accurate transaction data.
2. Users are comfortable providing financial information to leverage personalized budgeting and investment services.
3. The development team will have access to secure and reliable development environments and tools.