Mobile Banking App MVP - Requirements & Planning

1. Overview

This document outlines the requirements, scope, and phased rollout plan for the MVP of a cross-platform mobile banking application using **Flutter** and **Firebase**. ***The MVP will focus on user authentication, fund transfers, transaction history, real-time notifications, and account overview***.

2. Functional Requirements

2.1 User Authentication & Registration

- Users can **register/login** using OAuth (Google, Apple, etc.).
- JWT-based authentication using **Firebase**.
- Secure **session management** with auto-logout on inactivity.

2.2 Fund Transfer

- Users can **send money** to another registered user.
- Transfers should update sender and receiver balances in real time.
- Transactions must be logged in Firestore for future reference.
- Users should receive push notifications upon successful transactions.
- A transaction should have statuses: **Pending, Success, Failed**.

2.3 Transaction History

- Users can view their **past transactions** in a list format.
- Transactions are **categorized** (credit, debit, pending, failed).
- Each transaction entry includes **amount, timestamp, and status**.
- Clicking on a transaction shows detailed information.

2.4 Account Overview

- Users can view their **account balance** on the dashboard.
- Breakdown of last **5 transactions** displayed on home screen.
- A profile section to **update user information** (name, email, etc.).

2.5 Real-Time Notifications

- Users receive a push notification on receiving funds.
- Transactions should trigger notifications using Firebase Cloud Messaging (FCM).
- Users can enable/disable notifications in settings.

3. Non-Functional Requirements

- **Performance:** Response time <100ms for database queries.
- **Scalability:** Firebase backend optimized for high user traffic.
- **Security:** AES encryption for sensitive data, OAuth for authentication.
- **Availability:** Ensure minimal downtime with Firebase services.
- **Error Handling:** Graceful handling of failed transactions and API failures.
- **Device Support:** Android & iOS support using Flutter.

4. MVP Scope & Phased Rollout

4.1 MVP Features (Core Functionalities)

- User Authentication (**OAuth** with **Firebase**)
- Fund Transfer (Peer-to-Peer transactions)
- Transaction History (Basic UI, filters, and details)
- Account Overview (Balance, last 5 transactions)
- Push Notifications (For fund transfers)

4.2 Phase 2 Features (Post-MVP Enhancements)

- KYC verification with document upload
- Payment Gateway Integration (Stripe/Razorpay)
- Real-time market data updates
- Advanced analytics and spending insights
- Bill payments & UPI integration

5. User Stories & Acceptance Criteria

User Story 1: User Registration & Login

- **As a** new user, I want to sign up using OAuth so that I can access the banking services securely.
- **Acceptance Criteria:**
    - Users can sign up using Google or Apple authentication.
    - Users see an error message if authentication fails.
    - User sessions are maintained using OAuth.

User Story 2: Fund Transfer

- **As a** user, I want to send money to another user so that I can make transactions.
- **Acceptance Criteria:**
    - Users can search and select a recipient.
    - Users enter an amount and confirm the transaction.
    - If the balance is insufficient, an error is shown.
    - On success, the receiver's balance updates in real time.

User Story 3: Transaction History

- **As a** user, I want to see my past transactions so that I can track my expenses.
- **Acceptance Criteria:**
    - A list of past transactions is displayed.
    - Transactions are sorted by date (newest first).
    - Clicking a transaction shows details (amount, date, status).

User Story 4: Real-Time Notifications

- **As a** user, I want to receive a notification when I get money so that I am informed instantly.
- **Acceptance Criteria:**
    - User receives a push notification when a transaction is successful.
    - Notifications work when the app is in the background.
    - Users can disable notifications from settings.