**SRS – FinEdge (Banking App with Finance Management Dashboard)**

**1. Introduction**

**1.1 Purpose**FinEdge aims to provide users with a secure and user-friendly platform for managing their banking and financial activities. It allows users to register, log in, and manage multiple bank accounts, perform real-time transactions, and analyze their financial activities—all from one dashboard.

**1.2 Document Conventions**Key features and requirements are written in UPPERCASE for emphasis and listed hierarchically.

**1.3 Product Scope**  
FinEdge will simplify and enhance banking by offering:

* User Registration and Login for secure access.
* Real-time banking functionalities like fund transfers, bill payments, and notifications.
* A single platform to add and manage multiple accounts, both personal and business.
* A detailed transaction history and filtering options for financial tracking.
* Monitoring tools for bank administrators to ensure the platform’s smooth operation.

**1.4 References**

* Documentation for NextJS 14 and Plaid API.
* Appwrite's authentication and database integration guide.

**2. Overall Description**

**2.1 Product Perspective**FinEdge replaces traditional, fragmented banking processes with a seamless digital experience. By consolidating multiple financial services into one intuitive platform, it ensures convenience for users and administrators alike.

**2.2 Product Functions  
Key functionalities include:**

* Registering new users and logging in securely.
* Linking and managing multiple bank accounts.
* Performing real-time banking transactions like transfers and bill payments.
* Viewing recent transactions and filtering history by category, date, or type.
* Monitoring platform performance to ensure reliability.

**2.3 User Classes and Characteristics**

* Individual Account Holders: Manage their personal finances easily.
* Business Account Holders: Handle multiple accounts for business operations.
* Bank Administrators: Monitor and ensure smooth functioning of the platform.
* Financial Advisors: Use detailed transaction insights to guide clients.

**2.4 Operating Environment**The system is cloud-based, accessible via web browsers and mobile devices, and secured with advanced encryption.

**2.5 Design and Implementation Constraints**

* Only verified users can register or add accounts.
* Bank account linking is limited to those supported by Plaid.

**2.6 Assumptions and Dependencies**

* Users will have stable internet access.
* Bank APIs will provide real-time transaction updates**.**

**3. External Interface Requirements**

**3.1 User Interfaces**

* Registration and Login Screens: To securely access the platform.
* Dashboard: Displays account balances, recent transactions, and key features.
* Administrator Panel: Includes tools to monitor system health and activity.

**3.2 Hardware Interfaces**

* Works on devices like smartphones, tablets, and desktop computers.

**3.3 Software Interfaces**

* Integrates with Plaid for bank account management and Appwrite for secure authentication and database operations.

**3.4 Communication Interfaces**

* Uses secure HTTPS for all data transfers.

**4. System Features**

**R1: USER REGISTRATION AND LOGIN**

* Users can register securely with verified credentials.
* Role-based access is provided (e.g., user, administrator).

**R2: ADD AND MANAGE ACCOUNTS**

* Users can link and manage multiple bank accounts.
* Preferences can be set for each account (e.g., primary account).

**R3: REAL-TIME TRANSACTIONS**

* Users can transfer money and pay bills instantly.
* Notifications confirm successful transactions.

**R4: TRANSACTION HISTORY**

* Recent transactions are displayed for quick review.
* Filters allow users to sort history by category, date, or type.

**R5: PLATFORM MONITORING**

* Administrators can monitor user activities and system health.
* Anomalies can be detected and resolved proactively.

**5. Other Nonfunctional Requirements**

**5.1 Performance Requirements**The platform should handle high traffic, supporting at least 1,000 users simultaneously without lag.

**5.2 Safety Requirements**Sensitive user information, such as passwords and financial data, will be encrypted and securely stored.

**5.3 Security Requirements**

* Two-factor authentication (2FA) ensures secure login.
* Auto-logout after inactivity to enhance security.

**5.4 Software Quality Attributes**

* Interoperability: Works seamlessly with Plaid APIs and Appwrite services.
* Portability: The platform performs equally well on web and mobile devices.

**5.5 Business Rules**

* Only verified users can add bank accounts.
* Transactions cannot be reversed after completion.
* Administrators cannot modify user financial data but can monitor system health.