Software Requirement Specification (SRS) for Smart Banking Solution

Purpose:-

The purpose of this SRS is to define the functional and non-functional requirements for the Smart Banking Solution (SBS). The system will manage customer accounts, transactions, and other banking operations. It will serve as an interface for both the customers and bank employees.

1. Scope:

The Smart Banking Solution will handle functionalities such as:

- Customer account creation and management.
- Deposit and withdrawal operations.
- Transaction history and reports.
- Admin functionalities (e.g., managing customer accounts, generating reports).
- Security features like login authentication and encryption.

2. System Overview:

The Smart Banking Solution is designed to automate various banking functions, ensuring the efficient management of customer accounts and bank transactions. The system provides two types of users:

1.Customers who can perform transactions.

2.Admins who have management privileges over the system.

3. Functional Requirements:

I. Account Management

- **Account Creation:** Customers can create new accounts by providing their personal details (name, address, email, phone, etc.).
- **Account Modification:** Customers can update their details such as address or phone number.
- **Account Deletion:** Admins can close accounts on request.

II. Transaction Management

- **Deposits:** Customers can deposit money into their accounts.
- **Withdrawals:** Customers can withdraw money, ensuring they don't exceed their balance.
- **Transfers:** Customers can transfer money to other accounts within the bank.
- **Transaction History:** Customers can view their transaction history (deposits, withdrawals, transfers).

III. Admin Functions

- **Customer Management:** Admins can Add,view, edit, and delete customer accounts.
- **Transaction Monitoring:** Admins can view all transactions for auditing purposes.
- **Generate Reports:** Admins can generate financial reports, account balance reports, etc.

IV. Security Features

- **Authentication:** Both customers and admins must log in with a secure username and password.

- **Authorization:** Only authorized users (admins) can access certain sensitive features.
- **Data Encryption:** All data, especially financial transactions, will be encrypted using modern encryption standards (e.g., AES).

4. Non-Functional Requirements:

I. Performance Requirements

The system should be able to handle up to 100,000 customers and 1 million transactions concurrently.

Transaction processing should not exceed 3 seconds for any operation.

II. Security Requirements

The system must ensure user authentication via encrypted passwords.

Sensitive data such as account details and transaction information must be encrypted.

The system should have audit logs for tracking login attempts, successful transactions, and system access.

III. Usability Requirements

The user interface should be intuitive and easy to navigate for both customers and admins.

It should support modern web browsers and mobile devices.

IV. Reliability

The system should be available 99.9% of the time, excluding scheduled maintenance.

The system should have automatic backup features to ensure data integrity.

V. Maintainability

The system should allow for easy updates to support new features or comply with regulatory changes.

The codebase should be modular to facilitate easy debugging and enhancements.

5. System Features:

I. User Registration

Description: A customer can create an account by filling in personal information.

Functional Requirements: The customer should be able to create an account by providing essential data (e.g., name, address, and phone number).

II. Login/Logout

Description: Customers and Admins can log in to access the system.

Functional Requirements: A user can log in by entering a correct username and password.

III. Money Transfer

Description: Customers can transfer money from one account to another.

Functional Requirements: The customer will specify the recipient's account number, the amount to transfer, and any necessary security verification (e.g., PIN).