**Software Requirements Specification (SRS)**

**Project title: Bank Management System**

**1.Introduction:**

The scope of this document is to describe all functional and non-functional requirements regarding the Banking Management System. This system will provide a safer, efficient, and user-friendly platform to handle bank operations including account management, transactions, loans, and reporting.

**Purpose:** It addresses the BMS functional as well as nonfunctional requirement document. That is how such a system is devised to provide both secure efficient and friendly in the various bank operations mainly account handling, transactions and loans amongst others.

**Scope:**

The Banking Management System manages all accounts, transactions, loans, and regulatory compliance and ensures that the banking operation remains secure and efficient. Additionally, it is integrated with third-party services while providing a user-friendly platform for customers as well as bank staff.

**2.Overall Description:**

**Product Perspective:** The BMS will be a standalone software with database and server connections for data processing and storage. It will support online and offline functionalities to provide seamless banking services**.**

**Product Functions:**

**Account Management**: create, delete, and update accounts of customers.

**Transaction Management**: Deposit, withdrawal, and transfer.

**Loan Management**: Processing and managing loan application, including interests calculation and loan   to repayment.

**Characteristics of Users:**

* **Customers**: Can view account details, perform transactions, and apply for loans.
* **Bank Employees**: Can manage accounts, authorize loans, and generate reports.
* **Administrators**: All rights and permissions that enable the user to fully manage the system, including policy and system setting configurations.

**Constraints:**

* The system must comply with local and international banking regulations.
* The system should be available 24/7 with minimal downtime.
* The system must have a high level of security for user authentication and data protection.

**3. Functional Requirements:**

**Account Management:**

* Customer Registration and Account Opening: This facility must be offered to the customers so that new accounts are opened after submitting the necessary KYC documents.
* View Account Detail: Enables a customer to view his or her account details, such as balance, account type, and history of transactions
* Update or Delete Accounts: Make it possible for a bank employee to update or delete accounts when necessary.

**Transaction Management:**

* **Deposit and Withdrawal**: Enable customers to deposit and withdraw funds from their accounts.
* **Fund Transfer**: Facilitate transferring funds between accounts within the bank or to external banks.
* **Real-Time Balance Update**: Provide real-time updates on account balances after each transaction.

**Loan Management:**

* **Loan Application**: Allow customers to apply for loans, specifying amount, interest, and loan term.
* **Loan Approval and Processing**: Allow bank employees to review, approve, or reject loan applications.
* **Loan Repayment**: Manage and track loan repayments, interest calculations, and remaining balances.

**Reporting**

* **Transaction Reports**: Generate transaction summaries for different periods (daily, monthly, yearly).
* **Account Summary Reports**: Provide account summaries for customers on request.
* **System Usage Reports**: Allow administrators to generate reports on system activity and performance.

**4. Non-Functional Requirements:**

Non-functional requirements outline the quality standards and constraints of the system, including performance, security, usability, and regulatory compliance.

**Performance Requirements:**

* **Concurrency**: Support at least 1,000 concurrent users without compromising system performance.
* **Response Time**: Ensure that each transaction is processed within 2 seconds under normal conditions.

**Security Requirements:**

* **Data Encryption**: Encrypt all sensitive information, including account details, transactions, and personal data.
* **Automatic Logout**: Automatically log out users after 15 minutes of inactivity for added security.
* **Compliance**: Ensure compliance with data protection regulations such as GDPR or CCPA.

**Usability Requirements**

* **User-Friendly Interface**: Provide an intuitive interface accessible to users with basic computer skills.
* **Multi-Language Support**: Support multiple languages for usability in different regions served by the bank.

**Reliability and Availability**

* **Uptime**: Ensure the system has an uptime of at least 99.9% to meet business continuity needs.
* **Failover Mechanisms**: Implement failover and backup systems to ensure continued functionality in case of hardware failure or other disruptions.

**Conclusion:**

This makes it a banking management system needing a well-selected stack in terms of security, scalability, and compliance that would be done efficiently. Ideally, a complete frontend, a robust backend, a highly secure database architecture, cloud infrastructure, and fundamental authentication measures would make sure the operational smoothness and security of all the information that involves the customers. Thus, a bank can guarantee good-quality, real-time service without compromising the confidentiality and anonymity of its customers. This, therefore, implies that a good banking management system will increase customer satisfaction, optimize the banking workflow, and allow the bank to grow in such a competitive financial landscape.