Software Requirement Specification (SRS)

Project: BankCore – Full Banking Management System

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1. Introduction

1.1 Purpose

BankCore is a secure, scalable, and intelligent banking management system designed to streamline and automate core banking operations including account management, transactions, loans, customer management, and reporting. This document defines the functional and non-functional requirements of BankCore to guide development and ensure all stakeholders have a clear understanding of the software's scope and capabilities.

1.2 Scope

BankCore is intended for financial institutions of all sizes to manage internal banking operations efficiently while offering features to support customer interaction, regulatory compliance, and data security. The system supports multiple banking modules including customer accounts, transaction processing, loan management, audit logging, and comprehensive reporting.

1.3 Definitions, Acronyms, and Abbreviations

- **KYC**: Know Your Customer
- **AML**: Anti-Money Laundering
- **UI**: User Interface
- **API**: Application Programming Interface

1.4 References

- ISO 27001: Information Security Management
- PCI DSS: Payment Card Industry Data Security Standard

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2. Overall Description

2.1 Product Perspective

BankCore is a standalone modular system designed to integrate with existing bank infrastructure through secure APIs. It is web-based and accessible to internal staff via role-based permissions.

2.2 Product Functions

- Customer account creation and management
- Deposit, withdrawal, and fund transfer processing
- Loan application, approval, and repayment tracking
- Transaction history and audit logging
- User roles and access control (tellers, managers, auditors)
- Regulatory compliance and KYC/AML checks
- Real-time notifications and alerts
- Reporting dashboards and export features

2.3 User Classes and Characteristics

- **Bank Tellers**: Operate day-to-day transactions, customer service
- **Branch Managers**: Oversee branch operations, approve loans
- **Auditors**: Monitor transactions, generate audit reports
- **System Admins**: Manage user access, system settings

2.4 Operating Environment

- Web browsers (Chrome, Firefox, Edge)
- Backend server environment (Linux-based)
- Database server (PostgreSQL/MySQL/Oracle)

2.5 Design and Implementation Constraints

- Compliance with banking regulations (local and international)
- High availability and fault tolerance
- Secure data storage and transmission (SSL/TLS encryption)

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3. Specific Requirements

3.1 Functional Requirements

3.1.1 Customer Account Management

- The system shall allow creating new customer accounts with KYC verification.
- The system shall support multiple account types (savings, checking, fixed deposit).
- The system shall enable updating and closing accounts following bank policies.

3.1.2 Transaction Processing

- The system shall support deposits, withdrawals, fund transfers between accounts.
- Transactions must be logged with timestamp, user, and transaction details.
- The system shall prevent overdrafts according to account rules.

3.1.3 Loan Management

- The system shall allow loan application submission and documentation upload.
- The system shall support multi-level loan approval workflows.
- The system shall track loan repayment schedules and calculate interest.

3.1.4 User Roles and Access Control

- The system shall implement role-based access control with permissions configurable by admins.
- Users must authenticate securely via username/password and 2FA optional.

3.1.5 Reporting and Audit

- The system shall generate transaction summaries, loan reports, and audit logs.
- Reports shall be exportable in PDF and Excel formats.

3.2 Non-Functional Requirements

3.2.1 Security

- All data must be encrypted in transit and at rest.
- The system shall log all user activities for audit purposes.
- The system must comply with relevant security standards (ISO 27001, PCI DSS).

3.2.2 Performance

- The system should handle up to 10,000 concurrent users without degradation.
- Transaction processing should complete within 2 seconds under normal load.

3.2.3 Usability

- The UI shall be intuitive with user roles seeing only relevant modules.
- The system shall support multiple languages (initially English, with expansion).

3.2.4 Reliability & Availability

- The system must have 99.9% uptime.
- Data backups shall be taken daily with disaster recovery procedures defined.

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4. External Interface Requirements

4.1 User Interfaces

- Responsive web UI compatible with desktops and tablets.
- Dashboard views for different user roles.

4.2 Hardware Interfaces

- Integration with ATM and POS machines via API.

4.3 Software Interfaces

- APIs for integration with third-party credit bureaus and payment gateways.

4.4 Communication Interfaces

- Secure HTTPS protocol for all client-server communication.

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5. Other Requirements

5.1 Regulatory and Compliance

- Must support compliance with local banking regulations and international standards.

5.2 Documentation

- User manuals for different roles.

- API documentation for integration.

End of SRS Document