

Software Requirements Specification (SRS)

Banking Management System (BMS)

Version 1.0

Contents

1	Introduction	3
1.1	Purpose	3
1.2	Document Conventions	3
1.3	Intended Audience and Reading Suggestions	3
1.4	Product Scope	3
1.5	References	3
2	Overall Description	4
2.1	Product Perspective	4
2.2	Product Functions	4
2.3	User Classes and Characteristics	4
2.4	Operating Environment	4
2.5	Design and Implementation Constraints	5
2.6	User Documentation	5
2.7	Assumptions and Dependencies	5
3	External Interface Requirements	5
3.1	User Interfaces	5
3.2	Hardware Interfaces	6
3.3	Software Interfaces	6
3.4	Communications Interfaces	6
4	System Features	6
4.1	Account Management	6
4.1.1	Description and Priority	6
4.1.2	Stimulus/Response Sequences	6
4.1.3	Functional Requirements	6
4.2	Transactions (Deposit, Withdrawal, Transfer)	7
4.2.1	Description and Priority	7
4.2.2	Stimulus/Response Sequences	7

4.2.3	Functional Requirements	7
4.3	Admin Customer Management	7
4.3.1	Description and Priority	7
4.3.2	Functional Requirements	7
5	Other Nonfunctional Requirements	7
5.1	Performance Requirements	7
5.2	Safety Requirements	7
5.3	Security Requirements	8
5.4	Software Quality Attributes	8
5.5	Business Rules	8
6	Other Requirements	8

1 Introduction

1.1 Purpose

This SRS describes the specifications for the Banking Management System (BMS) Version 1.0. It is designed to manage bank operations efficiently, including account management, transactions, loans, and customer services. This document defines the functional and non-functional requirements for the system.

1.2 Document Conventions

1. Section headings appear in bold small caps.
2. Each requirement is labeled as **REQ-#**.
3. Priority levels: High / Medium / Low.
4. Placeholder items not finalized are denoted as “Figures TBD” or “Details TBD”.

1.3 Intended Audience and Reading Suggestions

- **Developers:** Focus on Sections 3–4 for system and interface requirements.
- **Project Managers:** Focus on Sections 1, 2, and 5 to understand scope and constraints.
- **Testers:** Sections 4–5 provide test case information.
- **Bank Staff and Customers:** Section 3.1 describes the UI.
- **Documentation Writers:** Sections 2.6 and 3 provide guidance for help content.

1.4 Product Scope

The BMS automates banking operations including account creation, deposits, withdrawals, transfers, and loan management. Customers can perform secure transactions online, while bank staff manage accounts, monitor transactions, and generate reports. The system aims to improve operational efficiency and customer experience.

1.5 References

1. IEEE Software Requirements Specification Template
2. ISO/IEC 25010 Software Quality Model
3. Vision Document for Banking Automation, Version 1.0, 2025
4. Bank IT Policies and Compliance Guidelines

2 Overall Description

2.1 Product Perspective

The BMS is a web-based and mobile-responsive system. It can integrate with existing bank authentication and core banking systems. Components include:

- Web client (user interface)
- Backend server (business logic and database)
- Admin panel for bank staff

2.2 Product Functions

1. Account creation and management
2. Customer login and authentication
3. Deposit, withdrawal, and fund transfer
4. Loan application and tracking
5. Transaction history and statements
6. Admin functions: customer management, report generation

2.3 User Classes and Characteristics

- **Bank Admin/Staff:** Full access to all modules; technically proficient.
- **Registered Customers:** Can manage accounts and transactions online.
- **Guests:** Limited access to information, e.g., branch locator.

2.4 Operating Environment

- Web browsers: Chrome, Firefox, Edge
- OS: Windows, macOS, Linux
- Server: Ubuntu 22.04+, Apache/Nginx, MySQL, Python/PHP
- Mobile-responsive interface

2.5 Design and Implementation Constraints

- Must follow bank's authentication and security protocols
- Data privacy and compliance with GDPR/PCI DSS
- Use of open-source tools where possible
- Database: MySQL
- Programming languages: Python (Django) or PHP (Laravel)

2.6 User Documentation

- User manual (PDF and HTML)
- Online help system (FAQs and tooltips)
- Admin guide for bank staff
- Installation guide for system administrators

2.7 Assumptions and Dependencies

- Users are expected to have a stable internet connection
- Bank provides server infrastructure
- Integration with external payment gateways (Figures TBD)
- Notifications via SMS/email depend on third-party services

3 External Interface Requirements

3.1 User Interfaces

- Responsive web and mobile design
- Standard layout with clear navigation
- GUI includes:
 - Login/Register
 - Dashboard with account summary
 - Transaction pages
 - Loan application pages
- Keyboard shortcuts: Enter (submit), ESC (close popups)
- Clear error messages in red

3.2 Hardware Interfaces

- ATM or branch terminal integration (Figures TBD)
- Printer support for receipts/statements

3.3 Software Interfaces

- Database: MySQL
- Authentication: LDAP/SSO
- Payment gateway APIs
- REST APIs for third-party services (future phase)

3.4 Communications Interfaces

- HTTP/HTTPS for web transactions
- SMTP for notifications
- API endpoints secured via OAuth 2.0

4 System Features

4.1 Account Management

4.1.1 Description and Priority

Manage creation, modification, and deletion of bank accounts.

Priority: High

4.1.2 Stimulus/Response Sequences

1. Customer requests account creation → system verifies and creates account
2. Staff updates account info → system confirms changes

4.1.3 Functional Requirements

- REQ-1: System shall allow account creation, edit, and closure
- REQ-2: System shall verify customer identity before creation

4.2 Transactions (Deposit, Withdrawal, Transfer)

4.2.1 Description and Priority

Customers perform secure transactions.

Priority: High

4.2.2 Stimulus/Response Sequences

1. Customer initiates transaction → system processes and logs transaction
2. Failed transaction → system notifies customer

4.2.3 Functional Requirements

- REQ-3: System shall process deposits, withdrawals, and transfers
- REQ-4: System shall maintain transaction history

4.3 Admin Customer Management

4.3.1 Description and Priority

Admin manages customer accounts and roles.

Priority: Medium

4.3.2 Functional Requirements

- REQ-5: Admin can add/edit/remove customer records
- REQ-6: Admin can assign access levels

5 Other Nonfunctional Requirements

5.1 Performance Requirements

- Response time < 2 seconds for online transactions
- Support up to 1000 concurrent users

5.2 Safety Requirements

- Regular data backups
- Confirmation prompts before deleting accounts

5.3 *Security Requirements*

- Encrypted passwords and sensitive data
- Role-based access control
- Audit logs for critical actions
- Authentication via SSO

5.4 *Software Quality Attributes*

- **Usability:** Intuitive for customers and staff
- **Maintainability:** Modular code
- **Reliability:** 99.5% uptime with recovery features
- **Portability:** Compatible across OS and browsers

5.5 *Business Rules*

- Minimum account balance as per bank policy
- Transactions exceeding limit require approval
- Only admins can delete accounts

6 Other Requirements

- Data exportable in CSV/PDF
- Multi-language support (Figures TBD)
- Compliance with GDPR/PCI DSS

Appendix A: Glossary

- **BMS:** Banking Management System
- **SSO:** Single Sign-On
- **GUI:** Graphical User Interface
- **LDAP:** Lightweight Directory Access Protocol
- **ATM:** Automated Teller Machine

Appendix B: Analysis Models

- Use case diagrams (Figures TBD)
- ER diagrams for database schema (Figures TBD)

Appendix C: To Be Determined List

- Payment gateway integration
- Multi-language support timeline
- Notification service providers