***Software Requirements Specification (SRS) For***

***Banking Management System***

**1. Introduction**

A banking system functions as the heart and soul of a functioning economy. Banking Management System is a group or network of organizations that provide financial services. The main types of business include commercial banks, national banks and investment banks.

A web-based application used for paying financial institutions for the services. Banking Management System also provides analytical tools to review, and approve compensation, budgets, and outflows.

**1.1 Purpose**

The purpose of the banking system is to provide a robust and secure platform for managing banking transactions, customer accounts and related financial activities. Banks play a vital part, as they are rule dwell unobtrusively within the foundation. Numerous of us never set foot in a bank. Our paychecks may be stored in a bank, and in the event that we require cash we'll go to an ATM. Ofcourse a bank may be included some way or another in giving us a credit card or a charge card and may be included some way or another in giving a vehicle or domestic credit. In numerous ways, bank is essential portion of the common clamor and clutter of present-day society.

**1.2 Scope**

Banking regulations are designed to facilitate banking, improve customer service and comply with regulatory requirements. It includes account management, trading, credit management, reporting and security features. It aims to provide solutions for more efficient and secure management of banking operations. It includes a variety of features and capabilities to improve processes, improve customer service, and ensure compliance.

**1.3 Document Conventions**

-Web Development (HTML, CSS, JAVASCRIPT, REACT)

-Database Management (Oracle, Node.JS, EXPRESS.JS)

- Use of UML for diagrams (Use Case, DFD, ERD etc.).

-IEEE Standard 830 for SRS document format.

**2. System Overview**

**2.1 Description of the Banking Management System**

Bank Management is a software solution designed to facilitate more efficient and secure management of bank transactions. It includes functions such as user account creation, authentication, marketing and advertising. Users can securely perform transactions such as deposits, withdrawal forms. The system prioritize security through strong authentication, access control and encryption. Adheres to quality standards to ensure fast and reliable response times. With the user’s ease of use , the system improves usability and compliance with regulatory requirements, providing a reliable and user-friendly banking system for both customers and administrators. The system can also incorporates reporting and analytics tools to provide insights into financial activities

**2.2 System Architecture**

The system will be built using the MERN stack, with a modular architecture to ensure scalability , maintainability and allowing for flexibility in adapting to evolving technology and regulatory requirements.

**3. Functional Requirements**

**3.1 User Accounts and Authentication**

1.**Account Creation :**

-Users can register for a new account online.

-Capture and verify user details, including personal information and identification documents.

2**.Authentication:**

-Implement a secure process for capturing and storing user information.

-Regularly update authentication logs for unusual patterns or potential security threats.

-Secure authentication methods such as username, passwords, biometrics(fingerprint), account lockout, device recognition and multi-factor authentication.

3. **Account Management:**

-Account types such as saving, current, or fixed.

- Can log-in / log-out at any time.

- Change account passwords any time .

-Can request for the closure of the accounts

4. **Configure System Settings:**

- Specify session timeout durations for user inactivity.

-Limits of transactions for various account types and notification for successful or failed transactions

- Define system parameters.

5. **Generate Reports:**

-Generate user activity reports(account statement, transactions reports, balance reports, compliance reports).

-Create data retention policies for reports.

6. **System Maintenance:**

- Perform routine system maintenance tasks.

-Schedule regular data backups to prevent data loss in the event of failures.

7. **Updating Account Information and Profiles:**

- Users with proper authorization shall be able to modify account information, including contact details, address, and account preferences.

-Update and maintain comprehensive customer profiles

-Confirmation of updated customer profiles.

8. **Security Measures:**

- Change transaction PIN.

9. **Transaction Operations:**

-Can check their account balance in real-time.

- Deposit and withdraw funds.

- Transfer funds internally.

- Request account statements.

-Notify users when transactions limits are reached.

10. **Initiated for Loan :**

-Give an application related to the purpose of the loan.

-Have to fulfil the eligibility criteria required as per particular loan for which customer apply for.

-Set-up notification alerts regarding to inform any further updating or approval or any other issues related to the loan purpose.

**3.2 Bank Employee**

1**. Employee Authentication:**

- Secure login with role-based access.

- Password management.

2.**Users Account Management:**

- Approve and update customer accounts and information .

-Perform account closures.

- Conduct customer identity verification(KYC)

3.  **Transactions Processing:**

- Facilitate deposits and withdrawals of customers from their accounts ,updating account balances accurately.

- Execute internal fund transfers.

- Verify transaction authenticity and generate account statements.

-The system shall support processing of loan-related transactions

4. **Provide Customer Support:**

- Assist users with technical issues and facilitate account issue resolution.

- Resolve general inquiries and complaints.

5. **Reports and Analytics :**

-Generate transactions reports.

-Analyse customer behaviour for targeted services.

6. **Process for Loan Transactions:**

-Verify customer eligibility for the loan.

-Disburse the loan amount.

-Setup an automated repayment schedule.

-Notify customer when loan get approve.

**3.3 Bank Manager:**

1. **Users Management :**

- Bank manager should able to add new users to the system.

-Manager should have capability to modify user details, such as name, contact information, and assigned role.

-The manager should be able to deactivate or suspend user accounts when needed, restricting access to the system.

2. **Employee Performance Monitoring:**

- The system has a dashboard for the mangers to view key performance for individual employees, including transaction processing times, accuracy, and customer satisfaction ratings.

3. **Access Permissions:**

- Provide employers to access data and information of the customers according to their roles.

-Grant permissions for updating and change-in information of customers as per required.

4. **Approval for Loan:**

- After verify supporting documents provided by the customer and eligibility criteria including income statements ,credit score and loan purpose.

**3.4 Customer Support**

1. **Assist with Account Issues:**

- Provide support for account-related problems.

- Guide users through troubleshooting steps.

2. **Provide Technical Support:**

- Assist users with technical difficulties.

- Collaborate with other teams for issue resolution.

3**. Handle General Inquiries:**

- Answer general questions about the banking system.

- Provide information about services.

**3.5 Transaction History**

1. **View Detailed Transaction History:**

- Access a detailed log of all transactions.

- Filter transactions by date and type.

- Export transaction history in standard formats.

**3.6 Bill Payment (External)**

**1. Add Payee:**

- Add external entities for bill payments.

**2. Make Bill Payments:**

- Initiate bill payments to external payees.

- Schedule recurring payments.

- Set payment reminders.

3. **View Payment History:**

- Access a history of all bill payments made.

**3.7 Facilities Provided to the Customer:**

**1. Updation of Minor to Major:**

- Apply by giving the application and valid identification .

-Basic criteria to fulfil (i.e. >18 age) to update the account.

**2.Apply for Debit/Credit Card:**

- Typically need an existing account with the bank and fill-out the application form.

-Customers apply for the debit card who are eligible (i.e. above age -18) and have valid identification documents such as government-issued ID(aadhaar card, pan card).

-For credit card, credit history might be accessed.

**3. Cheque -book Requirements:**

- Fill-out the application form provided .

-Submit proof of your residential addresses.

**4. Door-Step Services**:

-Apply by filling-out the forms with basic criteria (those who are >45 age) and handicapped customer.

-The system shall employ multi-factor authentication for customer verification.

-The system shall capture and store documentation related to services requests.

**5. Locker Facility**:

- Having account and have log-in/log-out authentication of the customers.

-Verify the identity of customers accessing the locker facility using official identification documents.

-Send notifications to customers about impending expirations of locker rentals.

-Alerts for any unauthorized attempts to access lockers.

**4. Non-Functional Requirements**

**4.1 Performance**

- The system should handle a minimum of 1000 concurrent users.

- Transactions should be processed within 5 seconds.

**4.2 Security**

- User authentication and authorization should follow industry best practices.

- All data transmission should be encrypted using SSL/TLS.

**4.3 Usability**

- The user interface should be intuitive and user-friendly.

- The system should support accessibility standards.

**5. System Interfaces**

**5.1 User Interfaces**

- The application will have web-based interfaces for both desktop and mobile users.

**5.2 External Interfaces**

- Integration with external systems for bill payment services.

**6. System Constraints**

- The application should be compatible with modern web browsers (Chrome, Firefox, Safari).

**7. Appendices**

Include any additional information or supporting documents.

**8. Glossary**

Define any technical terms or acronyms used in the document.