

4) Credit card management system

* problem statement:

To develop a secure and efficient system that manages credit card accounts, transactions & customer data while preventing fraud and ensuring regulatory compliance.

SRS document

Introduction

* purpose of the document:

To define the detailed software requirements & system specifications for the credit card management system, guiding development and ensuring stakeholder alignment.

* Scope of the document:

Covers credit card account creation, transaction processing, billing, paying, fraud detection, user authentication, reporting, & integration with banking systems.

* Overview:

The system facilitates managing credit card lifecycle including issuance, transaction monitoring, payment processing & customer support through a secure web interface.

* General description:

→ * Handles customer account management, transaction authorization, billing cycle, payment processing, fraud detection alerts & compliance reporting.

- supports multiple user roles: admin, customer service reps, and customers
- provides APIs for integration with banks & payment gateways

* Functional requirements

- User authentication & role management
- credit card application processing & approval workflows
- real time transaction authorization & recording
- Billing statement generation & delivery
- payment processing & account balance updates
- Fraud detection & alert system
- Reporting module for transactions & account summaries

* Interface requirements:

- web based UI accessible on desktops & mobile devices
- Integration APIs for banks, payment gateway & credit bureaus
- Secure communication via HTTPS
- Hardware support for card readers if needed

* Performance requirements

- Support upto 10000 concurrent users with sub-second transaction authorization
- Generate billing statements within 1 hour of cycle end
- 99.9% system availability
- Real time fraud detection with alerts within seconds

* Design constraints:

- must comply with PCI DSS
- Use encrypted storage for sensitive data
- Compatible with existing banking infrastructure
- Support modular architecture for future scalability

* Non functional requirements

- High security & data privacy
- User friendly & accessible interface
- ⇒ System must be scalable to accommodate growing users & transactions
- Reliable backup & disaster recovery mechanisms
- Maintainability with modular code & documentation

* Preliminary schedule & Budget ~~estimation~~

- Requirement analysis - 3 weeks
- System design - 4 weeks
- Development - 10 weeks
- Testing - 4 weeks
- Deployment - 2 weeks
- ~~Budget~~ estimation: 25-30 lakhs