

Credit Card Processing

problem statement

To design & develop a credit card processing system to automate all activities with little to no human interaction.

SRS document

1) Introduction

1.1 Purpose:

This document specifies requirements for a credit card processing, which securely handles transactions between customers, merchants & banks.

1.2 Scope:

The system will support payment authorization, authentication, settlement, fraud detection, reporting. It improves security, accuracy & speed of transaction.

Estimated development time is 6-7 month

1.3 Overview:

This system provides secure, end-to-end payment processing with support for multiple card providers & fraud prevention mechanism.

2) General description

- users: card holders, merchants, banks & admin

- user characteristics:

- customers require simple, secure & payment process
- merchants need reliable approval & reporting
- banks & admin need transaction logs & fraud monitor

- feature: authorization, settlement, reporting, fraud detection
- benefit: fast, accurate & secure credit card transaction

3) functional requirements

- transaction authorization & authentication
- credit card validation & fraud detection
- clearing & settling between merchant & bank
- secure storage of transaction
- refund & chargeback processing

4) Interface requirements

- User interface: Merchant/admin dashboard, secure payment screen for customers
- software interface: databases, payment gateway, fraud detection API's & bank secure
- communication: secure transmission using SSL/TLS encryption

5) Performance requirements

- Handle 1000+ simultaneous transactions
- authorization response time ≤ 2 s
- settlement completed within 1 day
- Uptime $> 99\%$

6) design constraints

- Must comply with PCI DSS & banking standards
- work on server (cloud env)
- use AES/RSA encryption
- daily backups & disaster recovery required

7) Non functionality attributes

- : security : strong encryption
- : reliability : no loss of transaction data
- : portability : supports web, mobile, IOS system
- : scalability : Handle growth in transaction volume
- : data integrity : No unauthorized modification
- : availability : 24/7 operation

8) Preliminary schedule & budget

Schedule

- : requirement analysis - 4 weeks
 - : design - 5 weeks
 - : development - 12 weeks
 - : Testing - 3 weeks
- Total - 26 weeks

Budget

- : development : ₹ 60 lakh
- : compliance & security audits : ₹ 13 lakh
- : Infrastructure & maintenance : ₹ 13 lakh