

2. Software Requirement Specification for credit card processing

1. Introduction

- Purpose: The purpose of this document is to outline the functional and non-functional requirements for a secure credit card processing system, which facilitates transactions between merchants and cardholders.
- Scope: The system will support multiple card types (Visa, Mastercard) and offer real-time processing, fraud detection, and reporting tools. It is designed for integration with e-commerce platforms and point-of-sale systems.
- Overview: The credit card processing system will handle smooth payment transactions for both online and in-person purchases. The system will handle authorization, settlement, and reporting of transactions, ensuring compliance with payment industry standards.

2. General Description

• Product perspective:

The system will work as an intermediary between the merchant and the credit card companies, managing payments and

- User characteristics:
Users will include merchants, cardholders, and system administrators. The system will be easy to use for both technical and non-technical staff.
- System constraints:
It must meet PCI DSS (Payment Card Industry Data Security Standard) and ensure secure transaction handling.

3. Functional Requirements

- Card authorization
- payment gateway integration
- Fraud detection and prevention
- Transaction reporting and auditing
- Chargeback and refund handling.

4. Interface Requirements

- Web API for integration with e-commerce platforms.
- point-of-Sale Software interface for merchants

5. Performance Requirements

- Must process transactions in under 3 seconds.
- Support for up to 1000 transactions per second during peak times.

6. Design Constraints

- must comply with PCI DSS Standards for Security.
- The System must be designed for easy integration with third-party merchant systems.

7. Non-Functional Attributes

- Security: End-to-End encryption and tokenization of credit card information
- Reliability: 99.999% uptime 24x7 availability
- Scalability: must be able to handle high transaction volumes across multiple merchants.

8. Preliminary Schedule and Budget

- Development Timeline: 9 months.
- Estimated Budget: \$250,000 for the initial development phase.