

Software Requirements Specification for credit card processing system

1. Introduction

1.1 Purpose

It is a secure system designed to authorize, process and settle credit card transactions for merchants. This SRS covers the core transaction processing functionalities including authorization, capture, refund and settlement.

1.2 Document Conventions

- Requirements are stand alone and do not inherit priority from other requirements.
- IEEE format

1.3 Intended Audience and Reading suggestions

- This SRS is intended for developers, project managers, testers and stakeholders. Readers are encouraged to start with the specific requirements based on their roles.

1.4 Project Scope

- It supports authorization, settlements, refunds handling and fraud detection. The system aligns with organizational goals to modernize and secure transaction handling.

1.5 References

Credit card network API guides

2 Overall Description

2.1 Product perspective

- It is a standalone system replacing older payments system. It interfaces with card networks, banking APIs. The system supports integration with external services through standardized APIs.

2.2 Product functions
The system authorizes, processes payment, processes settlement, handles chargeback and generates reports.

2.3 User classes and characteristics
User groups includes customers, admin, staff and developers.

2.4 Operating Environment
The system runs on a cloud with database. 2.0 for documentation.

2.5 User documentation
It will be provided in PDF and will be integrated.

2.6 Assumptions and Dependencies
The system depends on stable network, access to cloud info. It uses API to interact with the system through security.

3. Specification requirements

3.1 Functional requirements

- Authorize transaction
- Capture payment
- Process merchant
- Keep transaction history

3.2 External Interface

- use standard network messaging
- provide RESTful API

3.3 External Systems

- Role based access
- Real time monitoring
- Automated batch processing

3.4 Non-functional

- 99.9% system availability
- Encrypt all data
- Handles 10,000 concurrent users

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- signed to authorize, the core transaction including authorization.
- and do not requirements.
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velopers, project holders. Readers the specific roles.
- Settlements, detection. The final goals to: usation handling.
- ideas
- playing older with card the system external services
- 2.2 Product function
The system authorizes transactions, captures payments, processes settlements, handles chargeback and generate reports.
- 2.3 User classes and characteristics
User groups includes customer, merchant, admin, staff and developers.
- 2.4 Operating Environment
The system runs on a cloud platform with database. 2.0 for secure communication.
- 2.6 User documentation
→ will be provided in both formats.
It will be integrated in the user interface.
- 2.7 Assumptions and Dependencies
→ The system depends on external card networks, stable API's, and ongoing access to cloud info. It assumes user access to system through secure channels.
3. Specification requirements
- 3.1 Functional requirements
- Authorize transaction within 3 sec
 - capture payment after merchant confirms
 - process merchant-initiated refunds
 - keep transaction logs for 2 years
- 3.2 External Interface Requirements
- use standard version for payment network messaging
 - provide Restful APIs for merchant
- 3.3 External System features
- Role based access control
 - Real time monitoring dashboard
 - Automated backup and recovery
- 3.4 Non-functional Requirements
- 99.9% system availability
 - Encrypt all sensitive data
 - Handles 10,000 transaction/sec