# **Software Requirement Specification(SRS)**

# **Problem Statement:**

Merchants face various challenges with existing credit card processing systems, including slow transaction processing, high processing fees, and security vulnerabilities. These limitations not only impact the merchant's bottom line but also result in dissatisfied customers. Therefore, there is a need for a credit card processing system that offers fast and secure transaction processing, low processing fees, and robust fraud prevention measures.

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# **Introduction**:

## **Purpose of this Document:** The main purpose of this document is to specify the software requirements for the credit card processing system. It will serve as a guide for the development team to design, develop, test and deploy the system. The document will also be used as a reference by the stakeholders to validate the system and ensure that it meets their expectations.

## **Scope of this document** – The scope of this document is to provide a detailed description of the credit card processing system. It includes the requirements for the system's functionalities, interfaces, performance, and design constraints. The document also covers the non-functional attributes of the system, such as security, reliability, portability, and scalability. The development cost and time required for the project are also included.

## **Overview** – The credit card processing system is designed to provide a secure and efficient payment solution for credit card transactions. The system will allow merchants to process payments from customers using their credit cards. The system will also provide an interface for customers to enter their credit card details and complete the payment process.

# **General description:** The credit card processing system is designed to cater to the needs of both merchants and customers. The system will be user-friendly and intuitive, allowing merchants to process payments quickly and customers to complete transactions easily. The system will also provide real-time transaction processing, ensuring that transactions are completed quickly and efficiently.

# **Functional Requirements:**The functional requirements for the credit card processing system are as follows:

# Allow merchants to process payments using credit cards

# Provide an interface for customers to enter their credit card details

# Process transactions in real-time

# Verify the validity of credit card details

# Track transaction history

# Provide payment confirmation to merchants and customers

# Provide fraud prevention measures

# Allow for refund processing

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# **Interface Requirements:**The credit card processing system will have the following interface requirements:

* + API for merchants to integrate the system with their website or application
  + Payment gateway for customers to enter their credit card details
  + Data encryption for secure transmission of data
  + Payment confirmation email for customers
  + Transaction history report for merchants

# **Performance Requirements:**The credit card processing system will meet the following performance requirements:

# Process transactions in real-time

# Handle a large volume of transactions

# Maximum response time of 2 seconds

# Maximum error rate of 0.01%

# **Design Constraints:** The design constraints for this projects are as follows:

* + Use industry-standard encryption algorithms to secure credit card information.
  + Comply with Payment Card Industry Data Security Standards (PCI DSS).
  + Use scalable and fault-tolerant architecture to handle high volumes of transactions.
  + Integrate with popular shopping carts and e-commerce platforms.

# **Non-Functional Attributes:** The system will provide the following non functional attributes:

# . Security: the system shall provide a secure platform for processing credit card transactions and storing payment information.

# Portability: the system shall be compatible with popular operating systems and web browsers.

# Reliability: the system shall be reliable and available 24/7.

# . Reusability: the system shall be modular and easy to integrate with other systems.

# Application compatibility: the system shall be compatible with popular shopping carts and e-commerce platforms.

# Data integrity: the system shall ensure the integrity and accuracy of payment information.

# Scalability capacity: the system shall be scalable to handle high volume of transactions.

# **Preliminary Schedule and Budget:** The development of the credit card processing system is estimated to take 6 months and will require a budget of $500,000. The project will involve a team of 10 developers and testers