2) Credit card processing system (CCPS)

1. Introduction

1.1 Purpose of this Document

The purpose of this document is to define the requirements of the (CCPS), which enables secure and compliant processing of credit card transactions for online & in-store purchases

1.2 Scope of this Document

This document outlines the features and interac-tions of the CCPS, including credit card processing system, fraud detection. The system will work with multiple payment gateways & comply with PCI-DSS standards.

1.3 overview

The CCPS ensures that credit card transactions are handled securely & efficiently. It validates credit card details, processes payments, manages refunds and chargebacks.

2. General Description

The credit card processing system will allow merchants to securely process credit card transactions. The system will interface with financial institutions & payment gateways, ensuring compliance with industry regulations & offering services like real-time payment processing, refunds, & chargebacks.

Key features include:

secure payment processing
Real-time authorization
Fraud detection & prevention

3. Functional Requirements

- Credit card validation : The system must validate card no., expiration dates, & CVV.
- Payment processing : support for one-time & recurring payments
- Refunds & chargebacks : The system must allow for refunds & manage chargebacks
- Fraud detection : Real-time fraud prevention using predefined rules & algo.
- Transaction Reporting : Detailed reports on transaction history for merchants

4. Interface Requirements

- Merchant Interface
- Customer Interface
- Admin Interface
- Bank Integration

5. Performance Requirements
The system should support up to 1 million daily transactions. Response times for payment proces-sing should be under 2 sec. Transactions data must be processed & stored in real time.

6. Design constraints
The system must comply with PCI-DSS for secure handling of cardholder data. Integra-tion with existing payment gateways should be seamless, requiring minimal changes to external systems.

7. Non-Functional Attributes
- security: All sensitive data must be encrypted ensuring PCI-DSS compliance.
- Scalability: The system must scale horizontally to accommodate growing transaction volumes.
- Availability: The system must be available 99.99% of the time, with a backup & disaster recovery plan in place.

8. Preliminary schedule & Budget
The estimated project duration is 9 months, with a total budget of $300000. This includes development, testing & deployment.

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