* Credit Card Processing

1. Problem statement

The existing credit card processing system lacks efficiency and security measures, leading to potential fraud risks and customer dissatisfaction. An upgraded credit card processing system is imperative to ensure seamless transactions, enhance security & maintain customer trust.

2. Introduction

2.1 Purpose

The purpose of credit card processing functionality is to enable seamless and secure payment transactions for various services provided by various platforms.

2.2 Scope

This section outlines the requirements & specifications for integrating credit card processing capabilities into various softwares. It includes handling payment authorizations, processing transactions and generating payment receipts.

2.3 Overview

The credit card processing functionality will allow guests to make payments using credit or debit cards for services rendered by various software. It will integrate with payment gateway services to securely processs transactions.

3. Functional Requirements

- Payment authorization
  - validate credit caud information provided by guest

- verify cardholder identity & authorization.
• Transaction processing.
- Initiate payment transactions securely through integrated payment gateway services.
- Handel different types of transactions (eg: authorization, capture, refund).
• Transaction status monitoring
- Provide real-time updates on transaction status (approved, declined, pending).
- Handel errors or exceptions during transaction processing securley.
• Payment reciept generation.
- Generate and email payment recipts to guests upon sucessful transaction completion.

4. Interface requirements.
The credit card processing functionalities will interact with:
• payment gateway API's for tran. processing.
• User interface components for entering & validating credit card details.
• Email service for sending payment receipts to guests.

5. Performance requirements.
• Transaction processing time <5 seconds
• System availability for processing payments 99.99% uptime.
• Secure transmission of credit card data using encryption protocols.
• PCI DSS for handeling cardholder data.

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6. Design Constraints.
- Integration with certified payment gateway providers.
- Use of tokenization for storing & transmitting sensetive cardholder data securely.
- compliance with regulations & standards governing electronic payments and data security

7. Non-functional attributes.
- Security: Encryption of credit card data during transmission & storage.
- Reliability: Fault-tolerant architecture to ensure uninterrupted payment processing.
- Scalability: Ability to handel high volume of payment transactions during peak periods.
- Compliance: Adherence to PCI DSS requirements for data security.

8. Preliminary Schedule and Budged.
The integration of credit card processing functionality is estimated to take 2 mnths with an additional budget of $20,000. This includes development, testing and certification processes required for compliance with industry standard