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2. Credit card Processing

Problem Statement:

The existing credit card processing system lacks eff-cy and security measures. leading to potential frau risks and customer dissatisfaction. An upgraded credit card processing system is imperative to ensure seamles transactions, enhance security & maintain customer trust

1. Introduction

1.1. Purpose of this Document

The purpose of this document is to enable seamle and secure payment transactions for hotel reservations, booking and other services offered by the hotel.

1.2. Scope.

This section outlines the requirements and specificat - s for integrating credit card processing capabilities int various software system. It includes handling payment authorization, processing transactions securely, and generating payment receipts.

1.3. Overview

The credit card processing functionality will allo guests to make payments using credit or debit cards for services rendered by the software. It will integ -te with payment gateway services to securely proces transactions record and ensure compliance with industry standards for data security

2. General Description:-
- Authorization of credit card transactions in real-time
- Settlement of transaction, including capturing funds and generating receipts
- Management of customer accounts and payment methods
- Integration with payment gateways and merchant services providers.

3. Functional Requirements:
* Payment Authorization
+ Validate credit card information provided by the guest
+ Verify cardholder identity and authorization for the transactions.
* Transaction Processing
+ Initiate payment transactions securely through integrated payment gateway services
+ Handle different types of transactions (e.g., authorization, capture, refund) as per hotel staff policies.
* Transaction Status Monitoring
+ Provide real-time updates on transaction status (approved, declined, pending) to hotel staff
+ Handle errors or exceptions during transaction processing gracefully.
* Payment Receipt Generation
+ Generate and email payment receipts to guests upon successful transaction completion
+ Include transaction details such as amount, date, payment method, and confirmation number

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4. Interface Requirements
* Payment gateway APIs for transaction processing
* User interface components for entering and 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 % up
* Secure transmission of credit card using encryption protocols.
* compliance with payment card industry data security standard (PCI DSS) for handling cardholder data.

6. Design Constraints
* Integration with certified payment gateway providers
* Use of tokenization for storing and transmitting sensitive cardholder data securely
* Compliance with regulations and standards governing electronic payments and data security.

7. Non-Functional Attributes
* Security : Encryption of credit card data during transaction transmission and storage.
* Reliability : Fault-tolerant architecture to ensure uninterrupted payment processing.
* Scalability : Ability to handle a high volume of payment transactions during peak periods.
* Compliance : Adherence to PCI DSS requirements for data security and compliance with relative regulations.

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8. Preliminary Schedule and Budget:

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

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