

Credit Card Processing

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, and maintain customer trust.

1. Introduction

1.1. Purpose.

The purpose of credit card processing functionality is to enable seamless and

secure payment transactions for hotel reservations, bookings and other services offered by the hotel.

1.2 Scope.

This section outlines the requirements and specifications for integrating credit card processing capabilities into the Hotel Management Software. It includes: handling payment authorizations, processing transactions securely, and generating payment receipts.

1.3 Overview

The credit card processing functionality will allow guests to make payments using credit or debit cards for services rendered by the hotel. It will integrate with payment gateway services to securely process transactions and ensure.

compliance with industry standards for data security

2. Functional Requirements

- Payment Authentication
 - Validate credit card information provided by the guest
 - Verify cardholder's identity and authorization for the transaction.
- Transaction Processing
 - Initiate payment transactions securely through integrated payment gateway services.
 - Handle different types of transactions as per hotel policies.
- Transaction Status Monitoring
 - Provide real-time updates on transaction status to hotel staff.
 - Handle errors or exceptions during transaction processing gracefully.
- Payment Receipt Generation
 - Generate & email payment receipts to guest upon successful transaction completion.
 - Include transaction details such as amount, date, payment method and confirmation number.

3. Interface Requirements

- The credit card processing functionality will interact with
 - Payment gateway APIs for transaction processing.
 - User interface components for entering

And validating credit card details

• Email service for sending payment receipts for guests.

4. Performance Requirements:

- Transaction processing time: < 5 seconds
- System availability for processing payments: 99.99%
- Secure transmission of credit card data using encryption protocols
- Compliance with Payment Card Industry Data Security Standards for handling credit card data

5. Design Constraints

- Integration with existing 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

6. Non-Functional Attributes

- Security: Encryption of credit card data during 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 relevant regulations

7. Preliminary Schedule and Budget:

The completion of credit card processing is estimated to take 1 month with an additional budget of \$20,000. This includes development, testing and verification phases required for compliance with industry standards.

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