

## 2) Credit Card Processing

### Problem Statement:

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

### 1. Introduction

#### 1.1 Purpose:

The purpose of credit card processing functionality is to enable seamless & secure payment transactions for hotel reservations, bookings, & other services offered by the hotel.

#### 1.2 Scope

This section outlines the requirements & specifications for integrating credit card processing capabilities into the hotel management software. It includes handling payment authorizations, processing transactions securely & generating payment receipts.

#### 1.3 Overview

The credit card processing functionality will allow guests to make payments using credit or debit cards for services provided by hotel. It will integrate with payment gateway services to securely process transactions & ensure compliance with industry standards for data security.



## 2. General Description

- Authorization of credit card transactions in real-time
- Settlements of transactions, including capturing funds & generating receipts
- Management of customer accounts & payment methods
- Integration with payment gateways & merchant services providers

## 3. Functional Requirements

- Validate credit card information
- Transaction processing
- Handle different type of transactions
- Payment Receipt generation
- Handle errors & exceptions during transaction
- Generate & email payment receipts to guests upon successful transactions
- Provide Real-time updates on transactions status

## 4. Interface Requirements

- Payment gateway AP's for transaction 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%
- Secure transmission of credit card data using encryption protocols
- Compliance with payment card industry data security standard (PCI DSS) for handling cardholder data.



## 6. Design constraints

- integration with unified payment gateway providers
- use of tokenisation for storing & transmitting sensitive cardholder data securely.
- compliance with regulations & standards governing electronic payments & data security.

## 7. Non-functional attributes

- **Security**: Encryption of card during transmission
- **Reliability**: Fault-tolerant architecture to ensure uninterrupted payments processing.
- **Scalability**: Ability to handle a high volume of payment transactions during peak periods.
- **compliance**: Adherence to PCI DSS requirements for data security.

## 8. Preliminary Schedule & 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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