Credit Card Processing (CCP).

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 transaction, enhance security and maintain customer trust.

1. Introduction:

1.1 Purpose of this document:
The purpose of CCP functionality is to enable seamless and secure payment transactions for hotel reservations, booking and other services offered by the hotel.

1.2 Scope of this Document:
This section outlines the requirements and specifications for integrating credit card processing capabilities into various softwares. It includes handling payment authorization, processing transactions 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 various software. It will integrate with payment gateway service to securely process transaction.

2. General Description

The credit card processing system facilitates the following functions:

- Authorization of credit card transactions in real time,
- Settlement of transactions, including capturing funds and generating receipts.
- Management of customer accounts and payment methods.

3. Functional Requirements.

- Payment Authorization
  - Validate credit card information provided by guests.
  - Verify card holders identity f authorization.
- Transaction Processing
  - Initiate payment transactions securely through integrated payment gateway services.
  - Handle 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 securely.

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 99.9% uptime
- Secure transmission of credit card data using encryption protocols.
- PCI DSS for handling card holder data.

6. Design Constraints
- Integration with certified payment gateway provider.
- Use of tokenization for storing and transmiting sensitive 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 and storage.
- Reliability: Fault-tolerant architecture to ensure uninterrupted payment processing.
- Scalibility: Ability to handle high volume of payment transactions during peak periods.

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 process required for compliance with industry standards.