Credit Card Processing

Problem Statement

The current credit card processing system is inefficient and prone to errors, resulting in delayed payments, increased transaction costs, and dissatisfied customers. The system lacks the necessary security measures to protect against fraudulent activities, which leads to significant financial losses for both merchants and customers. Additionally, the system is not compatible with emerging payment technologies, limiting the options available to customers and merchants. Therefore, there is a need to develop a more secure, efficient, and flexible credit card processing system that can meet the evolving needs of customers and merchants.

Software Requirement Specification(SRS)

1.Introduction:

The software application that we will develop is a credit card processing system designed to enable businesses to process credit card transactions efficiently and securely. The system will be developed using Java programming language and deployed on a web server. The system will have a user-friendly interface and will be accessible through web browsers.

2. General Description:

The credit card processing system will be designed to enable businesses to accept credit card payments from their customers, process and authorize transactions, and manage payment information securely. The system will be integrated with payment gateways, such as PayPal or Stripe, to ensure secure payment processing. The system will allow businesses to view transaction details, generate reports, and manage payment information, such as card details, payment history, and refunds.

3. Functional Requirements:

3.1 Payment Processing:

The system should allow businesses to process and authorize credit card transactions securely.The system should integrate with payment gateways to ensure secure payment processing.

The system should provide an option to authorize and capture payments or authorize only.

3.2 Payment Management:

The system should allow businesses to manage payment information securely, such as card details, payment history, and refunds.

The system should enable businesses to view payment reports and transaction details.

3.3 User Management:

The system should allow businesses to manage user accounts securely.

The system should provide different user roles, such as administrators and regular users, with different access levels.

3.4 Integration:

The system should be integrated with payment gateways such as PayPal or Stripe.

4. Interface Requirements:

The user interface should be designed to be intuitive and user-friendly.

The interface should have different sections for different functionalities, such as payment processing, payment management, and user management.

5.Performance Requirements:

The system should be able to handle multiple payment requests simultaneously.

The system response time should be less than 2 seconds.

6.Design Constraints:

The system will be developed using Java programming language.

The system will be deployed on a web server, and the front-end will be developed using HTML, CSS, and JavaScript.

The system will use a MySQL database to store data.

7. Non-Functional Attributes:

7.1. Security:

The system should use HTTPS protocol to secure data transmission.

The system should use data encryption to secure payment information.

The system should have user authentication and authorization to ensure that only authorized users can access the system.

7.2. Usability:

The system should be accessible through web browsers on multiple devices, including desktops, laptops, and mobile phones.

7.3. Reliability:

The system should have backup and restore capabilities to ensure data availability in case of system failure or data loss.

8. Preliminary Schedule and Budget:

The development of the credit card processing system is expected to take approximately 4 months.

The estimated budget for the project is Rs.50,000, including development costs, hardware, and software.