

Credit card information system.

Problem statement :-

The credit card information industry faces challenges with transaction speed, security and integration with various banking systems. A reliable credit card information system is needed to ensure fast transaction, robust security measures. It should ensure secure storage and management of sensitive information.

Slope:-

Storing and managing customer credit card information securely, processing real-time transactions, including authorizations, payments and refunds, detecting and reporting fraudulent activities, support multiple types of cards (debit, credit, prepaid).

Functional requirements:-

- Credit card information has to comply with the PCI DSS individual bank guidelines.
- Check for validity for information in credit card information,

Functional Requirements

① User registration and authentication :-

User can register, update and delete their account.

② Credit card management :-

- add, update and remove credit card details.
- display credit card balance & available credit.

③ Transaction processing:-

- real-time transaction authorization and approval.
- processing refunds and chargebacks.

④ Fraud detection :-

- automatic detection of unusual transactions.
- immediate alerts for suspicious activity via email or SMS.

⑤ Payment gateway integration :-

Integration with multiple payment gateways for processing transactions.

Non Functional requirements

① Security :-

- data encryption for sensitive information.
- role based access control for system administrators.

② Performance :-

- system should handle high volume of transactions per second with minimal latency.
- real time fraud detection.

③ Scalability :-

It should support a growing number of users and transactions.

④ maintainability :-

Code should be modular and follow object-oriented principles for easy maintenance and future upgrades.

⑤ compliance:-

must comply with national and international financial regulations.

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