ii) Credit Card Processing:

1. Project Description:

The Credit Card Processing system is designed to facilitate secure transactions between businesses & customers. It must allow users to perform payments, check transaction history & provide gateways to process payments.

2. Problem Statement:

With the rise of e-commerce & online payments, there is a need for a secure & efficient system to process credit card payments and ensure fraud detection, data security, smooth transactions etc.

3. System Requirements:

3.1 Functional Requirements:

- > User authentication (admin, merchant, customer)
- > Credit card validation
- > Transaction history & reporting
- > Fraud detection mechanisms
- > Payment integration & billing.

3.2 Non-Functional Requirements:

- > High security for credit card data
- > Minimum downtime.
- > Fast response times
- > Scalability

3.3 Domain Requirements:

- > Integration with fraud detection systems.
- > Support for different currencies (international)
- > Abide to financial standards.

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4. Design Constraints:

→ Strong encryption protocols (AES/RSA)

→ Limited choice of APIs owing to wide acceptance.

→ Database constraints due to high transaction volume

→ Limited choice of libraries for fraud detection

→ Limited choice of protocols due to compatibility

5. Preliminary Schedule & Budget:

5.1. Preliminary Schedule:

> Requirement Analysis : 2 weeks

> System Design: 4 weeks

> Development: 10 weeks

> Testing: 3 weeks

> Deployment: 1 week.

Total Duration: 20 weeks.

5.2. Preliminary Budget:

> Development Team: $60k

> Hardware : $5k

> Software Licenses : $10k

> Miscellaneous Costs: $5k

Total Budget : $80k.