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Credit Card Processing System:

Problem statement
Existing credit card processing systems face efficiency, security and scability, leading to risks such as fraud and system downtime. A robust credit card processing system is needed to provide real-time authorization, seamless settlement and effective customer management while ensuring compliance with industry standards and regulations.

1) Introduction:

1.1 Purpose of this document:
It is to outline the specifications and requirements for the development of CCPS. It serves as a comprehensive guide for the development team, stakeholders and users, detailing the objectives, scope and overview of the system.

1.2 Scope of this document:
This document defines the overall working and objectives of credit card processing system. It describes the value it will provide to customers and stakeholders, ensure secure and efficient handling of credit card transactions.

1.3 Overview:
It is designed to facilitate the proces of credit card transactions securely and

efficiently. It provides a centralized platform for merchants to accept payments for customers using credit cards, ensuring compliance with industry standards and regulations.

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
- Integration with payment gateways and merchant service providers.

3) Functional Requirements:
3.1 Authorization:
- Ability to verify the validity of credit card information, including card number, expiration date, and CVV.
- Real-time authorization of transactions and initiate the settlement process.
3.2 Settlement:
- Capture funds from authorized transactions and initiate the settlement process.
- Generation of transaction receipts for merchants and customers.

3.3 Customer management:
- Registration of new customers with payment information and preferences.
- Ability to update and manage customer accounts, including adding or removing payment methods.

3.4 Integration:
- Integration with payment gateways and merchant services providers for processing transactions.
- Compatibility with various payment methods including credit cards, debit cards and digital wallets.

4) Interface Requirements
4.1 User Interface:
- Intuitive and user-friendly interface for merchants to initiate and manage transactions.
- Secure login and authentication mechanisms for accessing the system.

4.2 System Interfaces:
- Integration with external payment gateways and merchant service providers via APIs.
- Secure communication protocols for transmitting sensitive payment data.

5) Performance requirements:

Response Time:
Quick response time for authorizing

transaction and processing payments.
- Scalable architecture to handle peak transaction loads without degradation in performance.

5.2 Reliability
- Reliable transaction processing with minimal downtime or system failures.
- Fault tolerance to ensure uninterrupted service availability.

6) Design constraints
6.1 Security
- Compliance with industry standards such as PCI DSS for securing payment card data.
- Encryption of sensitive payment information during transmission and storage.

6.2 Compliance:
- Adherence to regulatory requirements and standards governing credit card processing, including GDPR & CCPA.
- Regular audits and security assessments to maintain compliance.

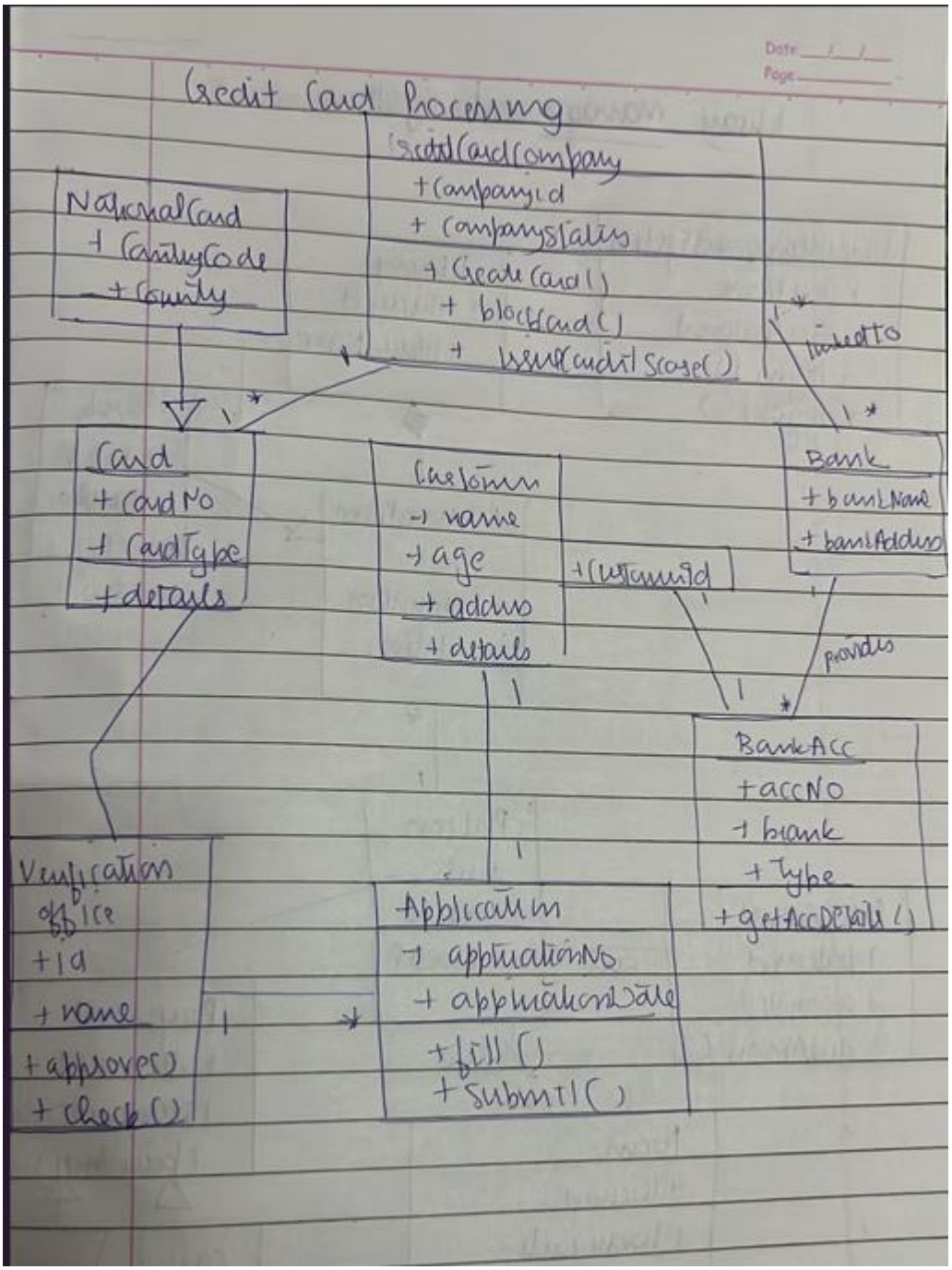
7) Non-functional Attributes:
7.1 Scalability:
- Ability to scale the credit card processing system to accommodate growth in transaction volume and user base.
- Elasticity to adapt to changing busin

needs and market demands.

7.2 Portability:
- Compatibility with different operating systems and hardware platforms.
- Cloud deployment options for flexibility and scalability.

8) Preliminary Schedule and Budget:

The development of the credit card processing system is estimated to take approximately 9 months with a budget of $ 100,000. The schedule includes phases for requirements gathering, design, implementation, testing and deployment.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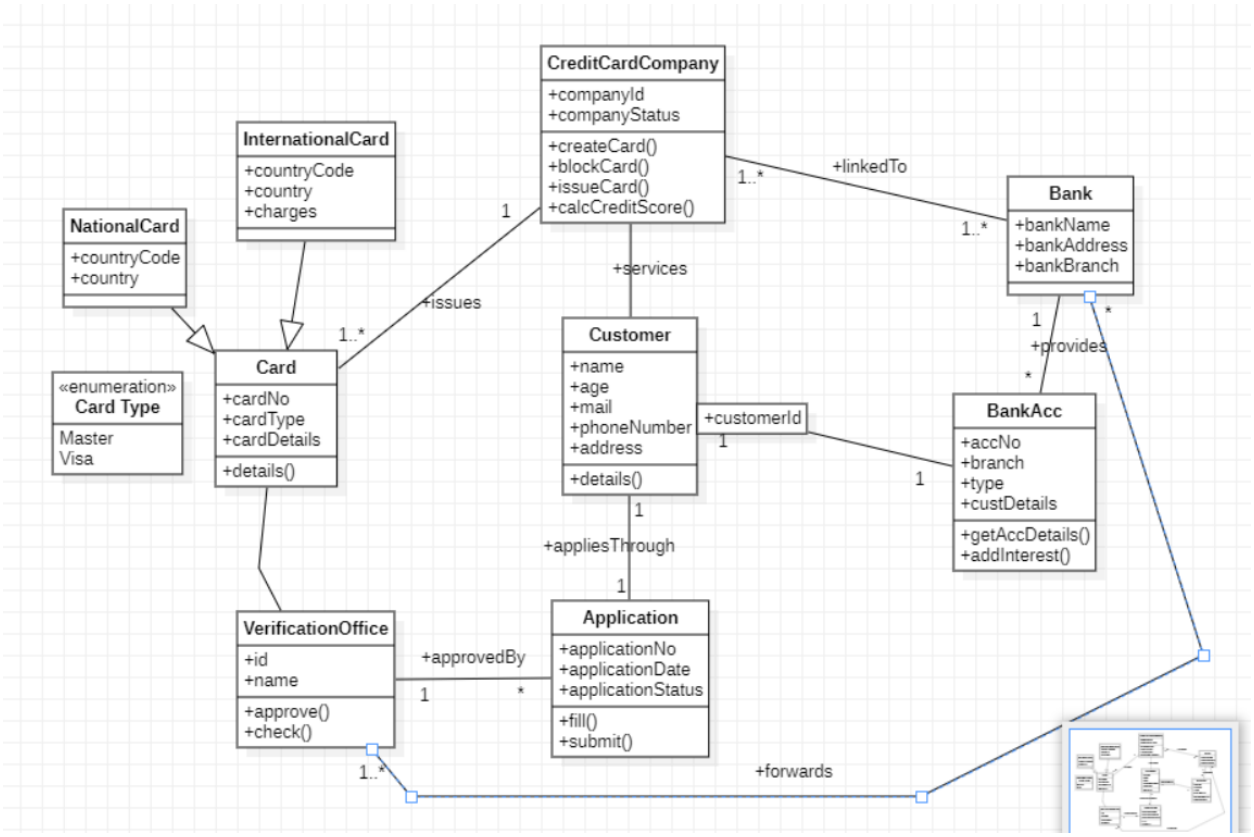
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