Introduction to Payment systems

Value exchange

merchant -> Gateway - > acquirer processor -> Payment network -> issuer processor -> cardholder

POS terminal -> point of Sale (physical purchase)

E com- > Online purchases

acquirer process requires highly available fault tolerance system - > HP Non-stop commonly used

Iso 8583 - format used for payment ,ISO 8583 is a global standard set by the International Organization for Standardization (ISO) that defines how credit and debit card transaction messages are structured.

BIN - Bank Identification number
 is the first four to six digits of a credit or debit card that identify the issuing bank and card type.

SCHEMES -In the context of credit cards, a card scheme (also known as a card brand or payment network) is the central network that provides the infrastructure and rules for processing transactions, enabling consumers to use cards from various financial institutions at different merchants worldwide. Major examples include Visa, Mastercard, and American Express. Card schemes set the operating rules, security standards, and fee structures for the payment network they own.

Scalability - system should automatically expand based on the load - > TPS - Transaction per second
SLA - Service level agreement is a contract that defines the level of service expected from a provider, outlining the metrics to measure performance, such as uptime and response times, and the remedies or penalties if those levels aren't met.

Transaction - > Authorization + Completion
t +2 - > transacted day + 2 days
Transaction rollbacks / errors - Can delay completion

Asynchronouss transactions - won't wait untill the action is Completed
Synchronous transactions - waits untill the action is completed
Idempotency is a property of operations where executing them multiple times has the same effect as executing them once.
PAN - Permanent Account Number
TCP - Transmission Control Protocol (TCP)
RRN - Retrival Reference Number