

# Vinayakar Matric Hr.Sec.School

E-  
**PAYMENT  
SYSTEMS**

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## DISCUSSION POINTS

- What is Electronic Payment Systems.
- Various types of E-Payment Methods.
- To learn the basics of:
  - Card Based Payment Systems.
  - Electronic Account Transfer.
  - Electronic Cash Payment Systems.
  - Mobile Payment and Internet Payment Systems.

# INTRODUCTION

- Money becomes the major medium of exchange.
- The media used for transferring the value of money is very diversified.
- Physical money is the traditional and most widely used payment instrument.
- As the volume and variety of transactions expand, the volume of money also expand.

## DEFINITION

- An Electronic payment system is a financial arrangement that consists of an mediator to facilitate transfer of money-substitute between a payer and a receiver.
- Payment system is an essential part of a company's financial operations.
- As a result there are more than 750 payment systems throughout the world.

# CLASSIFICATION OF ELECTRONIC PAYMENT SYSTEM

- Based on the value of money transactions, processing time, processing requirements, security issues, EPS is generally classified into two types. They are:
  - Micro electronic Payment System.
  - Macro electronic Payment System.



## MICRO ELECTRONIC PAYMENT SYSTEM

- It is an online-payment system designed to allow efficient and frequent payments of small amounts.
- It is relaxed by using light weight cryptographic primitives and off-line payment verifications.
- Security of micro electronic payment systems is comparatively low.
- It is mainly designed to pay for simple goods on the internet.
- The Micro EPS can be explained as:
  - Customer provides the authentication and the payment processor issues micro payments.
  - Customer pays the micro payments to the online service provider and gets the requested goods or services from them.
  - Service provider deposit micro payments received from the customer to the payment processor and gets the money.

## MACRO ELECTRONIC PAYMENT SYSTEM

- It supports payments of higher value.
- Security requirements are more rigorous.
- Some of the popular macro online payment systems are:
  - Card based payment systems.
  - Electronic account transfer.
  - Electronic cash payment systems.
  - Mobile payment and Internet payment systems.

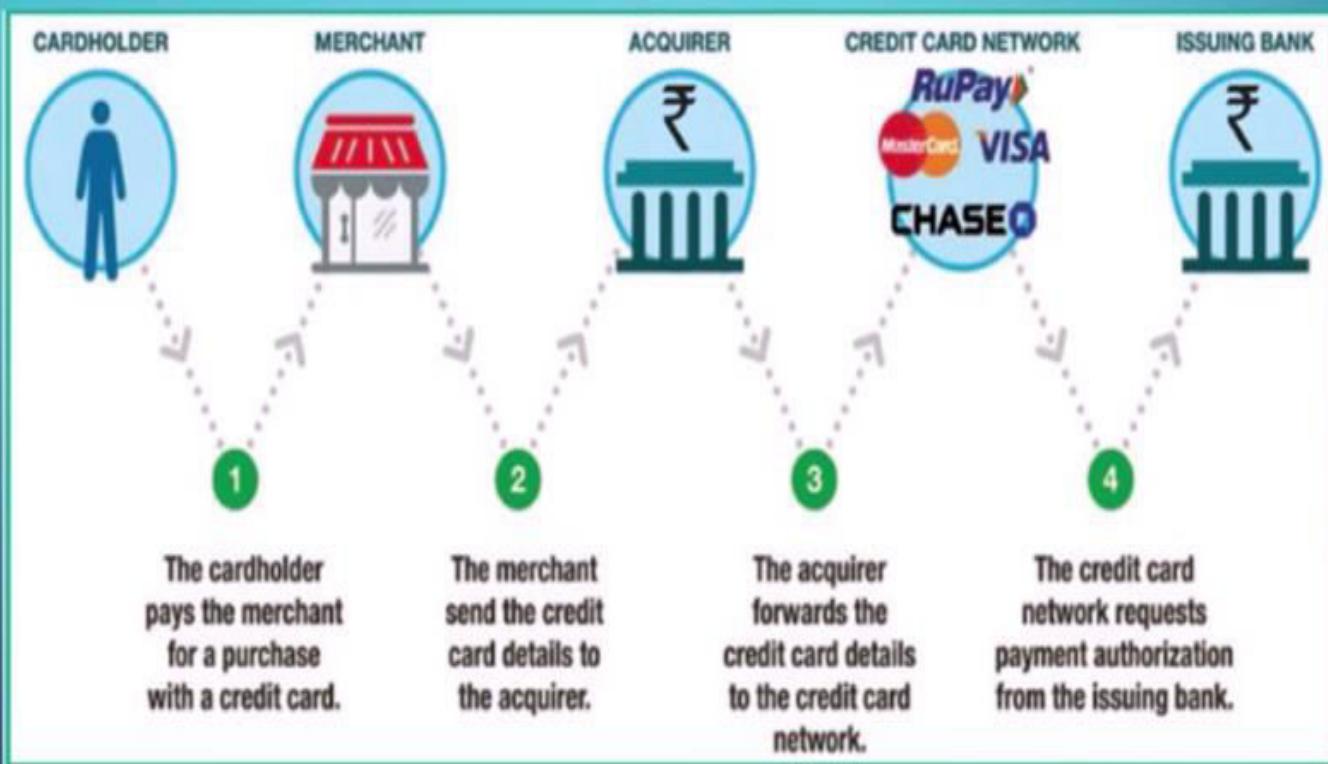
## CARD BASED PAYMENT SYSTEMS

- Payment cards are plastic cards that enable cashless payments.
- It authenticates the card holder on behalf of the card issuing company.
- Based on the transaction settlement method there are three widely used card payment systems are:
  - Credit card Payment systems (Pay Later)
  - Debit card Payment systems (Pay now)
  - Stored value card based payment systems (Pay before)

# CREDIT CARD

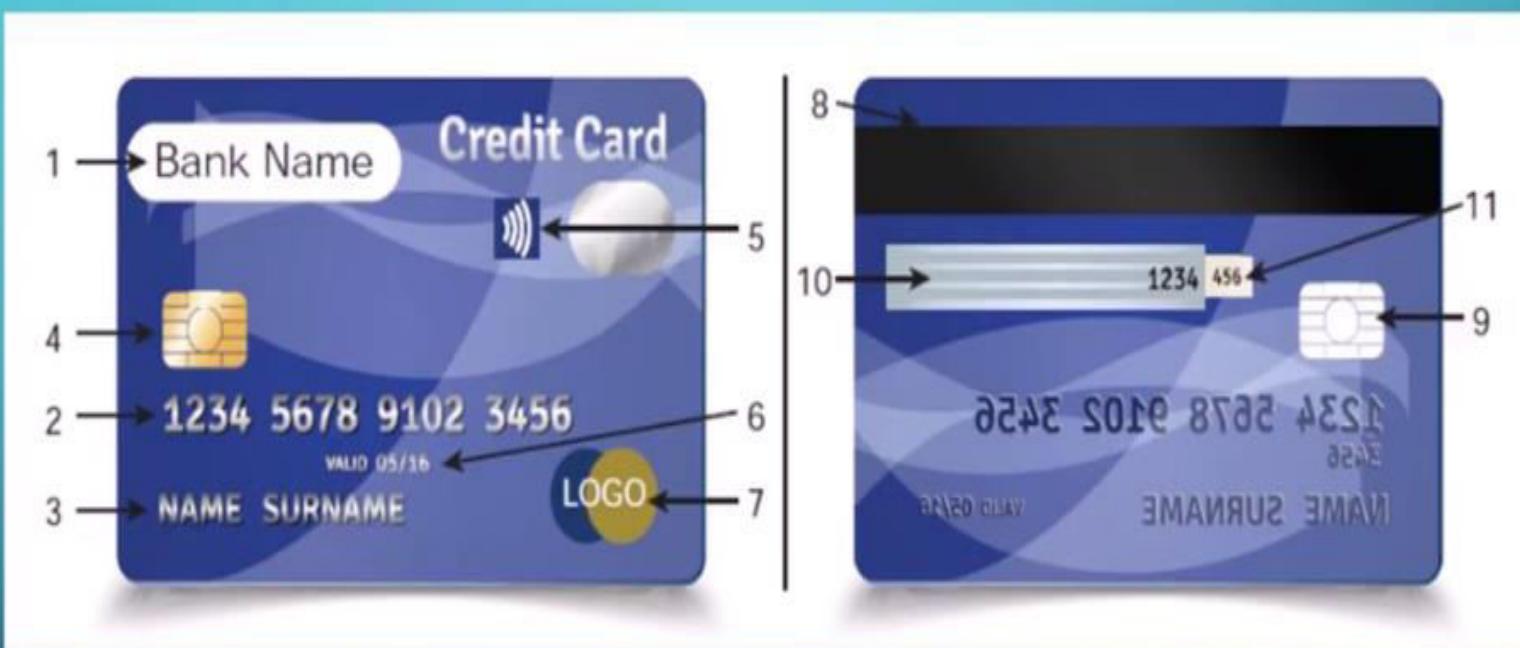
- Normally used for retail transactions.
- Every credit card account has a purchase limit set by the issuing bank or the firm.

## KEY PLAYERS OF CREDIT CARD



# ANATOMY OF A CREDIT CARD

- All cards usually are of size 85.60 mm width x 53.98 mm height, rounded corners with a radius of 2.88 mm to 3.48 mm and thickness of 0.76 mm.



## DEBIT CARD

- Debit card is an electronic payment card where the amount is deducted directly from the card holder's account upon authorization.
- Debit card functions as ATM card.
- The debit card and credit card are identical in their physical properties.
- Currently there are three ways of processing debit card transactions:
  - EFTPOS.
  - Offline Debit.
  - Electronic Purse Card System.

## STORED VALUE CARDS

- Stored value card is a type of debit card that is pre-loaded with certain amount.
- It has a default monetary value.
- Customers no need to have a bank account to get prepaid cards.
- There are 2 types of stored value cards:
  - Closed loop(single purpose)
  - Open loop( multipurpose)

## SMART CARDS

- The modern version of card based payment is smart cards.
- It holds a EMV chip similar to SIM card.
- Two types of Smart Cards:
  - Contact smart cards.
  - Contactless smart cards.

## **ELECTRONIC CLEARING SERVICE**

- ECS can be defined as repeated transfer of funds from one bank to multiple banks.
- This system provides the convenience of paperless payments.
- Small value repetitive payments such as paying EMI can be done in ECS.
- Advantages of this system are bulk payments, guaranteed payment, etc.
- ECS can be used both for debit and credit purposes.

## **ELECTRONIC FUNDS TRANSFER**

- EFT is the electronic transfer of money over an online network.
- EFT saves the effort of sending a demand draft through post.
- EFT is mainly used in money transfer of B2B model.

## REAL-TIME GROSS SETTLEMENT

- RTGS is a payment system used for the transactions between financial institutions.
- It is also called as Push Payments.
- Generally large value payments.
- RTGS transactions are:
  - Unconditional
  - Irrevocable

# ELECTRONIC CASH PAYMENT SYSTEM

- It is a currency that flows in the form of data.
- Cryptocurrency:
  - It is a unique virtual asset designed to work as a medium of exchange using cryptographic algorithm.
  - It can be defined as distributed accounting system based on cryptography.
  - The function of the cryptography is based on:
    - Bitcoin
    - Altcoins
    - Mining
    - Blockchain
- Electronic Wallets:
  - Use to make electronic transactions securely and quickly.
  - Most of the E-Commerce websites uses this E-Wallets.

# MOBILE BANKING

- Another form of net banking.
- Also called as m-banking.
- Transactions include balance checking, account transfers, payments, etc.
- Transactions can be done at anytime and anywhere.
- The WAP protocol is used in the mobile phones.
- Mobile banking implemented as:
  - Contacting the call center.
  - Automatic IVR telephone service.
  - WAP technology.
  - Using smartphone applications.

# INTERNET BANKING

- Collective term of e-banking, online banking, virtual banking, etc.
- Very fast and convenient way of performing any banking transactions.
- It is like a branch exclusively operating of an individual customer.
- Advantages:
  - Payments are made at the convenience.
  - Any standard browser is adequate.
  - Provides complete control over all banking demands.

# UNIFIED PAYMENT INTERFACE

- It is a real-time payment system to provide inter-bank transactions.
- Withdraws and deposits funds directly from the bank accounts.
- Developed based on the IMPS.
- Virtual Payment Address also called as UPI-ID.
- VPA hides the critical information.
- The MPIN is required to confirm each payment.
- Advantages:
  - Immediate Money transfer
  - Single mobile app for multiple bank accounts
  - Single click authentication
  - Doesn't require any details for every transaction
  - EFT made easier.

Thank You !!