

B.Com (Hons.), Semester-II, Subject: E-Commerce

Chapter: Digital Payment

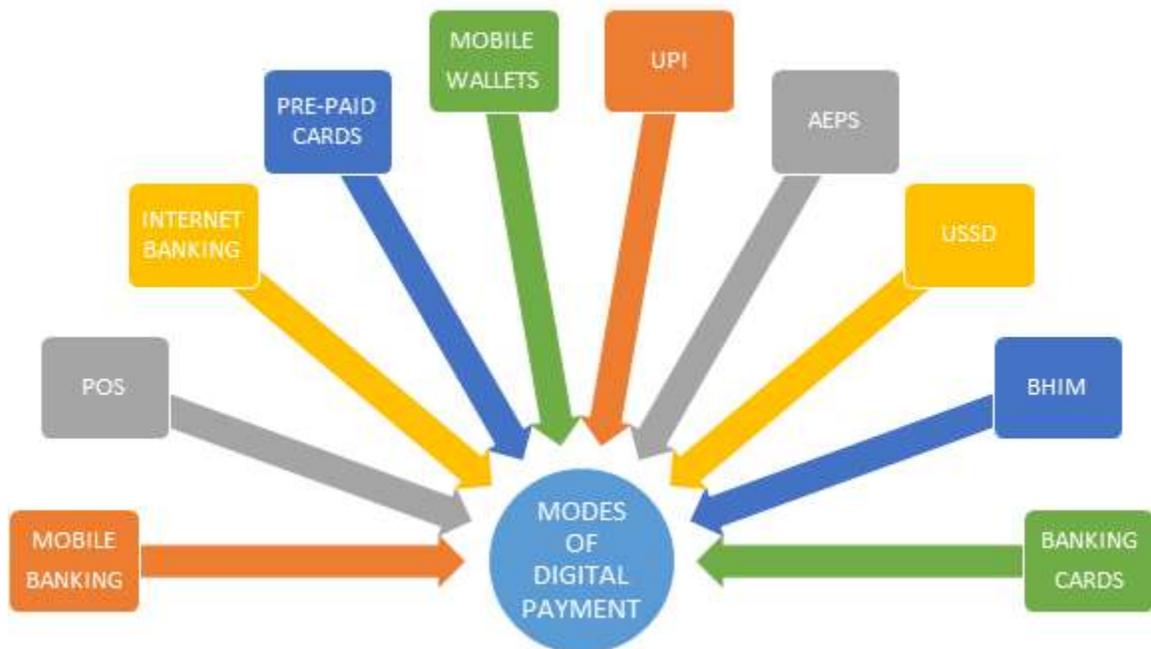
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Topics Covered in Class: Introduction, Advantages, and Risks involved in digital payment System

Remaining Topics: Methods of Digital Payment, Digital Signature and Payment gateways

(*Notes are prepared on the basis of information available in relevant books and e-resources)

Methods or Modes of Digital payment



1. Banking Cards

Banking cards are issued by the banks to their customers to offer greater security, convenience, and flexibility. A wide variety of banking cards are now available and which include debit card, credit card, pre-paid card and charge card etc. Nowadays, most of the banking cards are having its client's name, the issuer's name, and a unique card number printed on it and a magnetic strip or EMV chip on the back of the card enabling electronic punching machines to read and access information of the card holder to complete digital transaction. EMV stands for Europay, MasterCard and Visa, the three organizations that developed and established EMV as the global standard for chip-based credit and debit transactions. The EMV standard helps to maximize security of digital transactions.

2. Bharat Interface for Money App (BHIM)

BHIM (Bharat Interface for Money) is a UPI enabled initiative to facilitate safe, easy and instant digital payments through mobile phone. Anyone with a bank account, having a registered mobile number and a debit card can access BHIM App. Many banks have alliances with BHIM and NPCI to use this interface for payments. BHIM is a 24x7 is payment solution. It is a simple and secure procedure for digital transactions in one's preferred language

3. Unstructured Supplementary Data Service (USSD)

Unstructured Supplementary Service Data (USSD) allows mobile banking transactions using basic feature of a mobile phone, without any internet connection for using USSD based transactions. It is envisioned to provide financial services, specially to such sectors of our society who are not very much acquainted with main stream banking services. One just needs to dial at *99# to avail all banking services, like fund transfers, looking at a bank statement and ask balance related queries. It has multiple language options to make it user-friendly. USSD works in collaboration with National Payments Corporation of India (NPCI).

4. Aadhaar Enabled Payment Services (AEPS)

AEPS provides basic financial services such as cash deposit, balance enquiry, cash withdrawal and remittance etc. If one's Aadhaar number is linked with the bank account, one can get his or her Aadhaar number verified and initiate any bank related services like fund transfer, cash withdrawal, viewing bank statement, etc. It's a one-step digital payment process and no signatures or personal visit to a bank is required.

5. Unified payment interface (UPI)

Unified Payments Interface (UPI) is a mobile based application that empowers multiple participating banks into a single app facilitating several banking features. It can initiate 'Peer to Peer' fund transfer request which can be scheduled in accordance with time and convenience. Initially, in India a pilot project of UPI enabled banking Apps on Google Play store was started considering 21 member banks from August, 2016. All one needs is a valid bank account and a registered mobile number and a UPI app. There are no extra charges applicable. The best feature is that one can transfer funds through mobile device round the clock i.e. 24*7 and 365 days.

6. Mobile wallets

A mobile wallet is a virtual wallet where one can deposit money and use the same when needed. One can even transfer money to other person's wallet. Some of the latest mobile wallets are Paytm, Mobikwik, Phone pe, etc. Most importantly, a number of banks are now offering e-wallet services. All one needs to do is to download the app, log in and register, deposit money and use the services. Digital wallets are often used interchangeably with mobile wallets. Though these two techniques store payment information, but there is small difference and i.e. these are implemented differently. Digital wallets are commonly used for online transactions and may not necessarily be used on mobile devices while, mobile wallets are meant for mobile based uses like store purchases. Apple Pay, Samsung Pay, and Android Pay are examples of mobile wallets. On the other hand, a regular PayPal account is a digital wallet, which can alternatively serve as a mobile wallet when is used in conjunction with mobile payment services and mobile devices.

7. Prepaid cards

As the name suggests, these cards are simply value cards in which one can store money and spend when required. It is not linked to any one's bank account.

8. Internet/Online banking

Availing various banking services like opening and closing of deposit account, transferring funds, paying off e-bills and so on through internet is known as online or internet banking. It is an easy way to avoid long queues in a bank and get the work done within no time. One just needs his/her user id and password to log in to one's account on the bank website. It is safe as consumers can monitor their accounts regularly and time and cost effective too, as funds can be transferred between accounts almost instantly.

9. Point of Sale (POS)

Point of sale (POS) system is the spot where customers make payments for goods or services that are offered at the store. It enables the business transactions between the client and the company to be completed though a machine which on swiping of a card, reads the card details, and on entering the pin and the amount, clears one's payment and such payment gets reflected in the shop owner's linked account immediately.

10. Mobile banking

Mobile banking is becoming very popular and convenient in today's digital world. Almost, every bank is now offering their specialized apps to enable their customer to operate their bank accounts

just on a click of their mobile device. Different banks have their own mobile based app for their customers to facilitate their respective banking transactions. Convenient way to access bank account, safe and secure Banking, easy way to pay bills, availing exciting offers and discounts, SMS Banking etc. are to mention a few of the advantages of mobile banking.

Digital Signature

Digital signatures are as good as electronic ‘fingerprints’. It associates a signer with a document in a recorded transaction on the basis of a standard format, called Public Key Infrastructure (PKI) to provide the highest level of security and universal acceptance. Digital signatures and all other types of e-signatures come under the purview of the broad category i.e. ‘electronic signature’. Both digital signatures and other e-signatures allow one to sign documents and authenticate the signer. However, the differences between digital signature and other e-signatures lie in purpose, technical implementation, geographical use, and legal acceptance.

Digital signatures are like handwritten signatures which vary from person to person. When a signer electronically signs a document, a private key for the signer is developed to encrypt signature-related data and the only way to decrypt that data is the signer’s public key. Thus, the functioning of digital signature depends upon two basic things i.e. private key cryptography and public key cryptography. In this context it should be mentioned that digital signatures and digital certificates are not same. A digital certificate is an electronic document that contains the digital signature of the issuing authority. Modern email programs rely upon the use of digital signatures and digital certificates. It makes it easier to authenticate the outgoing emails and validate digitally signed incoming mails, as well.

Payment Gateways

A payment gateway is a technology used to accept debit or credit card transactions made by the customers. It serves both online and offline business modes. It is found in a retail store using the physical card reading device and payment processing portal in case of any online store. Payment gateway works as a third-party between the business and customer that securely collects payments from customers and send it to the business bank account. It is the key component of the electronic payment processing system, as it serves as the front-end technology used for processing the business transactions. Payment gateways are basically the consumer-facing interfaces used to collect payments from the customers. In physical stores, payment gateways serve at the point of

sale (POS) terminals while, in online stores, payment gateways work as the 'checkout' portals to ensure services such as PayPal.