

M1-R5.1 Information Tech. Tools & Networking basics

Chapter-8 Digital Financial Tools & Application

Digital Financial Tools

Digital financial services are accessed and delivered through digital channels, including payments, credit and saving, and so on. M-banking is the use of a mobile phone to access banking services and execute financial transaction. The government of India introduced new service set to move toward cashless economy.



OTP

OTP (One Time Password):-

One Time Password (OTP) is also known as One Time Pin. It is a string of characters or numbers login session or transaction, on a computer system or other digital device. This prevents some forms of identity theft by making sure that a captured username/password pair cannot be used for the second time.

It is a password that is valid for only one login session or transaction, on a computer system or other digital device. OTPs avoid a number of shortcomings that are associated with traditional (static) password-based authentication.



QR code

QR Code (Quick Response Code):-

The QR code system was invented in **1994** by the Japanese company **Denso Wave**. It is a **two-dimensional (2D)** barcode used for adding web links to a printed page. When you scan such a QR barcode using a webcam or mobile phone camera, the QR application takes you to a website, a YouTube video or some other web content. It is an easy way of sending people to a site without having to type of URL

QR code often contain data for **a locator, identifier, or tracker** that points to a website or application. A QR code uses four standardized encoding modes (**numeric, alphanumeric, byte/binary, and kanji**) to store data efficiently. The smallest element (**black or white square grid**) of the QR code is called a module.



UPI (Unified Payment Interface):-

A **Unified Payment Interface (UPI)** is an instant real time payment system which allows users to transfer money between two bank accounts on a mobile. It was developed by **National Payments Corporation of India** facilitating **inter-bank transactions**. To carry out any transaction, a user will only have to use a virtual address, known as a **Virtual Payment Address (VPA)**. UPI has been developed by the National Payments corporation of India (**NPCI**) and is regulated by the Reserve Bank of India (RBI).

The **pilot project** launch was on **11th April 2016** by **Dr. Raghuram G Rajan, Governor, RBI** at Mumbai. Per day transaction limit is up to Rs. **1 lakh**.

It offers instant money transfer via mobile device **24x7** for all **365 days**.



AEPS(Aadhar Enable Payment System):-

Aeps is a secure payment platform for financial transactions based on Unique Identification Number that enables a user for the cashless transactions. This system developed by the National Payments orporation of India allows the user to perform necessary banking transactions like balance enquiry, cash deposit, cash withdrawal and remittances through a Business correspondent.

The following services offered by AePS are available in both inter-bank and intra-bank modes:

- ✚ Cash withdrawal
- ✚ Cash deposit
- ✚ Balance Enquiry
- ✚ Aadhaar to Aadhaar Fund Transfer
- ✚ Mini Statement



USSD (Unstructured Supplementary Service Data):-

USSD is also referred to as Quick Codes or "Feature codes". It is a communications protocol used by **GSM** cellular telephones to communicate with the mobile network operator's computers. It is a technology platform through which information can be transmitted through a GSM network on a basic phone and will be available on all mobile phones with SMS facility. To use USSD, users will have to dial ***99#** to get the mobile balance. This service allows mobile banking transactions using basic feature mobile phone, there is no need to have mobile internet data facility for using USSD based mobile banking.



BHIM (Bharat Interface for Money):-

BHIM (Bharat Interface for Money) is an Indian mobile payment App developed by the **National Payments Corporation of India (NPCI)**, based on the **Unified Payments Interface (UPI)**. Named after **B. R. Ambedkar** and launched on **30 December 2016**, it is intended to facilitate e-payments directly through banks and encourage cashless transactions. The application supports all Indian banks which use UPI, which is built over the **Immediate Payment Service (IMPS)** infrastructure and allows the user to instantly transfer money between bank accounts of any two parties. It can be used on all mobile devices. A user can send up to **Rs 20,000 per transaction** and a maximum of **Rs 40,000 per day** for one bank account. This limit is available per bank account linked on BHIM.



Card (Credit/Debit):-

It is a piece of plastic card that contains personal data in a machine-readable form and is used to obtain cash. Credit cards and debit cards typically look almost identical, with **16 digit** card numbers, expiration dates, and personal identification number (PIN) codes.

Credit Card:-

A Credit card allows you to use money from a bank to make purchase. The card issuer pays for the purchase, and the cardholder pays the issuer at a later date. It is a convenient way of buying things, especially if you do not have cash handy.

Debit Card:-

A debit card is a plastic card or checking card or bank card that can be used instead of cash while making purchases. Debit cards are like digitized versions of cheque books; they are linked to your bank account.



MMID (Mobile Money Identifier):-

MMID is a **7 digit** number allotted by your Bank **for receiving funds** through **IMPS**. The bank will allot MMID when you register your mobile number and account number in which you wish to receive funds. If you have more than one account, you will get a separate MMID for each account. You have to share your mobile number and MMID with the remitter for receiving funds through IMPS.



E-Wallet:-

E-wallet is a type of electronic card which is used for transactions made online through a computer or a smartphone. Its utility is same as a credit or debit card. An E-wallet needs to be linked with the individual's bank account to make payments. E-wallet is a type of pre-paid account in which a user can store his/her money for any future online transaction. An E-wallet is protected with a password. With the help of an E-wallet, one can make payments for groceries, online purchases, Recharging mobile phones and flight tickets, among others.

There are 4 types of e-wallet

- Open wallets
- Semi Open
- Semi Closed
- Closed



Example:- Paytm, mobikwik, oxygen wallet, citrus wallet, itz cash, ICICI pockets, SBI buddy, HDFC payZapp, Jio money, Airtel money, freecharge, phone pay etc.

POS (Point of Sale):-

The point of sale (POS) or point of purchase (POP) is the time and place where a retail transaction is completed. At the point of sale, the merchant calculates the amount owed by the customer, indicates that amount, may prepare an invoice for the customer (which may be a cash register printout), and indicates the options for the customer to make payment. It is also the point at which a customer makes a payment to the merchant in exchange for goods or after provision of a service. After receiving payment, the merchant may issue a receipt for the transaction, which is usually printed but can also be dispensed with or sent electronically.



Internet Banking

NEFT (National Electronic Fund Transfer):-

National Electronic Funds Transfer is the most prominent inter-bank electronic funds transfer system of India, which provides a facility to bank customers to transfer the funds easily and securely on a one to one basis, which saves the time and is done via electronic messages. It is net transfer facility, executed in hourly batches.

National Electronic Funds Transfer (NEFT) is an electronic funds transfer system maintained by the Reserve Bank of India (RBI). Started in November 2005, the setup was established and maintained by Institute for Development and Research in Banking Technology.

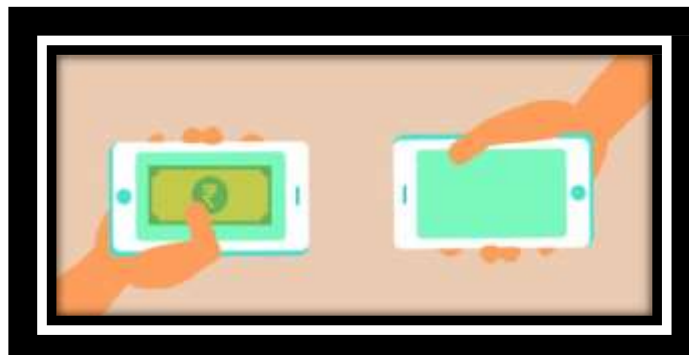


RTGS (Real Time Gross Settlement):-

Real time gross settlement is an inter-bank transfer system, which transfers money from one bank to another on a real time and on gross basis. It is used for high-value transactions which require an immediate clearing and is used to transfer of Rs. 2 lakhs and above. Real Time Gross Settlement (RTGS) System went live on March 26, 2004.

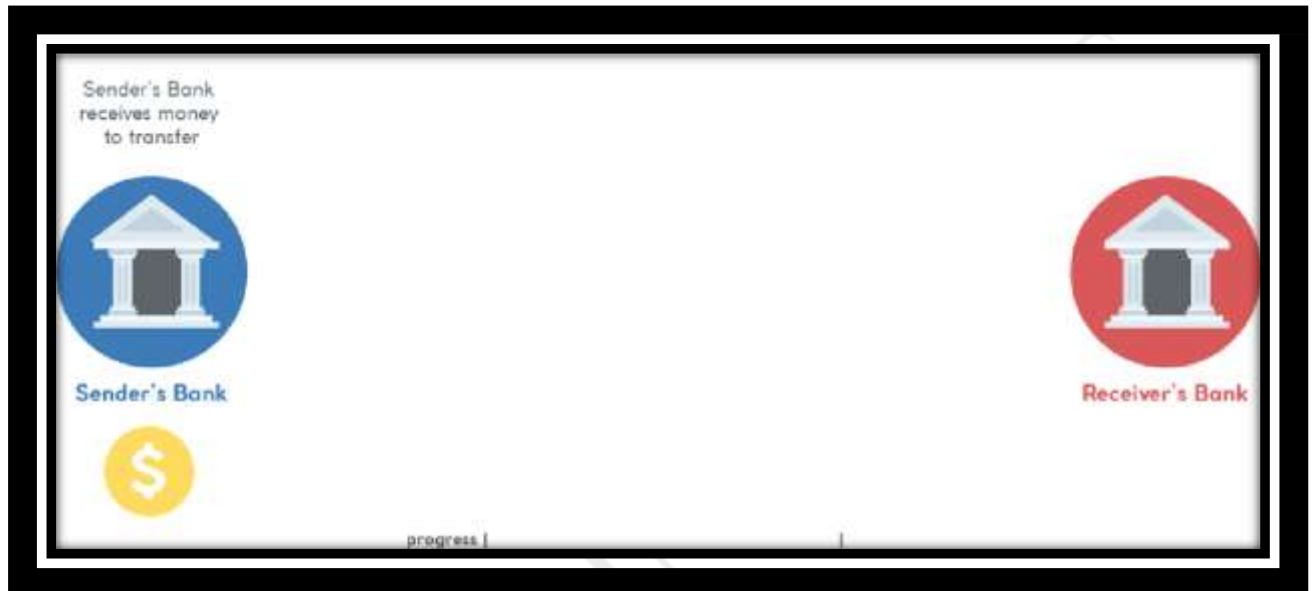
IMPS (Immediate Payment Service):-

Immediate payment service is an instant payment inter-bank electronic funds transfer system in India. It offers the inter-bank electronic fund transfer service through mobile phone. It is managed by the NPCI and is built upon the existing National Financial Switch network.



SWIFT (Society for Worldwide Interbank Financial Telecommunication):-

The Society for Worldwide Interbank Financial Telecommunication (Swift) is a global network connecting banks to communicate messages about activities like money transfer in a safe and secure way. Swift assigns each bank an eight- or 11-character long code, known as the bank identifier. Banks, Securities Dealers, Clearing Houses, Exchanges, and Corporate Business Houses are some of the users of the SWIFT network.



IFSC (Indian Financial System Code):-

IFSC is an alpha-numeric code that uniquely identifies a bank branch participating in the NEFT system. This is an 11 digit code with the first 4 alpha characters representing the bank, and the last 6 characters representing the branch. The 5th character is 0 (zero). IFSC is used by the NEFT system to identify the originating/destination banks/branches and also to route the messages appropriately to the concerned banks/branches.



ATM (Automated Teller Machine):-

An automated teller machine (ATM) is an electronic banking outlet that allows customers to complete basic transactions without the aid of a branch representative or teller. Anyone with a credit card or debit card can access cash at most ATMs.

