CSC-370
E - Commerce
(BSc CSIT, TU)

Ganesh Khatri
kh6ganesh@gmail.com

Online Stored Value Payment System

- Stored value systems are a form of electronic payment technology
- They coexist with credit and debit technology and principally target the low value transactions
- Online stored value systems have very low transaction cost.
- Stored value systems are based on creating a form of electronic value, for example on smart cards or as computer files.
- The value can be bought (withdrawn) anytime
- Today Stored Value Cards (SVC) are one of the most dynamic and fastest growing products in the financial industry
- One leading difference between SVC and debit cards is that debit cards are usually issued in the name of the account holders. In contrast Stored Value Cards are usually anonymous.
- The notion “stored value” means the funds and data which is stored on the card
- Eg: fare cards, telephone prepaid cards etc.

Digital Wallets

- A digital wallet is an electronic method for securely storing various types of sensitive information, including credit cards, debit cards, gift cards, electronic cash, tickets, and IDs.
- Not every wallet stores every type of payment information. While terms such as digital wallet, mobile wallet, and e-wallet all mean roughly the same thing, they technically cover slightly different services
- Eg : Apple Pay, Google Pay, and Samsung Pay, paypal etc

Digital Wallets : Major Functions

- **Store Credit & Debit Card Information :** Digital wallets can store information of debit and credit cards. Some, allow payment directly from the card as well
- **Pay At A Store**
- **Peer-To-Peer (P2P) Payments :** Most digital wallets allow users to transfer funds to one another. Typically, these payments are small amounts used to split a lunch bill, pay a babysitter, or even pay a share of the rent
- **Online Payments :** Digital wallets can be used to pay for online or in-app purchases
- **Hold Coupons & Loyalty Cards :** Many digital wallets can hold coupons or loyalty cards, so a user can be given the appropriate credit or discount for using a particular card or shopping at a specific store
- **Security :** All digital wallets have hardware and software security features that keep the stored information safe

Peer-to-peer payment systems

- Peer-to-peer payment systems, also known as P2P payments or money transfer apps - like Venmo, PayPal and Cash App allow users to send one another money from their mobile devices through a linked bank account or card.
- These payments allow the transfer of funds between two parties using their individual banking accounts or credit cards through an online or mobile app
- for whichever platform you choose, you'll sign up for an account then link your bank account or credit or debit card to it.
- Some apps might require further verification information and passwords to increase security. After your account is set up you can find other users by their username, their email, or your phone contacts.

Virtual Currency

- Virtual currency is a type of unregulated digital currency that is only available in electronic form
- It is stored and transacted only through designated software, mobile or computer applications, or through dedicated digital wallets, and the transactions occur over the internet through secure, dedicated networks.
- Virtual currency is considered to be a subset of the digital currency group, which also includes cryptocurrencies, which exist within the blockchain network
- Virtual currency is currency held within the blockchain network that is not controlled by a centralized banking authority
- Virtual currency is different than digital currency since digital currency is simply currency issued by a bank in digital form
- Eg : bitcoin, pi etc

Virtual Currency

- Virtual currency can be defined as an electronic representation of monetary value that may be issued, managed, and controlled by private issuers, developers, or the founding organization.
- Such virtual currencies are often represented in terms of tokens and may remain unregulated without a legal tender.
- Along with use by the common public, a virtual currency can have restricted usage, and it may be in circulation only among the members of a specific online community or a virtual group of users who transact online on dedicated networks.
- Due to lack of a centralized regulatory authority, virtual currencies are prone to wide swings in their valuations

Electronic Billing Presentment and Payment (EBPP) System

- is a process that companies use to collect payments electronically through systems like the Internet, direct-dial access, and Automated Teller Machines
- It has become a core component of online banking at many financial institutions today.
- Other industries - including insurance providers, telecommunications companies, and utilities depend on EBPP services as well.

Electronic Billing Presentment and Payment (EBPP) System

- There are two types of EBPPs
  - **biller-direct**
  - **bank-aggregator**
- **A biller-direct** EBPP lets users pay bills directly via the company's website for goods or services and might alert them when a payment is due via email.
- The customer then logs into the site via a secure connection, reviews the billing information, and enters payment amount
- **The bank-aggregator** model allows customers to pay bills to many different companies through one portal.
- That is, the service collects different payments from customers and distributes each payment to the appropriate company
- A bank, for instance, might offer online users the option to make many different payments like credit cards, utility bills, and insurance premiums.
- Standalone sites also exist that allow people to view and pay all of their bills

EBPP and Online Banking

- Many large banks offer electronic bill payment and presentment services as a part of their online banking system
- Online banking allows users to execute financial transactions via the Internet.
- Specifically, an online bank offers customers the ability to make deposits, withdrawals, transfers between accounts, and other traditional services, as well as online bill payments, such as EBPP
- Eg : Prabhu bank has its app that allows customers to pay different bills online.

Auctioning in E-Commerce

- An e-auction is a transaction between sellers(the auctioneers) and bidders (suppliers in business to business scenarios) that takes place on an electronic marketplace.
- It can occur business to business, business to consumer, or consumer to consumer, and allows suppliers to bid online against each other for contracts against a published specification
- This kind of environment encourages competition, with the result that goods and services are offered at their current market value

Types of E-Auction

- **English Auction :** English auctions are where bids are announced by either an auctioneer or the bidders, and winners pay what they bid to receive the object. The most common and straightforward form of e-auction, they’re intuitive, user-friendly and can help to reduce transaction costs

- **Dutch auction :** Dutch auctions start at a high price, which is then incrementally lowered until a buyer accepts the price. The first person to bid wins the auction, which makes them good for quick decisions

- **First-price sealed-bid :** When a single bid is made by all bidding parties and the single highest bidder wins, and pays what they bid. The main difference between this and English auctions is that bids are not openly viewable or announced as opposed to the competitive nature which is generated by public bids.

Types of E-Auction

- **Vickrey auction :** A Vickrey auction, sometimes known as a second-price sealed-bid auction in which bidders submit written bids without knowing the bid of the other people in the auction. The highest bidder wins but the price paid is the second-highest bid. This type of auction is strategically similar to an English auction and gives bidders an incentive to bid their true value
- **Double Auction :** A double auction is a process of buying and selling goods with multiple sellers and multiple buyers. Potential buyers submit their bids and potential sellers submit their ask prices to the market institution, and then the market institution chooses some price p that clears the market : all the sellers who asked less than p sell and all buyers who bid more than p buy at this price p. Buyers and sellers that bid or ask for exactly p are also included.
- Eg : stock exchange