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- Various security measures.

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COMMERCE

- 1] **COMMERCE** is an important part of business.
- 2] It is the process of buying and selling of goods.

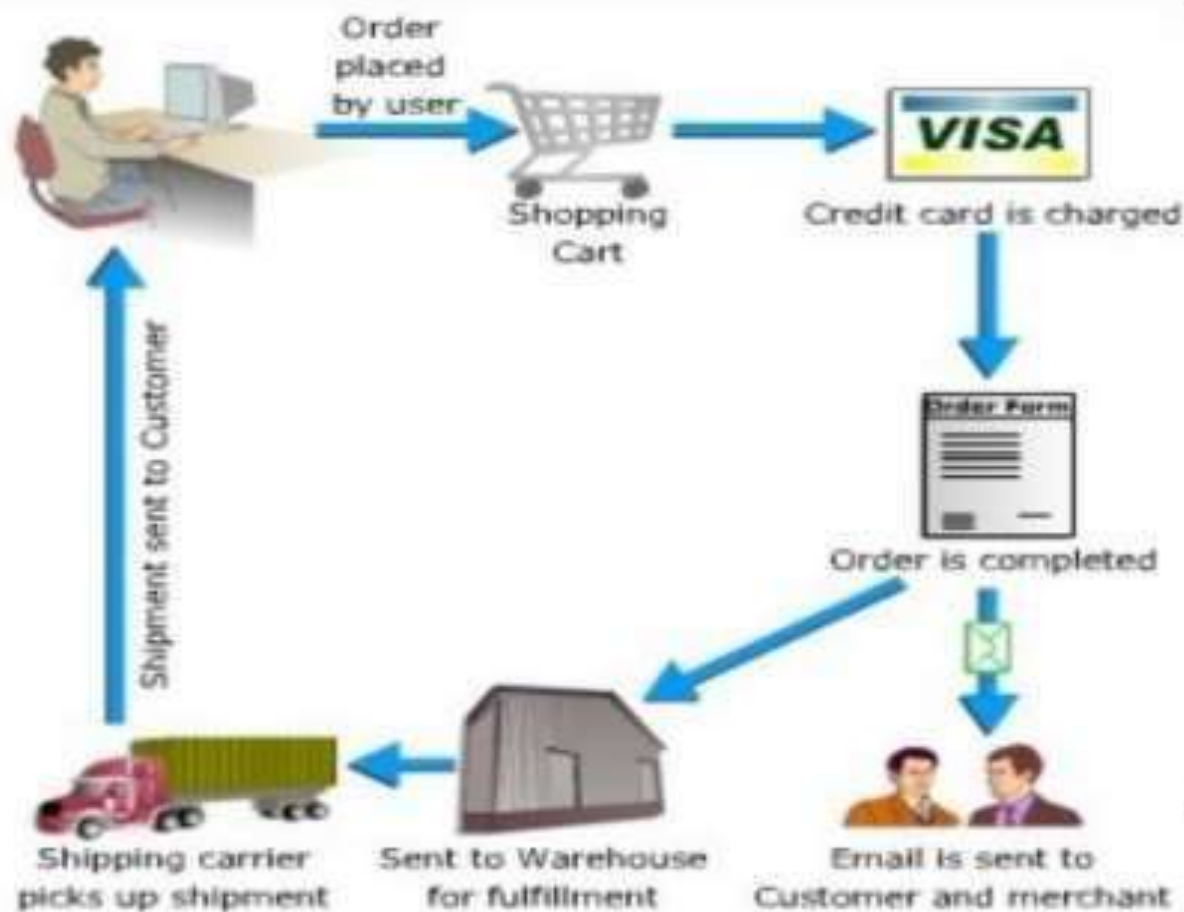


6.1 WHAT IS ECOMMERCE?

- 1] E-COMMERCE stands for Electronic Commerce
- 2] It is the process of buying and selling of goods and services using an electronic medium such as Internet.
- 3] It is also referred as a paperless exchange of business information.
- 4] E-Commerce becomes possible in 1991 . When the internet was opened to commercial use.
- 5] e-commerce is one of the fastest growing industries in the global economy.



The process of E-commerce



Difference between Traditional Commerce and E-Commerce

Traditional Commerce	E-commerce
Traditional commerce focuses on the exchange of products and services through personal interactions so it is manual.	E-commerce trading activities are online via the internet and can be considered automatic.
Traditional commerce is limited to business hours, mostly during the day.	E-commerce is 24X7, it can be done anytime day and night.
As far as consumer interactions are concerned, traditional commerce provides face to face interaction.	E-commerce can be termed as screen to face interaction.
Traditional commerce is limited to a particular geographical location.	E-commerce is global and has no physical limitation.
Modes of payment in traditional commerce include cash, cheques and credit cards.	In E-commerce modes of payments are bank transfer, credit card, e-wallet, mobile payment and many more.
Goods and delivery of services is instant with traditional commerce.	In E-commerce delivery of goods or services takes some time.
Traditional Commerce's scope is local.	E-commerce's scope is global.

ADVANTAGES OF E-COMMERCE

- **Global scope:** E-Commerce provide the sellers with a global reach
- **Electronic transaction :**E-commerce reduces the paper work and significantly lower the transaction cost.
- **Cost Saving :**It helps in reducing the cost of searching a product.
- **Anytime shopping :** A customer can shop 24×7.
- **No intermediaries :** the customer and the business to be in touch directly
- **Public services:** helps the government to deliver public services such as healthcare, education

DISADVANTAGES OF E-COMMERCE

- **Setup Cost** : The setup of the hardware and the software etc.
- **Physical presence** : This lack of a personal touch
- **Security** : Credit card theft, identity theft etc.
- **Goods Delivery** : There may arrive some problem with fulfillment of order.

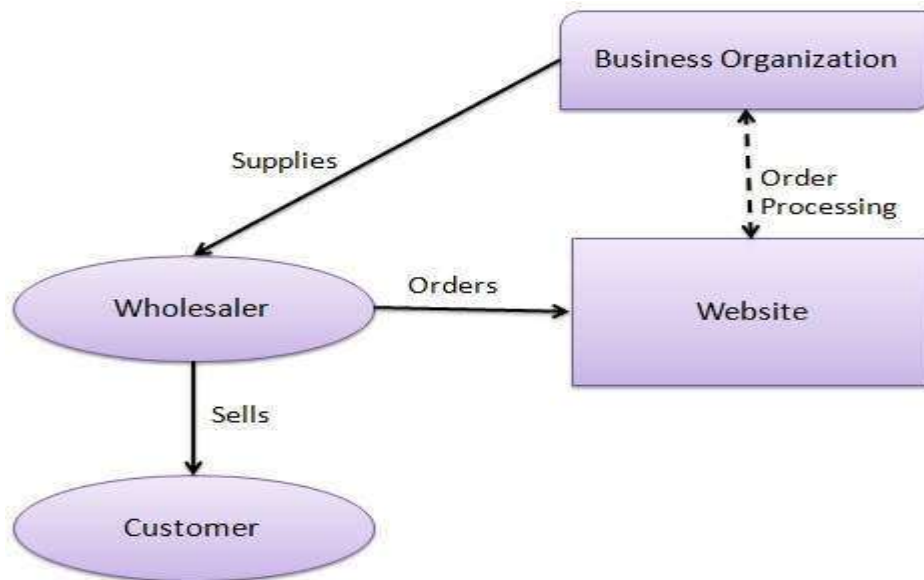
TYPES OF ECOMMERCE

- **Business - to - Business (B2B)**
- **Business - to - Consumer (B2C)**
- **Consumer - to - Consumer (C2C)**
- **Consumer - to - Business (C2B)**

BUSINESS - TO - BUSINESS (B2B)

B2B is one of the most common types of e-commerce. This is when a transaction of goods or services occurs between two businesses.

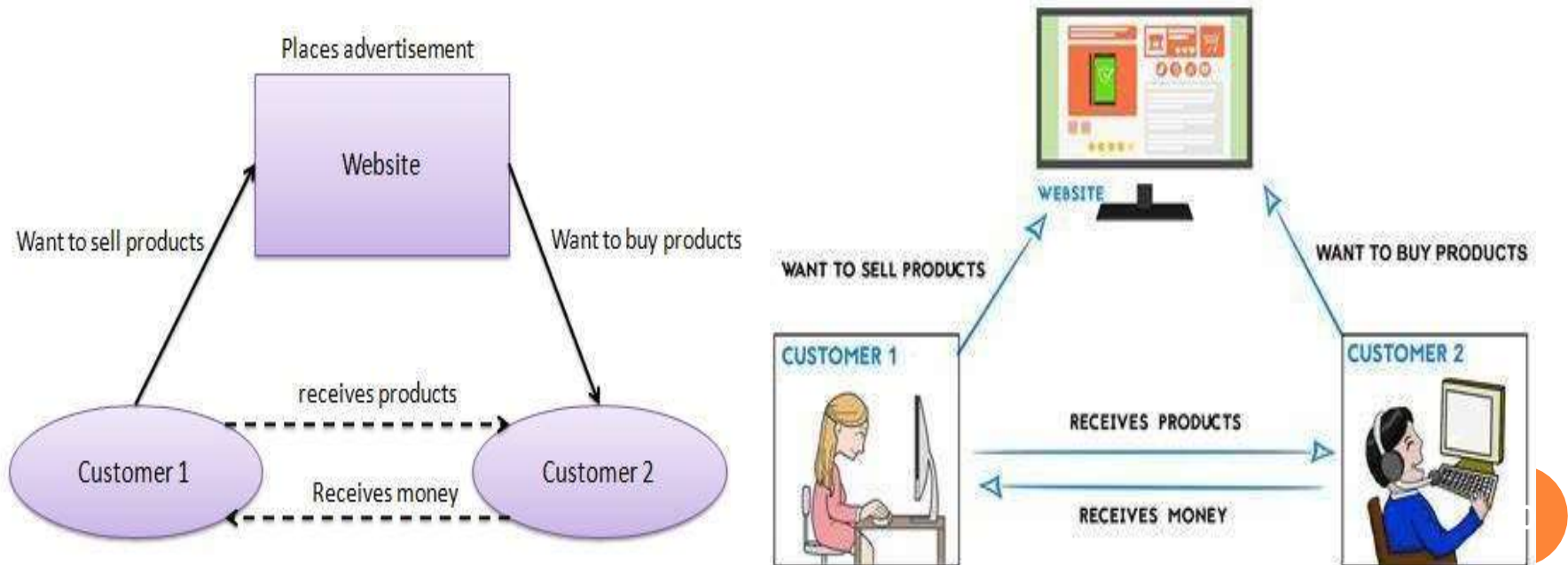
B2B e-commerce is simply defines as e-commerce between Companies .This is the type of e-Commerce that deals with relationship between and among businesses. The final consumer is not involved. So the online transactions only involve the manufacturers, wholesalers, retailers etc.



CONSUMER - TO - CONSUMER (C2C)

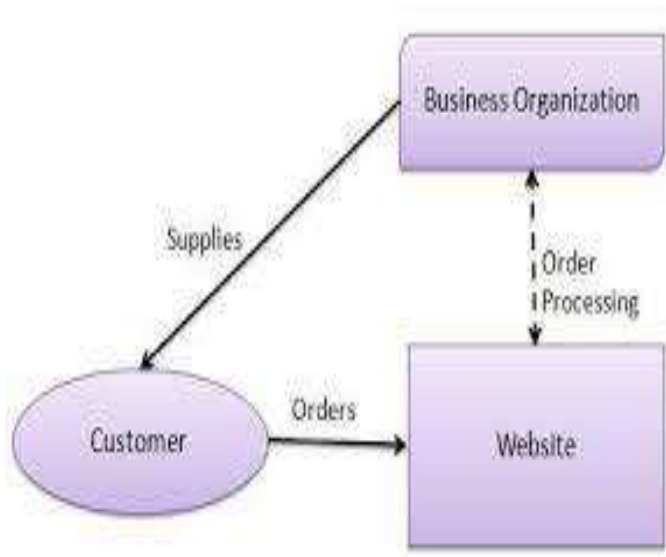
Consumer -to -consumer e-commerce or C2C is simply commerce between private individuals or consumers.

Consumer to consumer, where the consumers are in direct contact with each other. No company is involved. It helps people sell their personal goods and assets directly to an interested party. example eBay,Olx,Quikr



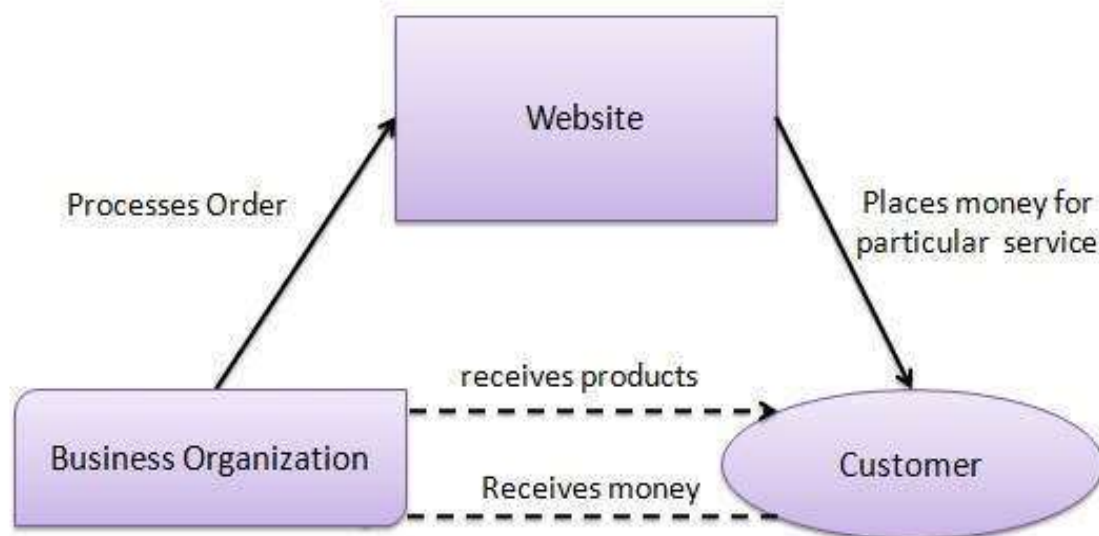
BUSINESS - TO - CONSUMER (B2C)

In Business to Consumer. the company will sell their goods and/or services directly to the consumer. The consumer can browse their websites and look at products, pictures, read reviews. Then they place their order and the company ships the goods directly to them. Popular examples are **Amazon, Flipkart, Jabong , paying and using Netflix at home. McDonalds (most big brands).**



CONSUMER - TO - BUSINESS (C2B)

- Consumers can offer products and services to companies, and the companies pay the consumers. Eg. A blog can be written by an author for a business to improve sale of products, ebay, content marketing. This is the reverse of B2C, an IT freelancer sells his software to a company.



E-COMMERCE TRADE CYCLE

- A trade cycle is the series of exchanges, between a customer and supplier that take place when a commercial exchange is executed.

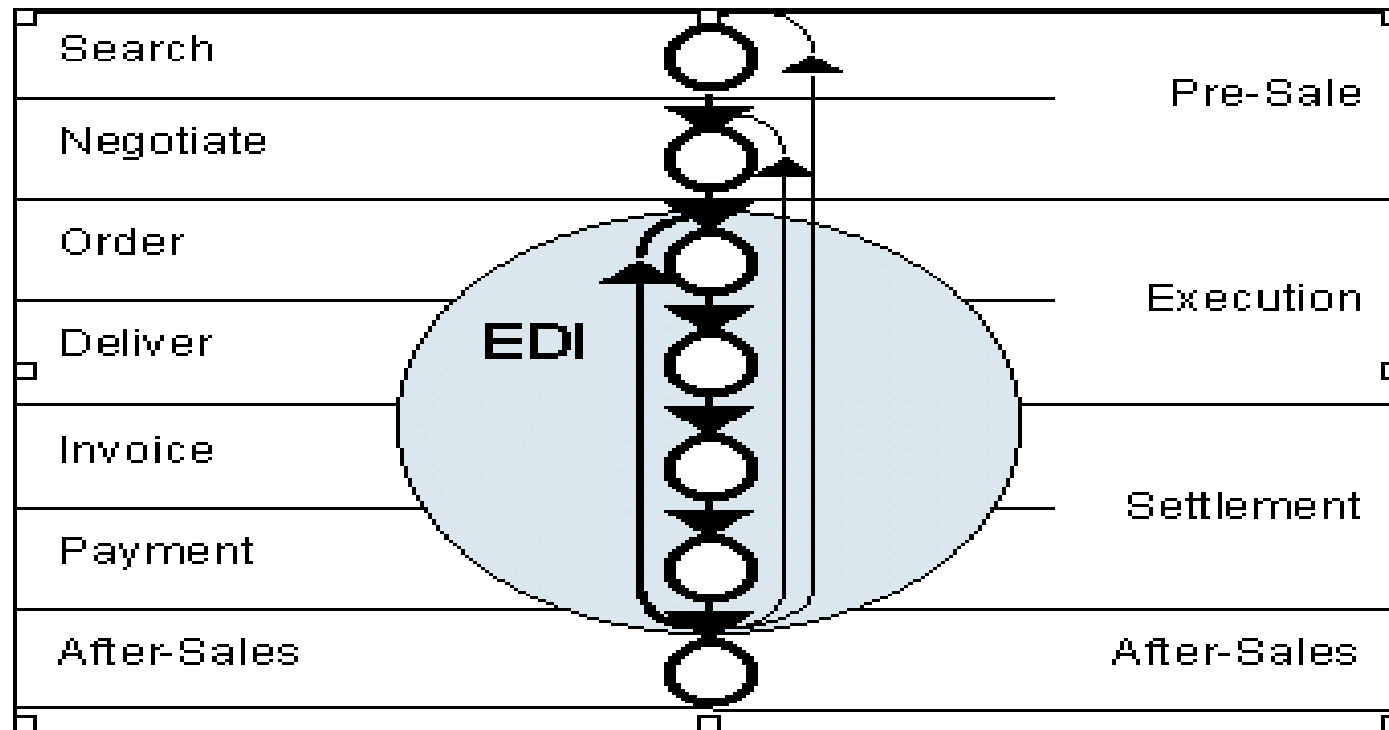


Figure 1: EDI Trade Cycle.

Phases of Ecommerce trade cycle:-

1] pre-sales

It consist of two steps Search and Negotiate

2] Execution

It consist of two steps Order and Delivery.

3] Settlement

It consist of two steps Invoice and Payment

4] After – sales

It consist of two steps Warranty and After sales services.

In warranty period , customer will get all maintenance services for free or at minimum cost.

In after-sales services means customer will do complaints(if any) about the performance of product and get maintenance service from the supplier.



MODES OF PAYMENT

- **Credit Cards** : it is type of bank card using that you can borrow money upto some limit, which must be repaid along with interest. Merchants can reach out to an international market with credit cards.



- **Mobile Payments** : customer can pay by scanning a barcode on an app on mobile. **Mobile payments offer a quick solution for customers to purchase on e-commerce websites** Ex. BHIM, UPI, Paytm, Google Pay, Paypal,..etc.



MODES OF PAYMENT

- **Bank Transfers** : money is sent from one bank account to another. Transferring money from bank account is usually fast and safer than withdrawing and paying in cash because every transaction will be authenticated by checking customer's banking credentials. Ex. NEFT , IMPS.
- **E-wallets** :- E-wallet is a type of electronic card which is used for transactions made online through a computer or a smartphone. E –wallet is a type of pre-paid account in which a user can store money for any future online transaction. An E-wallet is protected with a password. Ex. Bank Buddy, Paytm .



6.5 FORMS OF E-COMMERCE

6.5 FORMS OF E-COMMERCE

- **M-commerce (Mobile commerce) :**
- The term mobile commerce was developed in 1997.
- Buying and selling of goods and services through wireless handheld devices such as smart phones and tablets.
- m-commerce enables users to access online shopping platforms without using a desktop computer.
- Now a days shopping through wireless devices has become faster, more secure .

Ex. mobile banking, ticket booking, E-bill payment, online auctions, Stock , mobile shopping,



6.5 FORMS OF E-COMMERCE



- **Social Commerce :**
- **Social Commerce is marketing and selling products through social media platforms.**
- Social commerce is a form of electronic commerce that involves social media, online media that supports social interaction.
- Social commerce **uses networking websites such as Facebook, Instagram, and Twitter as vehicles to promote and sell products and services.**
- It utilizes user ratings, referrals, online communities and social advertising to for online shopping .
- The success of Social commerce campaign is measured by the degree to which consumers interact with the companies marketing through retweets, likes, shares

ELECTRONIC DATA INTERCHANGE (EDI)

- EDI is the electronic interchange of business information using a standardized format; a process which allows one company to send information to another company electronically rather than on paper.
- Business entities conducting business electronically are called trading partners.
- Many business document can be exchanged using EDI.
- Two common documents are purchase orders and invoices.
- It is computer-to-computer interchange of formatted documents via Internet.
- EDI software is typically used for the fast transfer of business documents within companies
- EDI is mostly conducting in B2B e commerce

EDI Documents:

The most common documents exchanged via EDI are:

- ❖ Invoices
- ❖ Purchase Orders
- ❖ Financial Information letters
- ❖ Transaction Bills
- ❖ Shipping requests and notifications
- ❖ Acknowledgment and feedback
- ❖ Claims

EDI Users:

- ❖ Central and state government agencies
- ❖ Industry
- ❖ Banking
- ❖ Retailing
- ❖ Manufacturing
- ❖ Insurance
- ❖ Healthcare
- ❖ Automotive
- ❖ Electronics
- ❖ Grocery
- ❖ Transportation

EDI softwares names

- 1] SPS Commerce Fulfillment EDI.
- 2] TrueCommerce EDI.
- 3] PartnerLinQ.
- 4] GoAnywhere MFT.
- 5] Boomi.



1] Advantages of EDI:

There are several advantages to Electronic Data Interchange:

Reduced paper work : The expense of storing, printing, recycling, reduces up to the maximum amount due to the EDI.

Reduction in data entry error: The data entry errors are reduced due to EDI.

Speed Increases: The best advantage is the increase in the speed of the data interchange. With everything going online, the speed of the information transfer increases exponentially.

Security: By following the Protocols and the standard rules, the security of all the important documents is always secure and safe.

Information accuracy: Since the information exchanged is based on standards agreed by the sender and receiver both, the correct information is always transferred regardless of where they belong to.

2] Disadvantages of EDI:

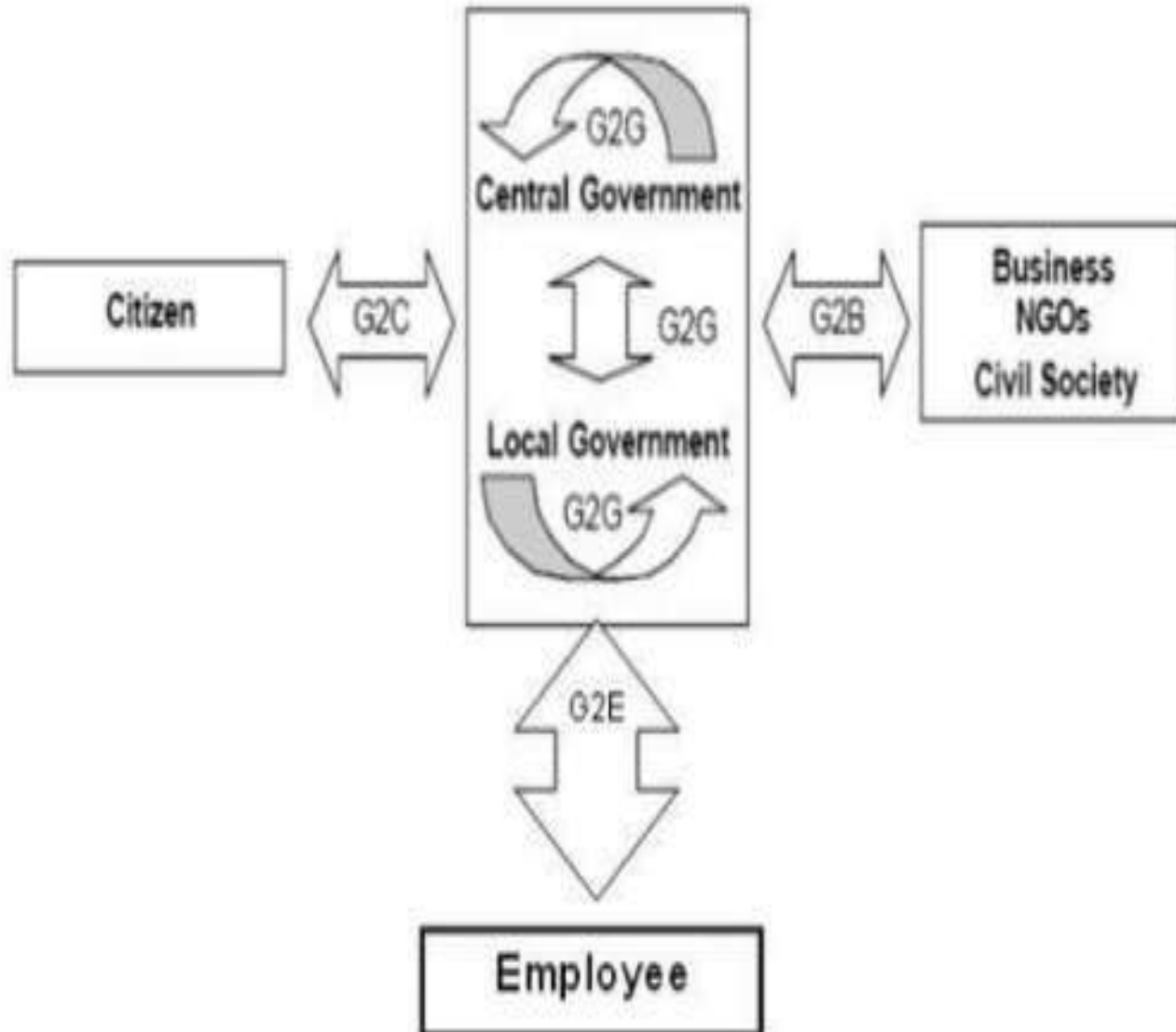
- ❖ The initial setup of the EDI is very Time-consuming.
- ❖ EDI standards keep on changing after some amount of time.
- ❖ A very systematic and proper back up is required as the entire data relies on EDI.
- ❖ The setup and maintenance of the EDI is very Expensive.



6.7 E-GOVERNANCE

- It is the application of IT for delivery government services ,
- E governance makes the whole administrative process convenient, efficient, transparent, fully accountable and responsible.
- Information technology is implemented in government processes and functions so as to cause SMART government i. e
 - S- Simple
 - M-Moral,
 - A-Accessible,
 - R-Responsive,
 - T-Transparent Government.
- It simplify processes for all, i.e. government, citizens, businesses etc. at National, State and local levels.
- **Advantages of E-Governance:**
 - Reduced corruption
 - High transparency
 - Increased convenience
 - Direct participation of constituents
 - Reduction in overall cost.
 - Expanded reach of government

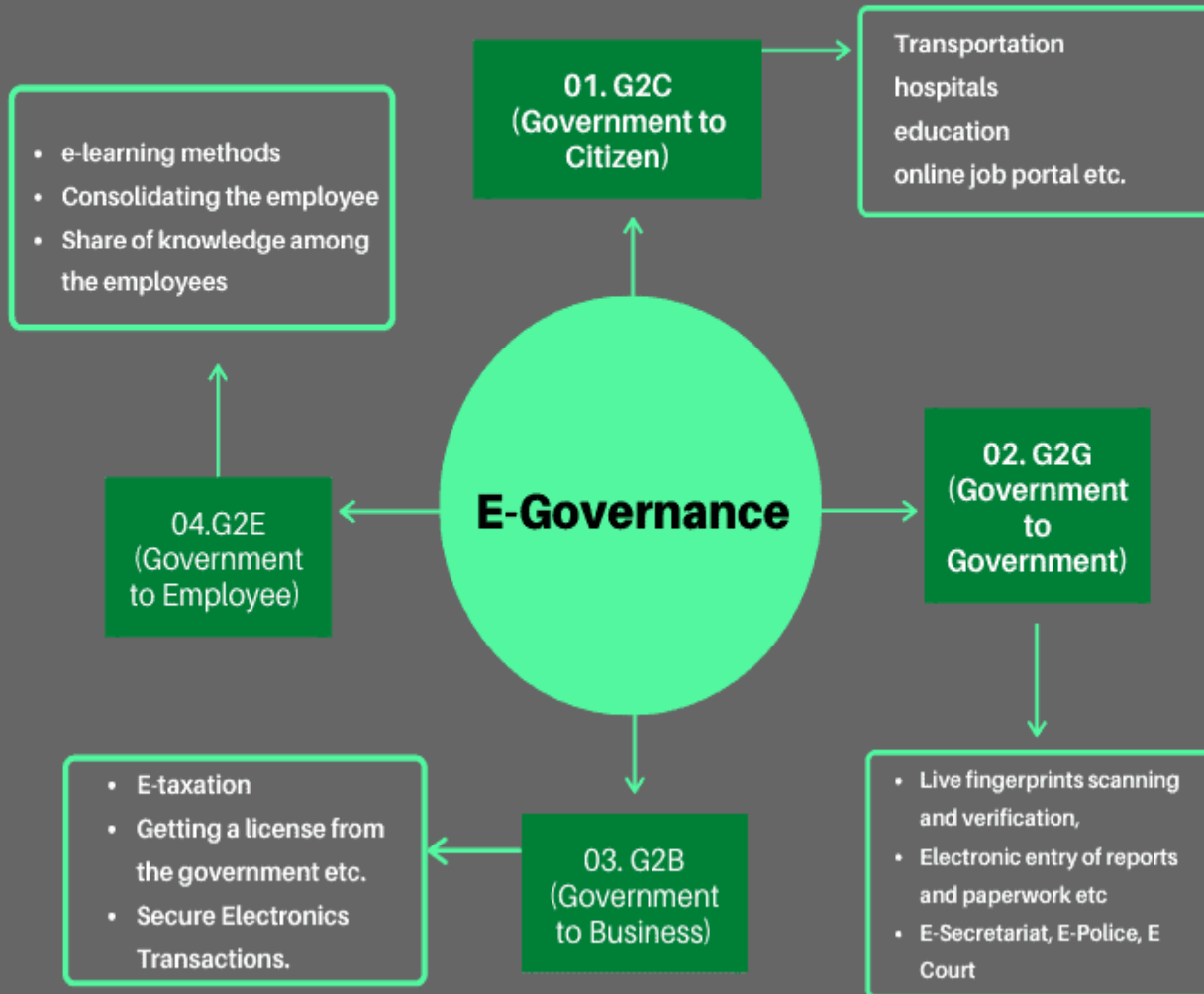
TYPES OF E-GOVERNANCE



1. Government-to-Citizen (G2C)

- 1] It stands for Government to Citizen.
- 2] the primary aim of Government-to-citizen is to supply facilities to the citizens.
- 3] It also helps ordinary people to minimize the time and cost to carry out a transaction.
- 4] It refers to the government service which enables citizens to get access to wide variety of public service.
- 5] A citizens can have access to the services anytime and anywhere
- 6] It is the online non commercial interaction between local and central government.
- 7] Ex.- many services like license renewal, paying tax

Types of E-Governance



2. Government-to-Business (G2B)

1] It stands for Government to Business.

2] It is the exchange of service between government and business organization.

3] Its aim is eliminating paper work, saving time and cost and establishing transparency in the business environment while interacting with government.

4]It enhance the efficiency and quality of communication and transparency of government project.

Ex:- service include tax return filing and trade business licensing applications (SIUP)

3. Government-to- Government (G2G)

1] It stands for Government to Government.

2] It is the interaction between different government department, organization, and agencies.

3] The different government department can work together.

4] In g2g government agencies share the same database using online communication .

5] G2G provide safe and secure interrelationship between domestic or foreign government.

4. Government-to-Employee (G2E)

- It is internal part of G2G.
- It aims to bring employee together & improve knowledge sharing.
- Provide facilities to the employees like applying for leave, reviewing salary payment record and checking the balance of holiday.
- The G2E sector provides human resource training and development.

SECURITY MEASURES IN E-COMMERCE

1] E-Commerce security means it is the protection of e commerce assets from unauthorized access , use , alteration Or destruction.

2] E- Commerce security is the Principle which guide Safe electronic transactions , allowing the Buying and selling of goods and Services through online.

There are following security measures used in E-Commerce

- 1) Encryption**
- 2) Digital Signature**
- 3) Digital Certificates**

SECURITY MEASURES IN E-COMMERCE

- Used for safe and secure electronic transaction

A. Encryption:

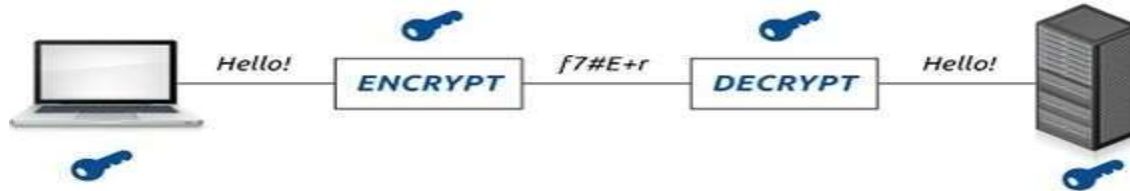


- 1] Encryption is the process of converting normal data into cipher text .
- 2] Encryption is the Process which convert plain text into cipher text called as encryption
- 3] Encryption is the process of encoding message or information in such a way that only authorized parties can read it.

In this process there are two steps **Encryption** and **Decryption**

SECURITY MEASURES IN E-COMMERCE

SECURITY MEASURES IN E-COMMERCE



- 1) **Encryption** - in encryption it convert readable form of data into coded form(cipher text) means non readable forms of data.
- 2) **Decryption**- it means it convert cipher text into normal plain text (readable form)

Types of Encryption

There are two types of encryption

1) **Symmetric Encryption**

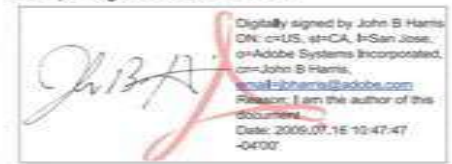
in this type of encryption where only one key (a secret key) is used to both encrypt and decrypt electronic information.

2) **Asymmetric Encryption**

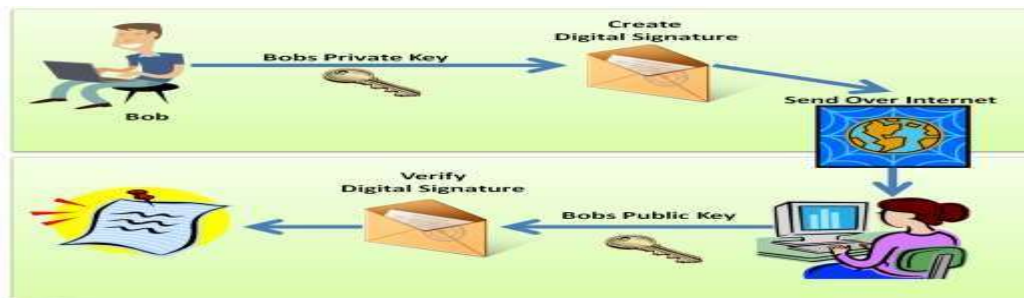
It is also called as public key encryption. In this type , encryption key and the corresponding decryption key are different.

B. DIGITAL SIGNATURE:

Sample Signed PDF Document



- A digital signature also known as an electronic signature.
- It is used to authenticate the identity of sender of a message or document.
- A digital signature guarantees the authenticity of an electronic document or message in digital communication and uses encryption techniques to provide proof of original and unmodified documentation.
- Digital signatures are used in e-commerce, software distribution, financial transactions.
- This is the direct transfer of information between two partners.
- A digital signature is a mathematical scheme for verifying the authenticity of digital messages or documents.



B. DIGITAL SIGNATURE:

Sample Signed PDF Document



Digital signature Requires two keys

1) Private key

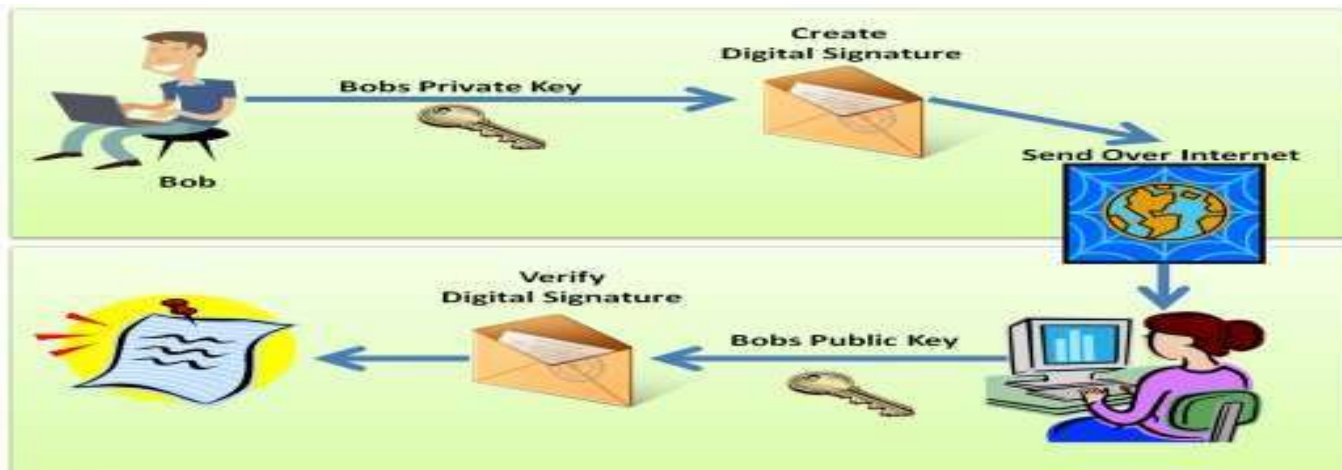
It is accessible only to the signer. It is used to generate digital signature which is then attached to the message.

2) Public key

It is available to all those , who receive message from sender.
It is used for verification of received messages.

EX..

Email, electronic funds transfer , ISDN , Smart cards , blind signature.



C. DIGITAL CERTIFICATE

- 1] Digital certificates is an Electronic "password" that allows a person, organization to exchange data securely over the Internet using the public key infrastructure (PKI).
- 2] Digital certificates also called as public key certificates or identity certificates
- 3] It is file that ensures holders identity and provides security.
- 4] In this process information is transferred between two authorized partners who have digital certificates issued by supreme authority.
- 5] Digital certificates issued by Certification Authority.



Certificate
Authority (CA)



Issues
certificates to
people,
systems, and
devices

Verifies the identity
of the holder

Provides **public key** of holder
to facilitate encryption/digital
signatures

Digital Certificate

- Issued to Jane Doe
- 123456789
- Expires MM/DD/YY



Digital signature of CA
validates the authenticity and
integrity of the certificate



Summary

- Buying and selling of goods or services on internet is called as E-Commerce.
- Common types of E-Commerce are B2C, B2B, C2C and C2B.
- When any business transaction takes place, it completes one trade cycle. Trade cycle consist of phases like presale, execution, settlement and after sale etc.
- In E-Commerce commonly used payment modes are credit card, mobile payment, bank transfer, e-wallet etc.
- Some common forms of E-Commerce are M-Commerce, social commerce.
- Electronic Data Interchange (EDI) is one of the most important technology for paperless exchange of information.
- E-Governance is the implementation of information technology in the government processes and functions.
- Types of E-Governance are G2C, G2B, G2G and G2E.
- In E-Commerce confidential information can be protected by using encryption, digital signature and digital certificate.

Thank you