

E-COMMERCE

UNIT - I

INTRODUCTION

E-commerce, also known as electronic commerce or internet commerce, refers to the buying and selling of goods or services using the internet, and the transfer of money and data to execute these transactions. E-Commerce is a methodology of modern business, which addresses the need of business organizations, vendors and customers to reduce cost and improve the quality of goods and services while increasing the speed of delivery. E-Commerce refers to the paperless exchange of business information using the following ways –

- Electronic Data Interchange (EDI)
- Electronic Mail (e-mail)
- Electronic Bulletin Boards
- Electronic Fund Transfer (EFT)
- Other Network-based technologies

Features of E-Commerce:

E-Commerce provides the following features –

• Non-Cash Payment –

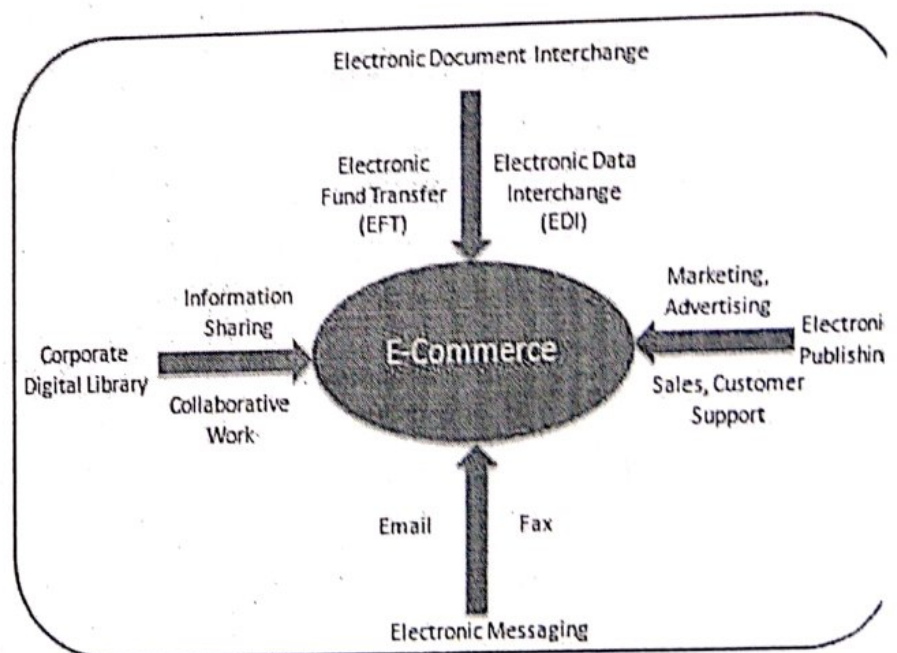
E-Commerce enables the use of credit cards, debit cards, smart cards, electronic fund transfer via bank's website, and other modes of electronics payment.

• 24x7 Service availability –

E-commerce automates the business of enterprises and the way they provide services to their customers. It is available anytime, anywhere.

- **Advertising / Marketing** – E-commerce increases the reach of advertising of products and services of businesses. It helps in better marketing management of products/services.

- **Improved Sales** – Using e-commerce, orders for the products can be generated anytime, anywhere without any human intervention. It gives a big boost to existing sales volumes.



- **Support** – E-commerce provides various ways to provide pre-sales and post-sales assistance to provide better services to customers.
- **Inventory Management** – E-commerce automates inventory management. Reports get generated instantly when required. Product inventory management becomes very efficient and easy to maintain.
- **Communication improvement** – E-commerce provides ways for faster, efficient, reliable communication with customers and partners.

Traditional Commerce v/s E-Commerce

S. No.	Traditional Commerce	E-Commerce
1	Heavy dependency on information exchange from person to person.	Information sharing is made easy via electronic communication channels making little dependency on person to person information exchange.
2	Communication/ transaction are done in synchronous way. Manual intervention is required for each communication or transaction.	Communication or transaction can be done in asynchronous way. Electronics system automatically handles when to pass communication to required person or do the transactions.
3	It is difficult to establish and maintain standard practices in traditional commerce.	A uniform strategy can be easily established and maintain in e-commerce.
4	Communications of business depends upon individual skills.	In e-Commerce or Electronic Market, there is no human intervention.
5	Unavailability of a uniform platform as traditional commerce depends heavily on personal communication.	E-Commerce website provides user a platform where all information is available at one place.
6	No uniform platform for information sharing as it depends heavily on personal communication.	E-Commerce provides a universal platform to support commercial / business activities across the globe.

T

Activities of E-Commerce :

Under the e-commerce umbrella there exist a variety of activities. These include:



- **Online Shopping:** A prevalent example of e-commerce is shopping via the internet. Virtual stores are created online, often boasting more variety of choices than are available at physical stores. There are also stores that exist only online, and benefit from the lack of investment into physical infrastructure.
- **Electronic Payments:** Payment systems for utility bills, phone, cable and internet bills, as well as online shopping are an important aspect of e-commerce. Here, security needs to be ensured regarding credit card and personal information.
- **Virtual Auctions:** One version of e-commerce is the online auction popularized by eBay. These websites offer customers the benefit of selling to others at the best possible price.
- **Internet Banking:** E-commerce has allowed many people to forego frequent visits to the bank and instead perform their regular banking activities online via secure banking services.
- **Online Ticketing:** Ticketing for almost all types of activities is now done online. This include travel ticketing such as air travel, bus and trains, as well as tickets for entertainment and sports events. This allows people to avoid queues and just go on the day of the event.

Types (categories/models) of E-Commerce:

E-commerce is the purpose of internet and the web to conduct business but when we concentrate on commercial deals among organizations and individuals demanding selective information systems under the guarantee of the firm it accepts the form of e-business. Nowadays, the word 'e' is hitting momentum.

There are primarily three types of e-commerce models:

1. Business To Business (B2B)

- Business to business, known as B2B model, is the largest e-commerce model that is based on revenue which involves trillions of dollars. In this both the buyers and sellers are business entities. B2B describes commerce transactions between businesses, such as between a manufacturer and a wholesaler, or between a wholesaler and a retailer.
- The volume of B2B transactions is much higher than the volume of B2C transactions and any other transaction.
- The primary reason for this is that in a typical supply chain there will be many B2B transactions involving sub components or raw materials, and only one B2C transaction, specifically sale of the finished product to the end customer.
- Benefits of B2B model:
 1. Encourage businesses online.
 2. Products import and export.
 3. Determine buyers and suppliers.
 4. Position trade guides.

2. Business To Consumer (B2C)

- Business to consumer is the first type of e-commerce that is also the most common one. It is also known as B2C model. In this type online business selling is offered to individual customers. This type started to expand after 1995 and now became one of the most common e-commerce.
- The B2C model works by retailers and marketers that use clear data in various marketing tools so can sell their products to the internet users.
- The internet users can use the shopping cart for everything they need. Payment is mostly done through credit cards or by payment gateways like the PayPal.
- Direct interaction with the customers is the main difference with other business model. B2C normally deal with business that are related to the customer. The basic concept of this model is to sell the product online to the consumers.

3. Consumer To Consumer (C2C)

- Consumer to consumer (C2C) or citizen-to-citizen electronic commerce involves the electronically facilitated transactions between consumers through some third party. A common example is the online auction, in which a consumer posts an item for sale and other consumers bid to purchase it; the third party generally charges a flat fee or commission.

- The sites are only intermediaries, just there to match consumers. They do not have to check quality of the products being offered.
- The C2C model facilitates online transactions of goods and services between the individual net users. But in this both the web users or both the parties cannot carry out any transaction without the platform that is provided by an online market maker such as the eBay.
- There is also the Customer to Business (C2B) model which is relatively less common. It's a complete reversal of the traditional sense of transaction, but could be found in crowd sourcing based projects.

Broad Goals of E-Commerce:

E-commerce is the route for purchasing goods and services online. The money transactions are done through online thus leads to the digital economy.

One research data to know is that 80% of online users buy their products in an online store than a physical store. As per statistics, \$4.5 trillion in sales are expected by 2021.

Some of the main goals of E-Commerce are

1. **Reach out to a larger audience** - internet access is becoming so mainstream now that your product/service can reach almost everyone on the planet with a internet-enabled device. Increasing visitors might be a familiar aim for us. Once we increase our website visitors, we should improve our hosting to fulfill demand.
2. **Always available:** Your virtual shop remains open and operational 24x7 even if you/your staff are not working- this might not be wholly true if your product is a service-which requires immediate human-intervention.
3. **Stock availability:** you need not maintain the whole stock of products - again this varies for different business models and will work greatly if you have a good supplier who does not defaults on supplies and a good shipping partner/team who work in sync for delivery
4. **Brand publicity:** You build your brand more quickly - as more people will know and talk and post and blog about you on social networks. Once your brand is build you can diversify easily and also pull out of a certain segment if that does not works out for you with minimal losses – typical example will be Flipkart's music(tunes) store which closed off even being a great initiative. For most part; setting up a website and maintaining it is lots cheaper given the plethora of hosting services available.
5. **Reduced Cost:** Cost of the products should be reduced when compared to the products that are available in general market.

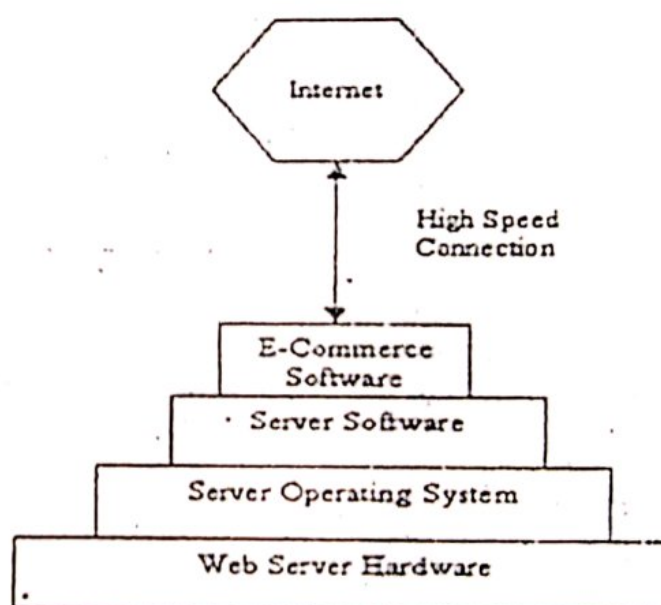
6. **Service Quality:** Quality of service plays a vital role in the success of E-Commerce. Also with the new crop of 3PL partners (within India) like Delhivery your shipping can also be outsourced.
7. **provide visitors a customized experience:** Technology now makes it feasible which will track how people interact with our website and customize their enjoy at the website as they move.
8. **partner with influencers:** with such a lot of blogs and social media channels for humans to move between to move between the net, getting our content material in front of human beings is one in all the biggest advertising challenges agencies continually face. One right tactic for achieving extra people is developing relationships with people and structures that already have a large audience.

Technical Components of E-Commerce:

The technology and infrastructure used to develop the E-commerce application is the key to its success.

The hardware and software must be selected in such a way that they can fulfill the needs of the E-commerce application.

The following figure shows the components involved in E-commerce infrastructure.



1. Hardware:

A Web server hardware platform is one of the major components of the E-Commerce infrastructure on which the performance of

the whole E-commerce application depends. While selecting Web server hardware, the software that will run on the server of the E-commerce transactions to be processed must be considered. The amount of the storage capacity and the computing power required depend on the volume of the E-commerce transaction to be processed.

If the exact requirements are not known in advance, then the hardware configuration should be highly scalable so that they can be upgraded to meet the requirements.

2. E - Commerce Software

Software is the main component that implements the E-commerce services and functionality. Software for E-commerce can be categorized in the following two types

Web server software:

Web server software is required in addition to the Web server operating system software. It is used to implement some extra functionality such as security and identification and retrieval and sending of Web pages.

Web server software creates a Web log file that identifies things such as the URL of the visitor, the length of the visit and the search engine and the key words used to find the site.

Web server software includes website development tools such as HTML editor and Web page upload support.

E-commerce software:

With the growth of E-commerce, many applications have emerged— for example, the electronic shopping cart that tracks the items selected for purchase and their costs. A typical E-commerce software must support the following processes:

Warehouse operations:

Warehouse is the area where online stores choose products from the shelf, present them smartly and prepare those products to be introduced. All these processes can be easily maintained using software.

Catalog management:

It is required to deliver the customized content to the screen or the GUI used by the customer. The software used for catalog management combines the different product data formats into a standard format for viewing, aggregating and interacting catalog data into a central store.

Product configuration:

The Web-based product configuration software allows the user to build the product to their specifications without the intervention of the salespeople.

For example, Dell Computers and CISCO systems use configuration software to sell build-to-order and network processes to their customers over the Internet.

Shopping cart

A model known as shopping cart is used by E-Commerce sites to track the items that are selected for purchase; the shopping cart allows customers to view all the items selected by them. The customers can add new items and remove the previously selected items from the shopping cart.

Transaction processing:

E-commerce transaction processing is used to process the data received from the. Shopping cart and to calculate the total cost of the purchase.

Functions of E-Commerce :

There are four functions of e-commerce:

1. Communication
2. Process management
3. Service management
4. Transaction capabilities.

1. Communication :

E-Commerce businesses must rely on virtual communication methods. While this is often a more efficient and effective means of exchanging information, workers must take care to ensure appropriate messaging and clear communication to guard against misunderstandings. Poor communication in e-commerce can result in lost business or an unprofessional business image.

Easy-to-Use Website

An easy-to-use company website is an essential tool for an e-commerce operation. Include high-resolution photographs of products, detailed descriptions of products and services and, if possible, video tutorials on how your products work. Include a frequently asked questions section to address common questions and concerns so you can quickly and efficiently communicate information to prospective customers.

Well-Trained Staffers

Training employees in effective e-commerce business communication techniques can present a polished image of your business and improve communication between customers and staffers. Make sure employees know all elements of your company's products and services. E-commerce consumers can't see or touch your product in person and are relying on information from your website and input from your staff members to help them make informed buying decisions.

Fast Email Response

If you give customers the option to email you with questions or concerns, make sure your response time is fast -- same-day or 24-hour turnaround time is ideal. Use an automated email response system to immediately let customers know their query was received and will be addressed soon. This lets the consumer know someone received his question and will get back to him quickly.

Customer Service Chat

Give customers instant access to online chat features with knowledgeable staff members. This aids communication for time-crunched customers who need answers right away, and it allows employees to direct customers to FAQs and other online resources they might find helpful. With chats,

customers can ask follow-up questions, which helps if they have a problem not found in your FAQs list.

Customer Service Phone Lines

Always give customers the option of using the phone and talking to a live operator.

Provide a live alternative for those seeking one-on-one support. This will give a “face” to your e-commerce business and improve communication with customers more comfortable with phones.

2. process management Function

The process Management function covers the automation and improvement of business processes. A good example of this would be networking two computers together so they could share and transfer data rather than have a person take data from one machine and input into another.

The benefits of e-commerce business process automation are :

Manage Orders More Easily

Managing orders can be much simpler when you don't need a human constantly working on receiving new orders, having them shipped, and cross checking those orders with the delivery addresses. With automation, your order management is an automated e-commerce process, and there's no chance of human error as well, making it faster and more accurate.

Collect Real Data

Using an automated e-commerce process gives you a better picture into how your company runs by delivering tons of data. We can know how long order processing takes right now, how many errors your current PO process generates and where most of the new item uploads get jammed.

Save Money

Through all of this automation, you're not only making the process easier for yourself, but you can also save money by not hiring additional people to do tasks that could otherwise be done instantly by your e-commerce business process.

3. Service management is the third function of E-Commerce. This is the application of technology to improve the quality of service. A good example of this function is any courier company web site. It permits customers to track shipments and schedule.

4. Transaction Capabilities provide the ability to buy/sell on the internet or some other online service.

Online Product Catalog

Users are able to view and search the product catalog. Product images and specifications are stored for each product and can be displayed on the web store at the user's discretion.

Online Pricing and Availability

Support multiple classes of customers, such as end-users and trade customers by applying security rules. Security can limit access to selected products or product categories and to particular price lists.

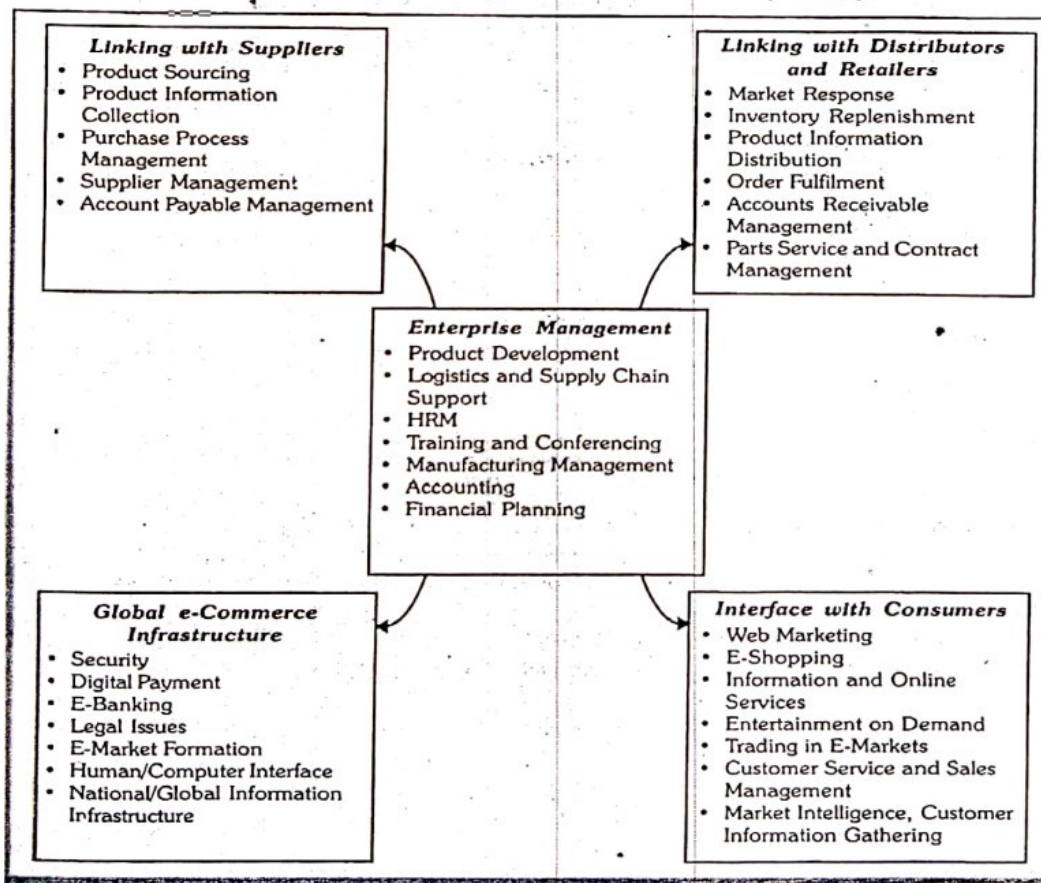
Online Sales Transactions

Companies enables users to add items to the Shopping Basket via the Product Catalog or web form request. Item quantities can be changed or removed from the shopping basket. It is mandatory to sign on with secure access to retrieve stored customer information. The payment information is then entered or confirmed.

Eg: Amazon.com

Scope of E-Commerce:

There are different places where e-commerce can be applied. The following diagram depicts them.



E-commerce has bloomed over the years and is one of the fastest-growing domains in the online world. Though it took some time for this to be accepted by the end-users, today we are at a point where the majority of the people love to shop online. There were numerous concerns revolving

around online shopping at its launch, but over years people tend to have started trusting E-commerce for all their shopping needs.

In India, people prefer shopping online these days rather than having to visit the physical store. The payment features that are smart and secure as well as the cash on delivery (COD), which makes the payment, even more, safer with hassle-free shipping, easy returns and reach out. Nowadays, India is in a completely growing stage of development and we need to update our business to the growing needs of the new generation. 'Incredible India' has now got a new name – 'DIGITAL India'. There is a huge scope of E-Commerce. The current generation completely belongs to e-services. Today, every business and service is going the 'internet' way. Everyone prefers e-services and e-governance which are the most preferred ways to connect to the people around the world.

Future of E-Commerce

Now days, the user of internet are increasing day by day and people will start using internet in making online business either by individuals or partnership. By calculating this we will reach the second most country after China. E-Commerce software provides huge growth by getting reserves from financial speculator organization.

Development of E-Commerce business in India

With increasing population in India it is a good factor with development of our country. The technology and the perspective of the people to earn profit is also developing. They think broadly and above there boundaries to start their business online. This improves the businessman to start and establish E-Commerce business in India Like — Grocery stores, handicraft store, online stationary store, medicines shops and many more like this, and we are encountering the adjustments in each part of the segments like — Logistic support, payment gateways, mobile responsive sites and many more. This help us in raise the expectations of getting success and increase in E-Commerce business in India.

Opportunities of E-Commerce business in India

Online entrance — As we increase our growth and secure second position, but the online entrance of the people are now also very less, but with the fastest growing country, the internet users will also increasing day by day which motivates them to shop online or sell product online.

Simplicity of utilizing the web — E-Commerce brings the easy way to use internet. Now a day, internet can easily access for use and many firm provide there system more efficient manner and fast internet service.

Make aware about the internet in rural areas — In India even it has developing country but then also in many area the advantage of internet is not so aware about it. Large number of population lies in

this area. So, providing them internet will help them to grow and also to E-Commerce business grow effectively.

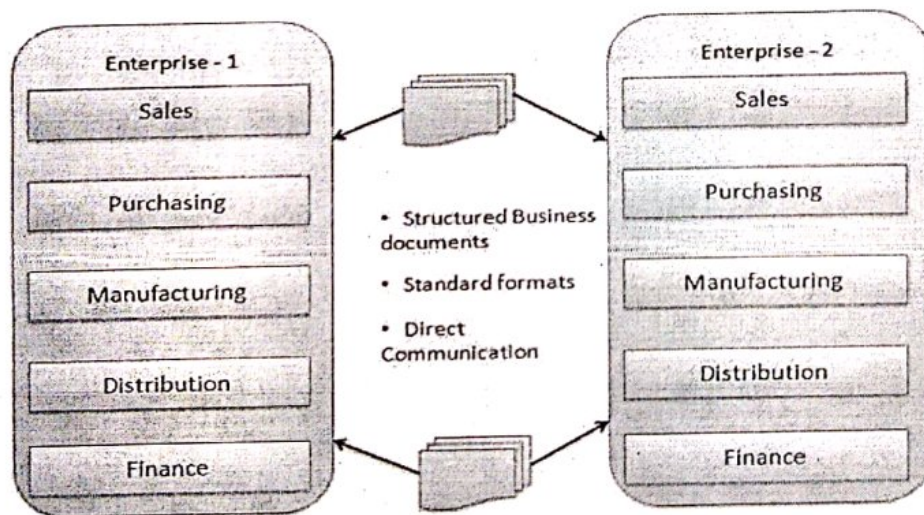
Financing E-Commerce business — Financing E-Commerce company in this sector will help them to grow their E-Commerce business and help people to start own online business in India which help to raise their earnings.

Services offered by company — The scope of E-Commerce business can helpful when in India it provides various kinds of facilities and services to them.

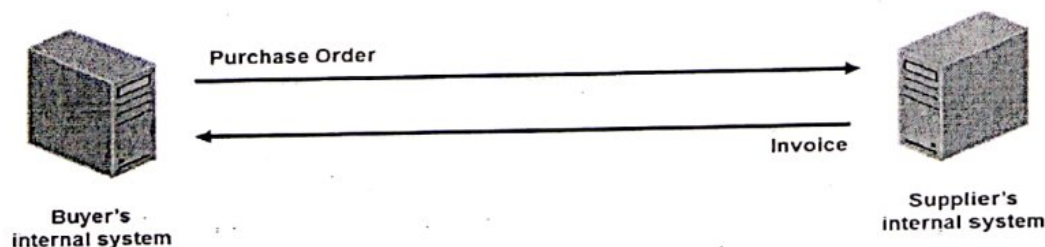
EDI (Electronic Data Interchange) :

EDI is the Concept of businesses electronically communicating information that was traditionally communicated on paper, such as purchase orders and invoices.

EDI stands for Electronic Data Interchange. EDI is an electronic way of transferring business documents in an organization internally, between its various departments or externally with suppliers, customers, or any subsidiaries. In EDI, paper documents are replaced with electronic documents such as word documents, spreadsheets, etc.



The EDI process looks like this — no paper, no people involved:



EDI Documents

Following are the few important documents used in EDI —

- Invoices
- Purchase orders
- Shipping Requests
- Acknowledgement
- Business Correspondence letters
- Financial information letters

Steps in an EDI System

Following are the steps in an EDI System.

- A program generates a file that contains the processed document.
- The document is converted into an agreed standard format.
- The file containing the document is sent electronically on the network.
- The trading partner receives the file.
- An acknowledgement document is generated and sent to the originating organization.

Advantages of an EDI System

Following are the advantages of having an EDI system.

- **Reduction in data entry errors.** – Chances of errors are much less while using a computer for data entry.
- **Shorter processing life cycle** – Orders can be processed as soon as they are entered into the system. It reduces the processing time of the transfer documents.
- **Electronic form of data** – It is quite easy to transfer or share the data, as it is present in electronic format.
- **Reduction in paperwork** – As a lot of paper documents are replaced with electronic documents, there is a huge reduction in paperwork.
- **Cost Effective** – As time is saved and orders are processed very effectively, EDI proves to be highly cost effective.
- **Standard Means of communication** – EDI enforces standards on the content of data and its format which leads to clearer communication.
