UNIT-I

Define e-commerce

Commerce is the exchange of goods (products) and services, usually but not exclusively for money. E-Commerce, short for electronic commerce, is simply commerce that is transacted over electronic media.

Web business processes

Electronic media infers all kinds of media including television, radio, fax, and email; but increasingly, e-commerce has come to mean commerce transacted on the Web.

A "transaction" typically involves three basic business processes, including:

Supplying potential customers with the information they need to understand the features and benefits of products and services, as well as disclosing terms for payment and servicing, and sometimes techniques to negotiate the terms.

Providing customers the means to actually purchase and deliver the products and/or services, which includes all the related services to the purchase, including invoice copies, payment histories, and shipment tracking.

Giving customers the ability to obtain support for products and services they have purchased.

History of e-commerce

The term electronic commerce came into widespread use after was developed in 1993 and freely distributed around the world. Drawn by the ease of use of the browser, millions of home consumers, businesses, and educators connected to the Internet, creating the conditions for Internet-based commerce. Businesses flocked to the Internet, attracted by the ease of setting up electronic storefronts and the potential access to a global market of Internet subscribers. Sales of goods and services to consumers, often referred to as (B2C) business-to-consumer e-commerce have grown steadily each year, despite the failure in 2000 and 2001 of so many new Internet businesses (known as dot-coms because of the domain name in their Internet address). Even more dramatic has been the extent to which businesses have adopted the Internet for supporting exchanges with other firms, such as suppliers and business customers. This is generally called business-tobusiness (B2B) e-commerce. Because of this rapid growth, e-commerce has become an important subject of study in its own right, and many schools now offer courses and degree programs focusing on it.

E-Commerce or Electronic Commerce

E-commerce is a popular term for electronic commerce or even internet commerce. The name is self-explanatory, it is the meeting of buyers and sellers on the internet. This involves the transaction of goods and services, the transfer of funds and the exchange of data.

Types of E-Commerce Models

Electronic commerce can be classified into four main categories. The basis for this simple classification is the parties that are involved in the transactions. So the four basic electronic commerce models are as follows,

1. Business to Business

This is Business to Business transactions. Here the companies are doing business with each other. The final consumer is not involved. So the online transactions only involve the manufacturers, wholesalers, retailers etc.

2. Business to Consumer

Business to Consumer. Here 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 etc.

3. Consumer to Consumer

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. Usually, goods traded are cars, bikes, electronics etc. OLX, Quikr etc follow this model.

4. Consumer to Business

This is the reverse of B2C, it is a consumer to business. So the consumer provides a good or some service to the company. Say for example an IT freelancer who demos and sells his software to a company. This would be a C2B transaction.

Advantages of E-Commerce

E-commerce provides the sellers with a global reach. They remove the barrier of place (geography). Now sellers and buyers can meet in the virtual world, without the hindrance of location.

Electronic commerce will substantially lower the transaction cost. It eliminates many fixed costs of maintaining brick and mortar shops. This allows the companies to enjoy a much higher margin of profit.

It provides quick delivery of goods with very little effort on part of the customer. Customer complaints are also addressed quickly. It also saves time, energy and effort for both the consumers and the company.

One other great advantage is the convenience it offers. A customer can shop 24×7. The website is functional at all times, it does not have working hours like a shop.

Electronic commerce also allows the customer and the business to be in touch directly, without any intermediaries. This allows for quick communication and transactions. It also gives a valuable personal touch.

Disadvantages of E-Commerce

The start-up costs of the e-commerce portal are very high. The setup of the hardware and the software, the training cost of employees, the constant maintenance and upkeep are all quite expensive.

Although it may seem like a sure thing, the e-commerce industry has a high risk of failure. Many companies riding the dot-com wave of the 2000s have failed miserably. The high risk of failure remains even today.

At times, e-commerce can feel impersonal. So it lacks the warmth of an interpersonal relationship which is important for many brands and products. This lack of a personal touch can be a disadvantage for many types of services and products like interior designing or the jewelry business.

Security is another area of concern. Only recently, we have witnessed many security breaches where the information of the customers was stolen. Credit card theft, identity theft etc. remain big concerns with the customers.

Then there are also fulfillment problems. Even after the order is placed there can be problems with shipping, delivery, mix-ups etc. This leaves the customers unhappy and dissatisfied.

Impact of e-commerce on Business Models

Describe how ecommerce influences and changes the dynamics of business. Why has Web-based ecommerce already revolutionized business in so many industries? Although there are many different factors, the overriding reason has to do with geographic market reach. Quite simply, companies that previously were limited in terms of geography, marketing, and distribution, can instantly become global players by selling goods and services over the Web. On the Web, all businesses automatically possess a worldwide reach.

On the surface, the Web's global reach can make for appealing stories. The Web offers the opportunity for businesses to dramatically alter the flow of products and services, and to change the playing field in many industries.

As a result, start-up Web specialty businesses (the notorious "dot-coms") tried to take early mover advantage of the opportunities afforded by the Web's reach. Brick-and-mortar companies (companies which pre-existed Web-based e-commerce) reacted to the changes set in motion by the dot-coms, and fought back with their own Web-based e-commerce. In many cases, the brick-and-mortars, renamed "click-and-mortars" once they earned their Web stripes, creatively went beyond even the dot-coms in terms of their application of e-commerce.

How the Web affects industry change?

The Web affects industry change in several areas, including competition, marketing, service, and sales. The risks are real, and businesses cannot enter into e-commerce lightly.

Web based ecommerce lowers the barriers of entry for virtually any industry. Because the cost of using the web as a retail outlet typically is far less than the costs of a physical store, a rash of new competitors should be expected.

Brick and mortar companies will take advantage of the web to move into new industry arenas.

An influx of competition into an industry usually translates into changes in product, mix, pricing, branding and supply chain partnerships.

The ability to market often differentiates companies. With the web, however, the marketing differences between companies become far easier for buyers to compare. With only a few keystrokes and clicks, a buyer can compare the web sites, and thus the products, prices and associated services of competitors.

The web generates new prospects and customers for companies, and new methods of marketing to those prospects/customers and existing customers.

A new science of marketing known as e-marketing has evolved to deal directly with the marketing challenges of doing business on the web. One of the disciplines of e-marketing. known as personalization, enables organizations to simulate one-to-one marketing to prospects and customers.

The notion of brand remains every bit as important on the web as it did before the web gained popularity.

Many companies have always taken pride in differentiating themselves from their competition through superior customer service. ecommerce offers new opportunities for organizations to distinguish themselves by offering customer self-service on the web.

Companies that provide extensive product information, or related product/service information, and even access to customer support specialists through email or chat, not only keep their web-centric customers happy, but cna reduce the overall operational costs of customer service.

Of course, the most obvious business model change resulting from e-commerce falls in the area of sales. E-commerce web sites may significantly reduce the cost of sales and savvy dot-comes and click-and-mortars have figured out ways of empowering web prospects and customers.

Allow web prospects and customers to perform their own product/service comparisons, configure their own pricing, choose their own shipping, make the payments, and track the fulfillment, all without the aid on an actual salesperson.

Impact of ecommerce

Impact of global reach, virtual sales, and online payment

With the incredible global reach offered by e-commerce comes an array of risks that many businesses and organizations never even considered. Global reach, virtual sales, and online payment all carry dangerous risks that can potentially put a company out of business.

Risks of Web-based e-commerce

Payment fraud and other security issues,new forms of tax and customs considerations, and

misrepresentation of products and services all mean that these risks are real, and that businesses cannot enter into e-commerce lightly.

In summary, Web-based e-commerce empowers all kinds of businesses, start-ups and established players alike, to test new markets, form creative partnerships, and chase previously untouchable business opportunities on a worldwide basis by means of a few simple keystrokes and clicks.

APPLICATIONS OF E-COMMERCE:

APPLICATIONS OF E-COMMERCE:

The applications of E-commerce are used in various business areas such as retail and wholesale and manufacturing. The most common E-commerce applications are as follows:

- Online marketing and purchasing
- Retail and wholesale
- Finance
- Manufacturing
- Online Auction
- E-Banking
- Online publishing
- Online booking (ticket, seat.etc)

Online marketing and purchasing

Data collection about customer behavior, preferences, needs and buying patterns is possible through Web and E-commerce. This helps marketing activities such as price fixation, negotiation, product feature enhancement and relationship with the customer.

Retail and wholesale:

E-commerce has a number of applications in retail and wholesale. E-retailing or on-line retailing is the selling of goods from Business-to-Consumer through electronic storesthat are designed using the electronic catalog and shopping cart model. Cybermall is a single Website that offers different

products and services at one Internet location. It attracts the customer and the seller into one virtual space through a Web browser.

Finance:

Financial companies are using E-commerce to a large extent. Customers can check the balances of their savings and loan accounts, transfer money to their other account and pay their bill through on-line banking or E-banking. Another application of E-commerce is on-line stock trading. Many Websites provide access to news, charts, information about company profile and analyst rating on the stocks.

Manufacturing:

E-commerce is also used in the supply chain operations of a company. Some companies form an electronic exchange by providing together buy and sell goods, trade market information and run back office information such as inventory control. This speeds up the flow of raw material and finished goods among the members of the business community. Various issues related to the strategic and competitive issues limit the implementation of the business models. Companies may not trust their competitors and may fear that they will lose trade secrets if they participate in mass electronic exchanges.

Auctions:

Customer-to-Customer E-commerce is direct selling of goods and services among customers. It also includes electronic auctions that involve bidding. Bidding is a special type of auction that allows prospective buyers to bid for an item. For example, airline companies give the customer an opportunity to quote the price for a seat on a specific route on the specified date and time.

E-Banking:

Online banking or E- banking is an electronic payment system that enables customers of a financial institution to conduct financial transactions on a website operated by the institution, Online banking is also referred as internet banking, e-banking, virtual banking and by other terms.

Online publishing:

Electronic publishing (also referred to as e-publishing or digital publishing) includes the digital publication of e-books, digital magazines, and the development of digital libraries and catalogs.

Online booking (ticket, seat.etc)

An Internet booking engine (IBE) is an application which helps the travel and tourism industry support reservation through the Internet. It helps consumers to book flights, hotels, holiday packages, insurance and other services online. This is a much needed application for the aviation industry as it has become one of the fastest growing sales channels.

ONLINE ENTERTAINMENT

When people think about the e-commerce sector they mostly consider the purchasing of products online. However, there is subscription based e-commerce which includes the online entertainment sector. Some of the biggest ecommerce entertainment companies include Amazon, Netflix, hulu, and Spotify. These companies depend a lot on the subscription based model. Online entertainment has taken over the entertainment sector. Long ago we used to watch television nowadays people have replaced television with Netflix. Another change in entertainment is Spotify which has taken over the

online entertainment sector by storm. It is a music playing platform. The way we entertain ourselves has been drastically changed by the e-commerce sector.

E-Marketing and its types.

Web marketing, digital marketing, internet marketing or online marketing; all of these words are synonymously used for E-Marketing. What it means is the marketing of products or services by using the internet. E-mails and wireless marketing also fall into the category of e-marketing.

We can say that it uses different technologies and media to connect customers and businesses. Especially in this era of technology, e-marketing has become a very important part of the marketing strategy of different companies.

Types of Internet Marketing

- ❖ Social media marketing.
- ❖ Influencer marketing.
- ❖ Affiliate marketing.
- ❖ Email marketing.
- ❖ Content marketing.
- ❖ Search engine optimization (SEO)
- ❖ Paid advertising.

What is ecommerce advertising?

Ecommerce advertising is the act of placing paid content on an online or offline property. Online properties include a website, search engine, social media network, podcast, newsletters, or other interactive online property such as chat or instant messaging.

Offline properties include more traditional forms of advertising such as TV spots, radio commercials, out-of-home advertising (such as billboards), direct mail campaigns, and more.

These paid messages allow you to reach people who may or may not have heard of your business and products. The goals of advertising campaigns can include everything from growing brand awareness to getting a direct response such as a newsletter subscriber, app signup, or a sale.

Search Engines

Search engines have three primary functions: Crawl: Scour the Internet for content, looking over the code/content for each URL they find. Index: Store and organize the content found during the crawling process. Once a page is in the index, it's in the running to be displayed as a result to relevant queries.

How do search engines work?

Search engines have three primary functions:

Crawl: Scour the Internet for content, looking over the code/content for each URL they find.

Index: Store and organize the content found during the crawling process. Once a page is in the index, it's in the running to be displayed as a result to relevant queries.

Rank: Provide the pieces of content that will best answer a searcher's query, which means that results are ordered by most relevant to least relevant.

E-Banking

Electronic banking has many names like e banking, virtual banking, online banking, or internet banking. It is simply the use of electronic and telecommunications network for delivering various banking products and services. Through e-banking, a customer can access his account and conduct many transactions using his computer or mobile phone. In this article, we will look at the importance and types of e-banking services.

Types of e banking

Banks offer various types of services through electronic banking platforms. These are of three types:

e banking

Level 1 – This is the basic level of service that banks offer through their websites. Through this service, the bank offers information about its products and services to customers. Further, some banks may receive and reply to queries through e-mail too.

Level 2 – In this level, banks allow their customers to submit instructions or applications for different services, check their account balance, etc. However, banks do not permit their customers to do any fund-based transactions on their accounts.

Level 3 – In the third level, banks allow their customers to operate their accounts for funds transfer, bill payments, and purchase and redeem securities, etc.

Most traditional banks offer e-banking services as an additional method of providing service. Further, many new banks deliver banking services primarily through the internet or other electronic delivery channels. Also, some banks are 'internet only' banks without any physical branch anywhere in the country.

m-commerce (mobile commerce)

M-commerce (mobile commerce) is the buying and selling of goods and services through wireless handheld devices such as smartphones and tablets. As a form of e-commerce, m-commerce enables users to access online shopping platforms without needing to use a desktop computer. Examples of m-commerce include in-app purchasing, mobile banking, virtual marketplace apps like the Amazon mobile app or a digital wallet such as Apple Pay, Android Pay and Samsung Pay.

Over time, content delivery over wireless devices has become faster, more secure and scalable. As of 2017 the use of m-commerce accounted for 34.5% of e-commerce sales. The industries affected most by m-commerce include:

Financial services, which includes mobile banking (when customers use their handheld devices to access their accounts and pay their bills) as well as brokerage services, in which stock quotes can be displayed and trading conducted from the same handheld device.

Telecommunications, in which service changes, bill payment and account reviews can all be performed from the same handheld device.

Service and retail, as consumers are given the ability to place and pay for orders on-the-fly.

Information services, which include the delivery of financial news, sports figures and traffic updates to a single mobile device.

Types of m-commerce

M-commerce can be categorized by function as either mobile shopping, mobile banking or mobile payments. Mobile shopping allows for a customer to purchase a product from a mobile device, using an application such as Amazon, or over a web app. A subcategory of mobile shopping is app commerce, which is a transaction that takes place over a native app. Mobile banking includes any handheld technology that enables customers to conduct fanatical transactions. This is typically done through a secure, dedicated app provided by the banking institution. Mobile payments enable users to buy products in-person using a mobile device. Digital wallets, such as Apple Pay, allow a customer to buy a product without needing to swipe a card or pay with physical cash.

How mobile commerce works

With most m-commerce enabled platforms, the mobile device is connected to a wireless network that can be used to conduct online product purchases. For those in charge of developing an m-commerce application, important KPIs to monitor include the total mobile traffic, total amount of traffic on the application, average order value and the value of orders over time. Similarly, tracking the mobile add to cart rate will help developers see if users are becoming customers. M-commerce developers may also be interested in logging average page loading times, mobile cart conversion rates and SMS subscriptions.

In terms of mobile payment products specifically, they operate through a form of peer-to-peer (P2P) sharing. Once a mobile device is paired with a bank card's information, the phone can be waved over a payment terminal to pay for a product. This contactless payment using a mobile device is possible due to the use of Near Field Communication (NFC).

Advantages and disadvantages of mobile commerce

The advantages of m-commerce include:

- ❖ Added customer retention by being more easily accessible.
- ❖ More convenience for customers in comparing prices, reading reviews and making purchases without the need of a desktop computer.
- ❖ Wider variety of products and services.
- ❖ Automates a businesses' point of customer contact and sales.

Disadvantages of m-commerce include:

- ➢ A poorly executed mobile experience can deter customers from making purchases.
- ➢ Mobile payment options are not available in every geographic location and may not support every type of digital wallet.
- ➢ Businesses must know and comply with tax laws and regulations of all countries they ship to (some businesses will avoid this by only allowing purchases and shipping from their country of origin).

WHAT IS ONLINE TRADING & ADVANTAGES OF ONLINE TRADING?

Investing is very much essential these days as savings alone is not adequate to fulfill all our financial goals and also to beat inflation. There are several investment options available and you can choose them as per your needs and convenience. You have to start your investments right from a young age so as to get good returns. Investment habit brings a sense of financial discipline in a person's life as it makes you allocate a certain amount of money periodically for the purpose of investment. Based on your risk appetite and time horizon to achieve your financial goals, you can select the appropriate investment option. There are some financial assets that help you achieve your short term goals and other assets that help you achieve your long term goals. In today's busy world, technological advances have made the entire process of investing and managing investments easier without any hassles. Anyone can have a complete hold on investments even through smartphone. You can stay connected with the market always as investing in the stocks requires constant monitoring of the stock market.

Trading in the stock market has become less time consuming these days as you can trade all by yourself without the assistance of a broker by means of online trading. Just like shopping for groceries online, you can buy and sell stocks online. You need not be an expert to begin online trading as these trading platforms are user friendly and do not necessitate any special learning. have even made things easier for an investor or trader as you can carry out any transaction in the stock market through your smartphone itself. You can trade from anywhere anytime through the mobile trading app.

Trading platforms provide all the necessary support and assistance by providing secured real time access to trading, research reports, price analysis of stocks, market news, etc. You can buy or sell shares if you have a trading account and an internet connection. Not only that, you can trade in currency, commodity, etc. through one single trading platform. platforms help you trade without any difficulty as these platforms enable high speed trading. These platforms have revolutionized the way trading is done. You can simply download these to your system or mobile and can begin trading.

What is Online Trading?

You can place trade orders or cancel orders at your will from the comforts of your home. It allows you to make your own decision with regards to trading without any interference of the broker. You can buy shares or invest in IPO or buy mutual funds as well.

Online trading can be done by simply opening a demat and trading account with any SEBI registered broker. Account opening can be done in a matter of 15 minutes. The documents required to open an account are PAN card, address proof, AADHAAR card, mobile number linked to AADHAAR, bank statement, cancelled cheque leaf and passport photograph.

Documents issued by trading member/broker:

Contract note:

The trading member or the broker has to issue contract note within 24 hrs of the execution of trade. Digital contract notes are issued these days. You have to check the contract notes regularly and any discrepancy has to be taken up with the broker immediately. The broker also issues a quarterly statement of funds in digital format.

Benefits of Online Trading

The Advantages of Online Trading are:

- ❖ Its Simple
- ❖ It is Less Expensive
- ❖ Quick & less time consuming.
- ❖ Complete Control
- ❖ Chances of Error is less
- ❖ Monitor Investment All time
- ❖ Access Reports.

It is simple:

It enables a trader to have a hassle free trading experience. Anyone can use these platforms as specific skill is not required to carry out trading online.

It is less expensive:

It is less expensive as compared to traditional mode of trading. Brokers also promote online trading as it reduces maintenance and other costs incurred by the broker.

Quick and less time consuming:

Trading can be done in a seamless manner and in less time. Before the advent of online technologies, trading was a cumbersome process as you had to visit the broker or call your broker for placing or cancelling trade orders. Now, you can carry out trading even through a smartphone in the simplest way.

Complete control:

It allows you to have complete control over your portfolio. You can place trade orders from anywhere anytime. That is the kind of flexibility you get due to online trading.

Chances of error are less:

In case of traditional offline trading, there were more chances of errors due to miscommunication between the traders and brokers. But in online trading, you can place trade orders or cancel without broker's interference and hence can manage trade transactions by yourself.

Monitor investment at all times:

You can monitor investments anytime. There are mobile trading apps that can be downloaded in your smartphone which help you stay in touch with the markets and also monitor your investment anytime and take proper strategic moves accordingly. Loss making stocks can be removed and profit making stocks can be added to your portfolio by observing the way the market moves.

Access to research reports:

You can get access to top research recommendations, reports, analysis on stock price based on various charts. There are various brokerage websites through which you can have discussions with research experts as well. You can take the best move with the help of financial advisors too.

Safety measures that have to be taken in case of online trading:

- ❖ Trade orders should not be placed from shared PCs or cyber cafes.
- ❖ Always log out after carrying out trade in order to avoid any misuse of your account.
- ❖ Personal computers have to be protected against viruses by installing anti-virus solution.
- ❖ Do not click on "remember me" option when you sign in to your trading account from a different location.
- ❖ Investment in financial assets is offered by several brokers. You can choose that which suits your needs and demands after comparison of brokers on the basis of services, brokerage charges, etc. Online trading helps you trade or invest in the most secured way. Its simple, easy and fast to trade online.

Definition of 'E-learning'

Definition: A learning system based on formalised teaching but with the help of electronic resources is known as E-learning. While teaching can be based in or out of the classrooms, the use of computers and the Internet forms the major component of E-learning. E-learning can also be termed as a network enabled transfer of skills and knowledge, and the delivery of education is made to a large number of recipients at the same or different times. Earlier, it was not accepted wholeheartedly as it was assumed that this system lacked the human element required in learning.

However, with the rapid progress in technology and the advancement in learning systems, it is now embraced by the masses. The introduction of computers was the basis of this revolution and with the passage of time, as we get hooked to smartphones, tablets, etc, these devices now have an importance place in the classrooms for learning. Books are gradually getting replaced by electronic educational materials like optical discs or pen drives. Knowledge can also be shared via the Internet, which is accessible   24/7,   anywhere,   anytime.

Description: E-learning has proved to be the best means in the corporate sector, especially when training programs are conducted by MNCs for professionals across the globe and employees are able to acquire important skills while sitting in a board room, or by having seminars, which are conducted for employees of the same or the different organizations under one roof. The schools which use E-learning technologies are a step ahead of those which still have the traditional approach towards learning.

No doubt, it is equally important to take forward the concept of non-electronic teaching with the help of books and lectures, but the importance and effectiveness of technology-based learning cannot be taken lightly or ignored completely. It is believed that the human brain can easily remember and relate to what is seen and heard via moving pictures or videos. It has also been found that visuals, apart from holding the attention of the student, are also retained by the brain for longer periods. Various sectors, including agriculture, medicine, education, services, business, and government setups are adapting to the concept of E-learning which helps in the progress of a nation.

Advantages of E-Learning

- ❖ You are able to link the various resources in several varying formats.
- ❖ It is a very efficient way of delivering courses online.
- ❖ Due to its convenience and flexibility, the resources are available from anywhere and at any time.
- ❖ Everyone, who are part time students or are working full time, can take advantage of web-based learning.
- ❖ Web-based learning promotes active and independent learning.
- ❖ As you have access to the net 24x7, you can train yourself anytime and from anywhere also.
- ❖ It is a very convenient and flexible option; above all, you don't have to depend on anyone for anything.
- ❖ Not only can you train yourself on a day to day basis, but also on weekends or whenever you have the free time to. There is no hard and fast rule.
- ❖ Through discussion boards and chats, you are able to interact with everyone online and also clear your doubts if any.
- ❖ The video instructions that are provided for audio and video learning can be rewound and seen and heard again and again if you do not happen to understand the topic first time around.

Disadvantages Of eLearning

- ❖ Well, there are not many disadvantages of eLearning, the main one being that you get knowledge only on a theoretical basis and when it comes to putting to use whatever you have learnt, it may be a little different. The face-to-face learning experience is missing, which may matter to some of you.
- ❖ Most of the online assessments are limited to questions that are only objective in nature.
- ❖ There is also the problem of the extent of security of online learning programs.
- ❖ The authenticity of a particular student's work is also a problem as online just about anyone can do a project rather than the actual student itself.
- ❖ The assessments that are computer marked generally have a tendency of being only knowledge-based and not necessarily practicality-based.

E-shopping

E-shopping is a form of electronic commerce which allows consumers to directly buy goods or services from a seller over the Internet using a web browser. The process of selling and buying products over the internet is called online shopping or e- shopping.

Advantages and Disadvantages of E-Shopping

Advantages of e-shopping

Due to rapid growth of technology, business organizations have switched over from the traditional method of selling goods to electronic method of selling goods. Business organizations use internet as a main vehicle to conduct commercial transactions.

Online stores do not have space constraints and a wide variety of products can be displayed on websites. It helps the analytical buyers to purchase a product after a good search.

1. Convenience of online shopping

Customers can purchase items from the comfort of their own homes or work place. Shopping is made easier and convenient for the customer through internet. It is also easy to cancel the transactions.

Saves time and efforts.

Convenience of Shopping at home.

Wide variety / range of products are available.

Good discounts / lower prices.

Get detailed information of the product.

We can compare various models / brands.

2. No pressure shopping

Generally, in physical stores, the sales representatives try to influence the buyers to buy the product. There can be some kind of pressure, whereas the customers are not pressurized in any way in online stores.

3. Online shopping saves time

Customers do not have to stand in queues in cash counters to pay for the products that have been purchased by them. They can shop from their home or work place and do not have to spend time traveling. The customers can also look for the products that are required by them by entering the key words or using search engines.

4. Comparisons

Companies display the whole range of products offered by them to attract customers with different tastes and needs. This enables the buyers to choose from a variety of models after comparing the finish, features and price of the products on display, Sometimes, price comparisons are also available online.

5. Availability of online shop

The mall is open on 365 x 24 x 7. So, time does not act as a barrier, wherever the vendor and buyers are.

6. Online tracking

Online consumers can track the order status and delivery status tracking of shipping is also available.

7. Online shopping saves money

To attract customers to shop online, e-tailers and marketers offer discounts to the customers. Due to elimination of maintenance, real-estate cost, the retailers are able to sell the products with attractive discounts through online. Sometimes, large online shopping sites offer store comparison.

Disadvantages of E-Shopping

Ease of use is the prime reason that drives the success of e-commerce. Though internet provides a quick and easy way to purchase a product, some people prefer to use this technology only in a limited way. They regard internet as a means for gathering more information about a product before buying it in a shop. Some people also fear that they might get addicted to online shopping.

The major disadvantages of online shopping are as follows.

1. Delay in delivery

Long duration and lack of proper inventory management result in delays in shipment. Though the duration of selecting, buying and paying for an online product may not take more than 15 minutes; the delivery of the product to customer' s doorstep takes about 1-3 weeks. This frustrates the customer and prevents them from shopping online.

2. Lack of significant discounts in online shops

Physical stores offer discounts to customers and attract them so this makes it difficult for e-tailers to compete with the offline platforms.

3. Lack of touch and feel of merchandise in online shopping

Lack of touch-feel-try creates concerns over the quality of the product on offer. Online shopping is not quite suitable for clothes as the customers cannot try them on.

4. Lack of interactivity in online shopping

Physical stores allow price negotiations between buyers and the seller. The show room sales attendant representatives provide personal attention to customers and help them in purchasing goods. Certain online shopping mart offers service to talk to a sales representative,

5. Lack of shopping experience

The traditional shopping exercise provides lot of fun in the form of show-room atmosphere, smart sales attendants, scent and sounds that cannot be experienced through a website. Indians generally enjoy shopping. Consumers look forward to it as an opportunity to go out and shop.

6. Lack of close examination in online shopping

A customer has to buy a product without seeing actually how it looks like. Customers may click and buy some product that is not really required by them. The electronic images of a product are sometimes misleading. The colour, appearance in real may not match with the electronic images.

People like to visit physical stores and prefer to have close examination of good, though it consumes time. The electronic images vary from physical appearance when people buy goods based on electronic images.

7. Frauds in online shopping

Sometimes, there is disappearance of shopping site itself. In addition to above, the online payments are not much secured. So, it is essential for e-marketers and retailers to pay attention to this issue to boost the growth of e-commerce. The rate of cyber crimes has been increasing and customers' credit card details and bank details have been misused which raise privacy issues.Customers have to be careful in revealing their personal information. Some of the e-tailers are unreliable.

UNIT-II

INTERNET AND HTML

Introduction to Internet

Internet is the world's largest computer network, the network of networks, scattered all over the world.The vast worldwide system consisting of information, people and computers is named as internet. The Internet is a global network of networks. People and organizations connect into the Internet so they can access its massive store of shared information. The Internet is an inherently participative medium. Anybody can publish information or create new services. The Internet is a cooperative endeavor no organization is in charge of the net.

History & Development of the Internet:

In its infancy, the Internet was originally conceived by the Department of Defense as a way to protect government communications systems in the event of a military strike. The original network, dubbed ARPANetV(for the Advanced Research Projects Agency that developed it) evolved into a communications channel among contractors, military personnel, and university researchers who were contributing to ARPA projects. The network employed a set of standard protocols to create an effective way for these people to communicate and share data with each other. ARPAnet's popularity continued to spread among researchers and in the 1980 the National Science Foundation, whose NSFNet, linked several high speed computers, took charge of what had come to be known as the Internet. By the late 1980's, thousands of cooperating networks were participating in the Internet. In 1991, the U.S. High Performance Computing Act established the NREN (National Research & Education Network). NREN's goal was to develop and maintain high-speed networks for research and education, and to investigate commercial uses for the Internet. The rest, as they say, is history in the making.

The Internet has been improved through the developments of such services as Gopher and the World Wide Web. Even though the Internet is predominantly thought of as a research oriented network, it continues to grow as an informational, creative, and commercial resource every day and all over the world.

Meaning of Internet

A network of computers and several networks consisting of computers, people and information. The internet helps in three obvious ways

1. To get information

We can get information about people, products, organizations,research data, electronic versions of the printed media, movies, etc from the internet. The most recent and very successful attempt at presenting information over the internet is World Wide Web (WWW).

2. To provide information

The best and most inexpensive way to let people know about you or about your institution is setting up a home page about you and your products and services.

i) Publishing, including full text articles, reports, illustrated articles, abstracts, computer programs and demonstrations.

ii) Extension, some of the delays associated with the printed media may be reduced.

iii) Teaching includes both learning and assistance for students.

3. To compile information

The special case of "getting information". For eg. You wanted to poll the readership of magazine or conduct survey to detect the pulse of a selected community, web provider an opportunity. Using forms, e-mail etc you can conduct surveys and get opinion of peoples across the world

Requirements to connect the Internet:

- To access the internet over phone lines the user needs
- A Computer
- A Modem
- An available telephone line
- The appropriate software
- A telephone number to use to connect to a remote internet computer.

Internet access/ Dial-Up Connection

History and types of connections

Common methods of Internet access include dial-up, landline (over Cable Internet access, Optical fiber or Twisted pairs), T- lines, Wi-Fi, satellite and cell phones.

Dial-up connections are the most common type of Internet connection available from ISPs and the slowest and (usually) the least expensive. A dial-up connection allows users to connect to the Internet via a local server using a standard 56k modem, the PC literally dials (hence the name) a telephone number (provided by the Internet Service Provider) and connects to the server's modem and therefore the Internet. Once connected users are free to search the web as they please, however, compared to modern speeds of broadband Internet, dial-up is very slow and can only nominally transfer at 56 Kilobits per second.

Asymmetric digital subscriber lines (ADSL) have become a widely available Broadband Internet access connection, providing a variety of data rates. The connections work by splitting the function of a phone line into separate channels for voice telephone calls and for data (Internet). Thus, a user can talk on the phone and be connected to the Internet at the same time. ADSL connection services are sold with different speed specifications, below are some common configurations for download/upload speed:

512kbit/s/128kbit/s

1 Mbit/s/256kbit/s

3 Mbit/s/768kbit/s

Cable Internet access, the principal competitor to DSL, is offered at a range of prices and speeds overlapping that of DSL, but tends to concentrate more on the high end of the market.

Wireless connections

Wi-Fi provides wireless access to computer networks, and therefore can do so to the Internet itself.

Hotspots providing such access include Wi-Fi-cafes, where a would-be user needs to bring their own wirelessenabled devices such as a laptop or PDA. These services may be free to all, free to customers

only, or fee based. A hotspot need not be limited to a confined location. The whole campus or park, or even the entire city can be enabled. Grassroots efforts have led to wireless community networks.

Apart from Wi-Fi, there have been experiments with proprietary mobile wireless networks like Ricochet, various high-speed data services over cellular or mobile phone networks, and fixed wireless services. These services have not enjoyed widespread success due to their high cost of deployment, which is passed on to users in high usage fees. New wireless technologies such as WiMAX have the potential to alleviate these concerns and enable simple and cost effective deployment of metropolitan area networks covering large, urban areas. There is a growing trend towards wireless mesh networks, which offer a decentralized and redundant infrastructure and are often considered the future of the Internet.

Methods and venues of connection

Besides accessing from residences, there are public places to use the Internet which would include libraries and Internet cafes, where computers with Internet connections are available. Some libraries provide stations that provide facilities for hooking up public-owned laptops to local area networks (LANs). There are also wireless Internet access points in many public places like airport halls, in some cases just for brief use while standing. These Access points may provide coin operated computers or Wi-Fi hot spots that enable specially equipped laptops to pick up Internet service signals. Various terms are used, such as "public Internet kiosk", "public access terminal", and "Web payphone". Many hotels now also have public terminals, though these are usually fee based.

Internet Services Features

Information

Many people use the terms Internet and World Wide Web, or just the Web, interchangeably, but the two terms are not synonymous. The World Wide Web is a global set of documents, images and other resources, logically interrelated by hyperlinks and referenced with Uniform Resource Identifiers (URIs). URIs allow providers to symbolically identify services and clients to locate and address web servers, file servers, and other databases that store documents and provide resources and access them using the Hypertext Transfer Protocol (HTTP), the primary carrier protocol of the Web. HTTP is only one of the hundreds of communication protocols used on the Internet. Web services may also use HTTP to allow software systems to communicate in order to share and exchange business logic and data.

World Wide Web browser software, such as Internet Explorer, Firefox, Opera, Apple Safari, and Google Chrome, let users navigate from one web page to another via hyperlinks embedded in the documents. These documents may also contain any combination of computer data, including graphics, sounds, text, video, multimedia and interactive content including games, office applications and scientific demonstrations.

Communication

E-mail is an important communications service available on the Internet. The concept of sending electronic text messages between parties in a way analogous to mailing letters or memos predates the creation of the Internet. Today it can be important to distinguish between internet and internal e-mail systems. Internet e-mail may travel and be stored unencrypted on many other networks and machines out of both the sender's and the recipient's control. During this time it is quite possible for the content to be read and even tampered with by third parties, if anyone considers it important enough. Purely internal or intranet mail systems, where the information never leaves the corporate or organization's network, are much more secure, although in any organization there will be IT and other personnel

whose job may involve monitoring, and occasionally accessing, the e-mail of other employees not addressed to them. Pictures, documents and other files can be sent as e-mail attachments. E-mails can be cc-ed to multiple e-mail addresses.

Internet telephony is another common communications service made possible by the creation of the Internet. VoIP stands for Voice-over-Internet Protocol, referring to the protocol that underlies all Internet communication. The idea began in the early 1990s with walkie-talkie-like voice applications for personal computers. In recent years many VoIP systems have become as easy to use and as convenient as a normal telephone. The benefit is that, as the Internet carries the voice traffic, VoIP can be free or cost much less than a traditional telephone call, especially over long distances and especially for those with always-on Internet connections such as cable or ADSL. VoIP is maturing into a competitive alternative to traditional telephone service. Interoperability between different providers has improved and the ability to call or receive a call from a additional telephone is available. Simple, inexpensive VoIP network adapters are available that eliminate the need for a personal computer.

Data transfer

File sharing is an example of transferring large amounts of data across the Internet. A computer file can be e-mailed to customers, colleagues and friends as an attachment. It can be uploaded to a website or FTP server for easy download by others. It can be put into a "shared location" or onto a file server for instant use by colleagues. The load of bulk downloads too many users can be eased by the use of "mirror" servers or peer-topeer networks. In any of these cases, access to the file may be controlled by user authentication, the transit of the file over the Internet may be obscured by encryption, and money may change hands for access to the file.

Accessibility

Common methods of Internet access in homes include dial-up, landline broadband (over coaxial cable,fiber optic or copper wires), Wi-Fi, satellite and 3G technology cell phones. Public places to use the Internetinclude libraries and Internet cafes, where computers with Internet connections are available. There are alsoInternet access points in many public places such as airport halls and coffee shops, in some cases just for brief use while standing. Various terms are used, such as "public Internet kiosk", "public access terminal", and "Web payphone". Many hotels now also have public terminals, though these are usually fee-based. These terminals are widely accessed for various usage like ticket booking, bank deposit, online payment etc. Wi-Fi provides wireless access to computer networks, and therefore can do so to the Internet itself. Hotspots providing such access include Wi-Fi cafes, where would-be users need to bring their own wireless-enabled devices such as a laptop or PDA.

Social impact

The Internet has enabled entirely new forms of social interaction, activities, and organizing, thanks toits basic features such as widespread usability and access. Social networking websites such as Face book and My Space have created a new form of socialization and interaction. Users of these sites are able to add a wide variety of information to their personal pages, to persue common interests, and to connect with others.

Business Services.

TCP/IP (Transmission Control Protocol/Internet Protocol)

The Transmission Control Protocol (TCP) is one of the core protocols of the Internet Protocol Suite. TCP is one of the two original components of the suite (the other being Internet Protocol, or IP), so the entire suite is commonly referred to as TCP/IP. Whereas IP handles lower-level transmissions from computer to computer as a message makes its way across the Internet, TCP operates at a higher level, concerned only with the two end systems, for example a Web browser and a Web server. In particular, TCP provides reliable, ordered delivery of a stream of bytes from a program on one computer to another program on another computer. Besides the Web, other common applications of TCP include e-mail and file transfer. Among its other management tasks, TCP controls segment size, flow control, the rate at which data is exchanged, and network traffic congestion.

TCP provides a communication service at an intermediate level between an application program and the Internet Protocol (IP). That is, when an application program desires to send a large chunk of data across the Internet using IP, instead of breaking the data into IP-sized pieces and issuing a series of IP requests, the software can issue a single request to TCP and let TCP handle the IP details. IP works by exchanging pieces of information called packets. A packet is a sequence of bytes and consists of a header followed by a body. The header describes the packet's destination and, optionally, the routers to use for forwarding until it arrives at its final destination. The body contains the data which IP is transmitting.

Shell Account

Traditionally a shell account was a user account on a remote server which gave you access to a unix shell via a command-line interface protocol such as telnet. They were originally provided by ISPs (such as Netcom (USA) and Digex) and were used for file storage, web space, email accounts, newsgroup access and software development. In more recent times, shell providers are often found to offer shell accounts at lowcost or for free. These shell accounts generally provide users with access to various software and services including compilers, IRC clients, background processes, FTP, text editor (such as nano) and email client (suchBas pine).

Changing the Password

A password is a secret word or string of characters that is used for authentication, to prove identity or gain access to a resource (example: an access code is a type of password). The password must be kept secret from those not allowed access. The use of passwords is known to be ancient. Sentries would challenge those wishing to enter an area or approaching it to supply a password or watchword. Sentries would only allow a person or group to pass if they knew the password. In modern times, user names and passwords are commonly used by people during a log in process that controls access to protected computer operating systems, mobile phones, cable TV decoders, automated teller machines (ATMs), etc. A typical computer user may require passwords for many purposes: logging in to computer accounts, retrieving e-mail from servers, accessing programs, databases, networks, web sites, and even reading the morning newspaper **online**

What makes the WWW work?

WWW is another example of client/server computing. Each time a link is followed, the client is requesting a document (or graphic or sound file) from a server (also called a Web server) that's part of the World Wide Web that "serves" up the document. The server uses a protocol called HTTP or HyperText Transport Protocol. The standard for creating hypertext documents for the WWW is HyperText Markup Language or HTML. HTML essentially codes plain text documents so they can be viewed on the Web.

Web page

Web is a collection of files known as WebPages. These WebPages can contain hyperlinks to link other.

WebPages. A hyperlink can be any text or image which when clicked would display another webpage .There may be one or more pages in the home page, which is the initial webpage present in a website. A webpage or web page is a document or resource of information that is suitable for the World Wide Web and can be accessed through a web browser and displayed on a computer screen.

Hyper Text

Hypertext is text displayed on a computer with references (hyperlinks) to other text that the reader can immediately access, usually by a mouse click or key press sequence. Apart from running text, hypertext may contain tables, images and other presentational devices. Other means of interaction may also be present, such as a bubble with text appearing when the mouse hovers over a particular area, a video clip starting, or a form to complete and submit. The most extensive example of hypertext today is the World Wide Web.

HTML (Hypertext Markup Languages)

HTML stands for Hypertext Markup Languages ,which is an application of standard generalized Markup Language(SGML).It is a simple language used to define and describe the layout of a Web page.HTML also supports Multimedia and documents links.HTML consist of special codes which when embedded in text, adds formatting. The special characters, which separate HTML from ordinary text, are the left and right brackets.

(<>).These brackets contain instructions known as TAGS that are not case sensitive. The Case study substantially helps in understanding the need for learning HTML and the usage of HTML and the usage of HTML in designing the web pages.

HTML Tags

• HTML tags are used to mark-up HTML elements .

• HTML tags are surrounded by the two characters < and > .

• The surrounding characters are called angle brackets .

• HTML tags normally come in pairs like and .

• The first tag in a pair is the start tag, the second tag is the end tag.

• The text between the start and end tags is the element content.

• HTML tags are not case sensitive, <b> means the same as <B>.

Web browsers

A Web browser is a software application for retrieving, presenting, and traversing information resources on the World Wide Web. An information resource is identified by a Uniform Resource Identifier (URI) and may be a web page, image, video, or other piece of content. Hyperlinks present in resources enable users to easily navigate their browsers to related resources. Although browsers are primarily intended to access the World Wide Web, they can also be used to access information

provided by Web servers in private networks or files in file systems. Some browsers can be also used to save information resources to file systems.

Internet Addressing:

To use Internet e-mail successfully, you must understand how the names and addresses for computers and people on the Internet are formatted. Mastering this technique is just as important as knowing how to use telephone numbers or postal addresses correctly. Fortunately, after you get the hang of them, Internet addresses are usually no more complex than phone numbers and postal addresses. And, like those methods of identifying a person, an organization, or a geographic location--usually by a telephone number or a street address--Internet addresses have rules and conventions for use.

Sample Internet Address: custcare@aucegypt.edu

The Internet address has three parts:

1. A user name [custcare in the example above]

2. An "at" sign (@)

3. The address of the user's mail server [aucegypt.edu in the example above]

The right-most segment of domain names usually adhere to the naming conventions listed below:

EDU Educational sites in the United States

COM Commercial sites in the United States

GOV Government sites in the United States

NET Network administrative organizations

MIL Military sites in the United States

ORG Organizations in the U.S. not covered by the categories above (e.g., non-profit orginaizations).

IP address

An Internet Protocol (IP) address is a numerical label that is assigned to devices participating in a computer network utilizing the Internet Protocol for communication between its nodes. An IP Address serves two principal functions in networking: host or network interface identification and location addressing. The role of the IP address has also been characterized as follows: "A name indicates what we seek. An address indicates where it is. A route indicates how to get there." The original designers of TCP/IP defined an IP address as a 32-bit number and this system, known as Internet Protocol Version 4 or IPv4, is still in use today.

Domain name

A domain name is an identification label that defines a realm of administrative autonomy, authority, or control in the Internet, based on the Domain Name System (DNS). Domain names are used in various networking contexts and application-specific naming and addressing purposes. They are organized in subordinate levels (subdomains) of the DNS root domain, which is nameless. The first-level set of domain names are the top-level domains (TLDs), including the generic top-level domains (gTLDs), such as the prominent domains com, net and org, and the country code top-level domains

(ccTLDs). Below these top-level domains in the DNS hierarchy are the second-level and third-level domain names that are typically open for reservation by end-users that wish to connect local area networks to the Internet, run web sites, or create other publicly accessible Internet resources. The registration of these domain names is usually administered by domain name registrars who sell their services to the public.

Uniform Resource Locators or URLs:

A Uniform Resource Locator or URL is the address of a document you'll find on the WWW. YourWWW browser interprets the information in the URL in order to connect to the proper Internet server and to retrieve your desired document. Each time you click on a hyperlink in a WWW document, you're actually instructing your browser to find the URL that's embedded within the hyperlink. The elements in a URL:

Protocol://server's address/filename

Hypertext protocol: http://www.aucegypt.edu

Gopher protocol: gopher://gopher.umm.tc.edu

File Transfer Protocol: ftp://ftp.dartmouth.edu

Telnet Protocol: telnet://pac.carl.org

News Protocol: news:alt.rock-n-roll.stones

Internet Protocols

A Protocol is a formal set of rules and conventions that governs hoe computer exchanges information over a net medium. Other words two computer communicate with each other using some set of rules called protocols. For instance, for one computer to send a message to another computer, the first computer must perform the following steps:

- Breaking the data into small pieces called packets
- Addressing of the destination computer is added to the packet.
- Data is then delivered to the network card for transmission over the network.

The receiving computer must perform the same steps, but in reverse order to accept the data:

- Accept the data from the network card.
- Remove the destination address from the packets.
- Reassemble the packets of data into the original message.

The packets have the following components:

- A source address specifying the details of sending computer
- A destination address
- Instructions for the computer how to pass or sent the data.
- If the packet is large, information on how to break the data into pieces.
- The data to be transmitted to the remote computer.
- Error checking information to ensure that the data arrives in to it.

Types of protocol:

- ✓ TCP/IP (Transmission Control Protocol/Internet Protocol)
- ✓ FTP (File Transfer Protocol)
- ✓ SMTP (Simple Mail Transfer Protocol)
- ✓ HTTP (Hypertext Transfer Protocol)

Overview of HTTP

HTTP is based on request-response activity. A client, running an application called a browser,

establishes a connection with a server and sends a request to the server in the form of a request method. The server responds with a status line, including the message's protocol version and a success or error code, followed by a message containing server information, entity information, and possible body content. An HTTP transaction is divided into four steps:

1. The browser opens a connection.

2. The browser sends a request to the server.

3. The server sends a response to the browser.

4. The connection is closed.

WAIS (Wide Area Information Servers) is an Internet system in which specialized subject databases are created at multiple server locations, kept track of by a directory of servers at one location, and made accessible for searching by users with WAIS client programs. The user of WAIS is provided with or obtains a list of distributed database s. The user enters a search argument for a selected database and the client then accesses all the servers on which the database is distributed. The results provide a description of each text that meets the search requirements. The user can then retrieve the full text.

SIMPLE HTML TAGS

Tag	Description
<html>	Defines an HTML document
<head>	Contains metadata/information for the document
<title>	Defines a title for the document
<body>	Defines the document's body
<h1> to <h6>	Defines HTML headings
<p>	Defines a paragraph
 	Inserts a single line break

Formatting Tags

Tags	Descriptipn
<ADDRESS>	To display a webpage's author information
<I>	To Italicize text
<EM>	To emphasize text
<PRE>	To display text in a monospaced font
<B>	To boldface text
<STRONG>	To give strong emphasis
<S>	To display strike-through text
<U>	To underline text

Lists

HTML supports ordered, unordered definition lists and nested list.

HTML Lists

This is the first

This is the second

This is the third

Unordered Lists

An unordered list is a list of items. The list items are marked with bullets (typically small black circles).

An unordered list starts with the <ul> tag. Each list item starts with the <li> tag.

Coffee
we=

Milk

Here is how it looks in a browser:

- Coffee
- Milk

Inside a list item you can put paragraphs, line breaks, images, links, other lists, etc.

Ordered Lists

An ordered list is also a list of items. The list items are marked with numbers**.**

An ordered list starts with the <ol> tag. Each list item starts with the <li> tag.

Coffee

Milk

Here is how it looks in a browser:

1. Coffee

2. Milk

Nested Lists

To be creative, you can create nested lists. These will create a list, inside another list. Each new list will be indented from the one before. This will work for BOTH Unordered lists and Ordered lists.

 apples

 green are good

  red are better

 oranges

 bananas

Using a nested list makes it possible to create sub-catagories from a main list. Take note that a full set of list tags are used to nest a list and the nested (sub) list tags are NOT overlapping the main list tags. There can be a list, inside a list, inside a list, etc.. Anything beyond 3 nests gets confusing and usually makes a web page look cluttered, so don't overdo it. It is possible to net the different type of lists within one another, or to nest multiple lists of the same type. In computer science, the word nest is used to indicate layer within layers. When nested list environments you not let them overlap. Nested lists are useful when you would like to expand on one or more items.

List Tags

Tag	Description
	Defines an ordered list
	Defines an unordered list
	Defines a list item

Define an HTML Table

The <table> tag defines an HTML table.

Each table row is defined with a <tr> tag. Each table header is defined with a <th> tag. Each table data/cell is defined with a <td> tag.

By default, the text in <th> elements are bold and centered.

By default, the text in <td> elements are regular and left-aligned.

Example

A simple HTML table:

```
<table style="width:100%">
  <tr>
    <th>Firstname</th>
    <th>Lastname</th>
    <th>Age</th>
  </tr>
  <tr>
    <td>Jill</td>
    <td>Smith</td>
    <td>50</td>
  </tr>
  <tr>
    <td>Eve</td>
    <td>Jackson</td>
    <td>94</td>
  </tr> </table>
```

UNIT-III

Consumer Oriented E-commerce Applications:

The different applications which are available in E-commerce are mainly utilized in different ways for entertainment, financial services educational training, information capturing, business development aspects. To maintain all these features in E-commerce we undergo the concept of consumer oriented E-commerce which helps in satisfaction of the customer. These applications have a great influence in E-commerce as they are used by many people in the world day by day utilization of all these applications is increasing rapidly in the entire world. It has various advantages like every individual is free to access all these applications. It is low cost, it save the time to greater extent, more over many individual (or) users (or) consumers (or) customers are busy in capturing or gathering information with the help of these application if they utilize all these application in appropriate manner. The operational factor of these applications is very easy and simple where large number of users can utilize the same application at same time.

These applications are faster, low cost transmission of the data is very fast as it is in digital mode, convenient to all the users. It contains various advantages over different Applications. Let us explain in brief about the different applications and their role E-commerce.

The wide range of applications envisioned for the consumer marketplace can be broadly classified into:
(i)Entertainment
(ii)Financial Services and Information
(iii)Essential Services
(iv) Education and Training

Consumer Life-Style Needs	Complementary Multimedia Services
· · Entertainment	Movies on demand, video cataloging, interactive Ads, Multi-user games, on-line discussions.
· Financial Services and Financial • news.	Home Banking, Financial services, Information,
· Essential Services and remote • diagnostics.	Home Shopping, Electronic Catalogs, telemedicine,
· Education and Training conferencing, · on-line databases.	Interactive education, multiuser games, video

1. **Personal Finance and Home Banking Management**
   (i) Basic Services
   (ii) Intermediate Services
   (iii)Advanced services
2. **Home Shopping**
   (i) Television-Based Shopping
   (ii)Catalog-Based Shopping
3. **Home Entertainment**
   (i) Size of the Home Entertainment Market
   (ii)Impact of the Home Entertainment on Traditional Industries
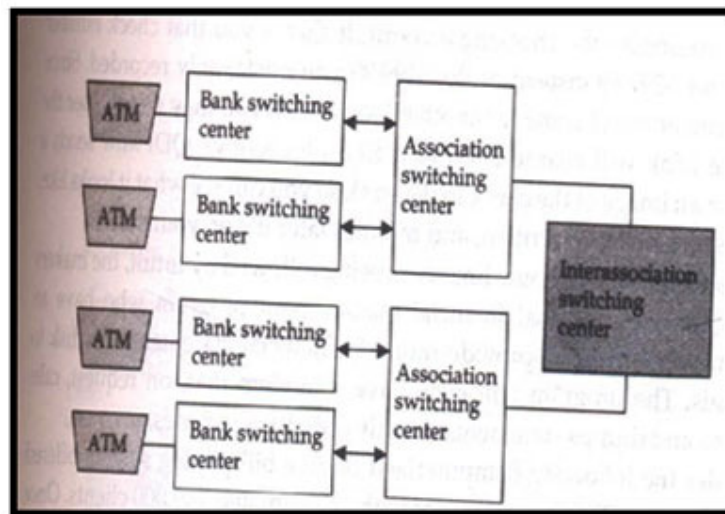4. **Micro transactions of Information**

Personal Finance and Home Banking Management:
The newest technologies are direct deposit of payroll, on-line bill payment and telephone transfers. The technology for paying bills, whether by computer or telephone, is infinitely more sophisticated

than anything on the market a few years ago. In 1980s were the days of "stone age" technology because of technology choices for accessing services were limited. For home banking, greater demands on consumers and expanding need for information, its services are often categorized as basic, intermediate and advanced.

(i) Basic services
- o   These are related to personal finance
- o   The evolution of ATM machines from live tellers and now to home banking
- o   The ATM network has with banks and their associations being the routers and the ATM machines being the heterogeneous computers on the network.
- o   This interoperable network of ATMs has created an interface between customer and bank that changed the competitive dynamics of the industry. See in next figure
- o   Increased ATM usage and decrease in teller transactions
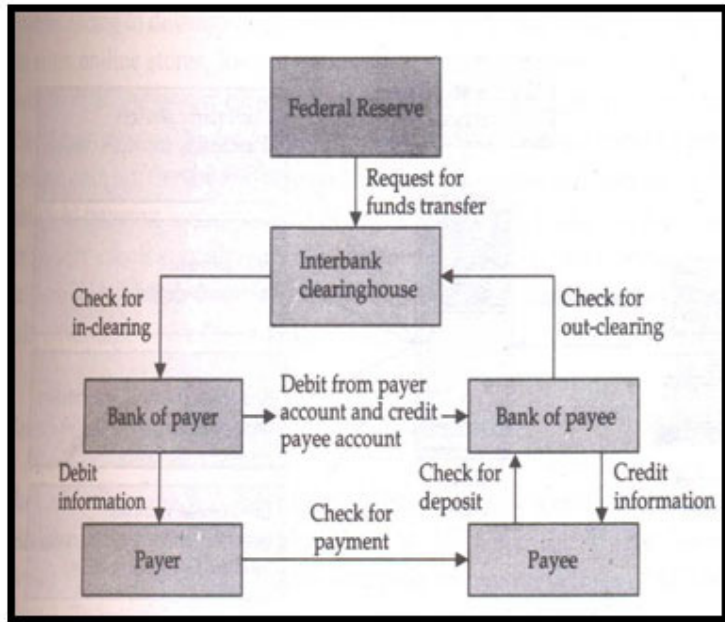- o   The   future   of   home   banking   lies   with

PC's
Structure of ATM Network

Intermediate Services
The problem with home banking in 1980 is, it is expensive service that requires a PC, a modem and special software. As the equipment becomes less expensive and as bank offers broader services, home banking develops into a comprehensive package that could even include as insurance entertainment.

Consider the computerized on-line bill-payment system. It never forgets to record a payment and keeps track of user account number, name, amount and the date and we used to instruct with payment instructions. See in Fig;

Check-Clearing process

(iii)Advanced Services
The goal of advanced series is to offer their on-line customers a complete portfolio of life, home, and auto insurance along with mutual funds, pension plans, home financing, and other financial products. The Figure explains the range of services that may well be offered by banks in future. The services range from on-line shopping to real-time financial information from anywhere in the world. In short, home banking allows consumers to avoid long lines and gives flexibility

2. **Home Shopping:**
   It is already in wide use. This enables a customer to do online shopping

3. **(i) Television-Based Shopping:**
   It is launched in 1977 by the Home Shopping Network (HSN). It provides a variety of goods ranging from collectibles, clothing, small electronics, house wares, jewelry, and computers. When HSN started in Florida in 1977, it mainly sold factory overruns and discontinued items. It works as; the customer uses her remote control at shop different channels with the touch of a button. At this time, cable shopping channels are not truly interactive

   (ii) Catalog-Based Shopping
   - o In this the customer identifies the various catalogs that fit certain parameters such as safety, price, and quality
   - o The on-line catalog business consists of brochures, CD-ROM catalogs, and on-line interactive catalogs
   - o Currently, we are using the electronic brochures

4. **Home Entertainment:**
   - o It is another application for e-commerce
   - o Customer can watch movie, play games, on-screen catalogs, such as TV guide.
   - o In Home entertainment area, customer is the control over programming

Advanced Services

Size of the home Entertainment Market:
- o Entertainment services play a major role in e-commerce.
- o This prediction is underscored by the changing trends in consumer behavior.
- o It is shown in Table

Impact of Home entertainment on traditional industries:
- o This will have devastating effects on theater business
- o Economic issues might allow theaters to maintain an important role in the movie industry

Desirable Characteristics of an Electronic marketplace
- Critical mass of Buyers and sellers: To get critical mass, use electronic mechanisms
- Opportunity for independent evaluations and for customer dialogue and discussion: Users not only buy and sell products, they compare notes on who has the best products and whose prices are outrageous
- Negotiation and bargaining: Buyers and sellers need to able to haggle over conditions of mutual satisfaction, money, terms & conditions, delivery dates & evaluation criteria
- New products and services: Electronic marketplace is only support full information about new services
- Seamless interface: The trading is having pieces work together so that information can flow seamlessly
- Resource for disgruntled buyers: It provide for resolving disagreements by returning the product.

Mercantile Process models
- Mercantile processes define interaction models between consumers and merchants for on-line commerce

Mercantile Models from the Consumer's Perspective
(i) Pre purchase preparation: The pre purchase preparation phase include search and discovery for a set of products to meet customer requirements
a. The consumer information search process.
b. The Organizational search process.
c. Consumer search experiences.
d. Information brokers & brokerages.
(ii) Purchase consummation: The purchase consummation phase includes mercantile protocols
a. Mercantile process using digital cash.
b. Mercantile transaction using credit cards.
c. Costs of electronic purchasing.
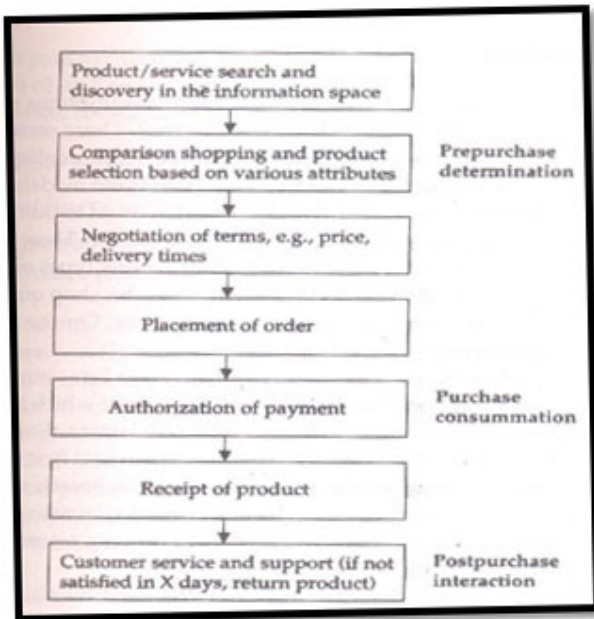(iii) Post purchase interaction: The post purchase interaction phase includes customer service & support

Figure: Steps taken by a customer in product/service purchasing

(i) Pre purchase Preparation
- The purchase is done by the buyers, so consumers can be categorized into 3 types
- Impulsive buyers, who purchase products quickly
- Patient buyers, purchase products after making some comparisons
- Analytical buyers, who do substantial research before making decision to purchase products.

Marketing researches have several types of purchasing:
- Specifically planned purchases
- Generally planned purchases
- Reminder purchase
- Entirely unplanned purchases

The consumer information search process
Information search is defined as the degree of care, perception & effort directed toward obtaining data or information related to the decision problem.

The Organizational search process
Organizational search can be viewed as a process through which an organization adapts to such changes in its external environment as new suppliers, products, & services.

Consumer Search Experiences
The distinction between carrying out a shopping activity "to achieve a goal" (utilitarian) as opposed to doing it because "u love it".

Information Brokers and Brokerages
To facilitate better consumer and organizational search, intermediaries called information brokers or brokerages. Information brokerages are needed for 3 reasons: Comparison shopping, reduced search costs, and integration

(ii) Purchase Consummation
- Buyer contacts vendor to purchase
- Vendor states price
- Buyer and Vendor may or may not engage in negotiation
- If satisfied, buyer asks the payment to the vendor
- Vendor contacts billing service
- Billing service decrypts authorization and checks buyers account balance
- Billing service gives to the vendor to deliver product
- Vendor delivers the goods to buyer
- On receiving the goods, the buyer signs and delivers receipt
- At the end of the billing cycle, buyer receives a list of transactions

Mercantile process using Digital Cash
- Buyer obtains e-cash from issuing bank
- Buyer contacts seller to purchase product
- Seller states price
- Buyer sends e-cash to seller
- Seller contacts his bank or billing service to verify the validity of the cash
- Bank gives okay signal
- Seller delivers the product to buyer
- Seller then tells bank to mark the e-cash as "used" currency

Mercantile Transactions Using Credit Cards
Two major components compromise credit card transactions in this process: electronic authorization and settlement

In retail transaction, a third-party processor (TPP) captures information at the point of sale, transmits the information to the credit card issuer for authorization, communicates a response to the merchant and electronically stores the information for settlement and reporting.

The benefits of electronic processing include the reduction in credit losses, lower merchant transaction costs, & faster consumer checkout & merchant-to-bank settlement

A step-by-step account of retail transaction follows:
- Step1: A customer presents a credit card for payment at a retail location
- Step2: The point-of-sale software directs the transaction information to the local network
- Step3: System verifies the source of the transaction and routes it.
- Step4: In this, transaction count and financial totals are confirmed between the terminal and the network
- Step5: In this, the system gathers all completed batches and processes the data in preparation for settlement

A merchant client takes one of two forms:
- Merchants are charged a flat fee per transaction for authorization and data capture services
- The other form of billing allows merchants to pay a "bundled" price for authorization, data capture, & settlement

Cost of Electronic Purchasing:
Cash seems to be preferable to electronic payments, such as on-line debit, credit, and electronic check authorization. Consumers appear to spend more when using cards then when spending cash

(iii)Post purchase Interaction

Returns and claims are an important part of the purchasing process. Other complex customer service challenges arise in customized retailing are:

Inventory issues: To serve the customer properly, a company should inform a customer right away and if the item is in stock, a company must able to assign that piece to customer

Database access and compatibility issues: Customers should get kind of services by easy issues like calling an 800 number

Customer service issues: To clear the doubts of customer about product

Mercantile Models from the Merchant's Perspective

- To better understanding, it is necessary to examine the order management cycle (OMC).
- The OMC includes eight distinct activities.
- The actual details of OMC vary from industry to industry and also for individual products and services
- OMC has generic steps
  (i) Order planning & Order generation.
  (ii) Cost estimation & pricing.
  (iii)Order receipt & entry.
  (iv) Order selection & prioritization.
  (v) Order Scheduling
  (vi) Order fulfillment & delivery.
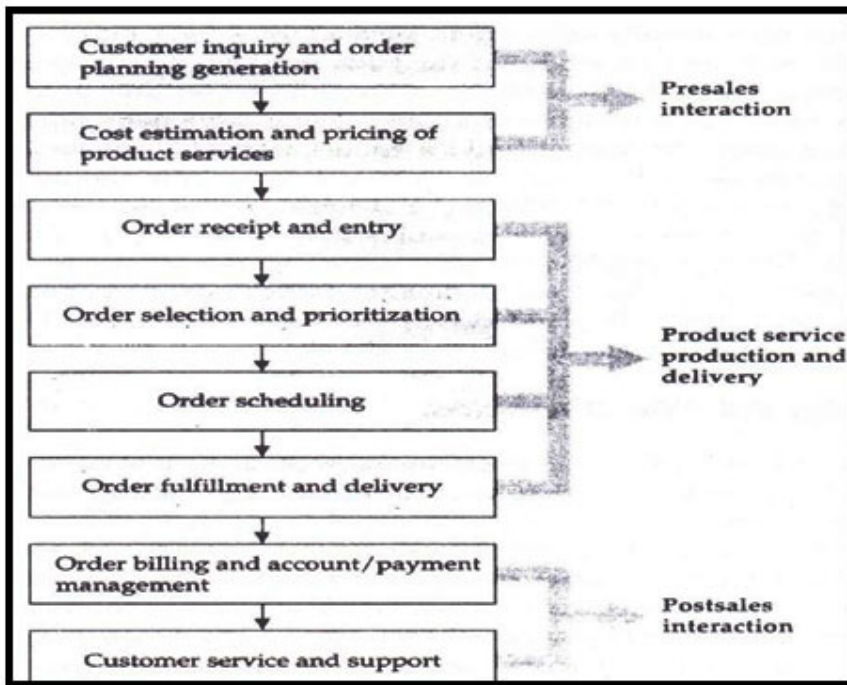 (vii) Order billing & account/payment management.
  (viii)Post sales service.

Figure: Order management cycle in E- Commerce

Order planning & order Generation
- Order planning leads to order generation.
- Orders are generated in a number of ways in the e-commerce environment.
- The sales force broadcasts ads (direct marketing), sends personalized e-mail to customers (cold calls), or creates a WWW page

Cost Estimation & pricing
- Pricing is the bridge between customer needs & company capabilities.
- Pricing at the individual order level depends on understanding the value to the customer that is generated by each order, evaluating the cost of filling each order; & instituting a system that enables the company to price each order based on its value & cost

Order Receipt & Entry
- After an acceptable price Quote, the customer enters the order receipt & entry phase of OMC.
- This was under the purview of departments variously titled customer service, order entry, the inside sales desk, or customer liaison.

Order Selection & Prioritization
- Customer service representatives are also often responsible for choosing which orders to accept and which to decline.
- Not, all customers' orders are created equal; some are better for the business.

Order Scheduling
- In this phase, the prioritized orders get slotted into an actual production or operational sequence.
- This task is difficult because the different functional departments- sales, marketing, customer service, operations, or production- may have conflicting goals, compensation systems, & organizational imperatives:
  Production people seek to minimize equipment changeovers while marketing & customer service reps argue for special service for special customers.

Order Fulfillment & Delivery
- In this actual provision of the product or service is made.
- It involves multiple functions and locations.

Order Billing & Account/Payment Management
- After the order has been fulfilled & delivered, billing is given by finance staff.
- The billing function is designed to serve the needs and interests of the company, not the customer.

Post sales Service
- This phase plays an increasingly important role in all elements of a company's profit equation: customer, price, & cost.
- It can include such elements as physical installation of a product, repair & maintenance, customer training, equipment upgrading & disposal.

Electronic Payment System:

The definition of an **electronic payment system** is a way of paying for a goods or services electronically, instead of using cash or a check, in person or by mail. An example of an **electronic payment system** is Pay Pal. An example of an **electronic payment system** is the use of a credit card.

Advantages of EPS

Quick, simple and secure

Whether you are buying items or services online, transferring money between accounts, or simply buying your morning coffee, e-payments are quick and simple in comparison to using cards or cash. Payments can be completed in a few seconds, and there is no longer a need to risk carrying a lot of money around.

When shopping online, there's no need to enter your card details each time, making it a safe and secure process.

Staying in control

Whether payments are for personal or business purposes, using e-payment systems helps you to stay in control of transactions. The account shows all transaction details, including the date, amount and the name of the retailer. It's therefore easy to see where your money is going, and you can check transaction details without waiting for a monthly statement.

Good for business

Although most retail businesses still take cash, overall, its use is declining. If your business doesn't accept e-payments, you risk falling behind and losing customers to competitors. Offering several alternative payment options helps companies to attract more consumers.

Risks of EPS

Risk of fraud

Although e-payment platforms have high levels of security in place, as with any technology-based system, they run the risk of hacking and fraud. Although systems may not come under direct attack, cybercriminals are likely to use phishing techniques to obtain IDs and passwords. Once a hacker has these details, e-payments make it possible to process multiple payments before the genuine account holder notices.

However, security is improving with the availability of additional verification methods such as two-factor authentication (2FA) or biometric identifiers.

Transaction charges

Another drawback of e-payments systems for merchants is that although they are generally free for the consumer to use, however, the merchant pays a charge to the payment provider to finance the system. This may eat into profit margins, especially on smaller transactions.

Another issue is that if payments are in foreign currencies, then the user will usually have to pay a transaction fee.

Reliance on technology

As with any system that relies heavily on technology, e-payments put businesses at the mercy of the machinery. Internet connection failure can leave companies unable to make or accept payments. Payment gateways may suffer technical issues or cyberattacks that leave them unable to approve transactions. For the consumer, these issues are frustrating; for businesses, they can mean a significant loss in revenue.

Business costs

For businesses, handling payments electronically can mean additional costs. These are relatively minimal when transactions are managed online, but if with a physical store, it may be necessary to invest in terminals to accept payments. These need to be kept up to date and secure.

There will usually be back-office costs involved in storing customer data and keeping it safe. Although the payment provider does most of the work, companies still need to ensure that transactions are handled safely within the organisation.

The future of e-payments

Cash is in decline, and electronic payments are gradually taking over. For small businesses, this means that they must adapt to using the new technology or risk being overtaken by competitors. In 2018, over 60 per cent of UK transactions used some form of electronic payment, indicating the growth and the importance of this sector in the future!

Payment method types

Credit Cards

As a global payment solution, credit cards are the most common way for customers to pay online. Merchants can reach out to an international market with credit cards, by integrating a payment gateway into their business. Credit card users are mostly from the North America and Europe, with Asia Pacific following suit.

Mobile Payments

A popular payment method in countries with low credit card and banking penetration, mobile payments offer a quick solution for customers to purchase on ecommerce websites. Mobile payments are also commonly used on donation portals, browser games, and social media networks such as dating sites, where customer can pay with SMS. **Majority of mobile payments are done in the Asia Pacific, with 64 million users expected by the year 2016**.

Bank Transfers

Customers enrolled in an internet banking facility can do a bank transfer to pay for online purchases. A bank transfer assures customers that their funds are safely used, since each transaction needs to be authenticated and approved first by the customer's internet banking credentials before a purchase happens.

Ewallets

An ewallet stores a customer's personal data and funds, which are then used to purchase from online stores. Signing up for an ewallet is fast and easy, with customers required just to submit their information once for purchases. Additionally, ewallets can also function in combination with mobile wallets through the use of smart technology such as NFC (near field communication) devices. By tapping on an NFC terminal, mobile phones can instantly transfer funds stored in the phone.

Prepaid Cards

An alternative payment method, commonly used by minors or customers with no bank accounts. Prepaid cards come in different stored values for customers to choose from. Online gaming companies usually make use of prepaid cards as their prefered payment method, with virtual currency stored in prepaid cards for a player to use for in-game transactions. Some examples of prepaid cards are Mint, Ticketsurf, Paysafecard, and Telco Card. It appears that age rather than income is the trait that affects the adoption of prepaid cards, according to Troy Land's research.

Direct Deposit

Direct deposits are when customers instruct their banks to pull funds out of their accounts to complete online payments. Customers usually inform their banks on when funds should be pulled out of their accounts, by setting a schedule through them. A direct deposit is a common payment method for subscription-type services such as online classes or purchases made with high prices.

Cash

Fiat, or physical cash, is a payment method often used for physical goods and cash-on-delivery transactions. Paying with cash does come with several risks, such as no guarantee of an actual sale during a delivery, and theft.

WEB SECURITY ISSUES:

Security risks associated with e-commerce can be as a result of human error, an accident or unauthorized access to systems. Online retailers are most likely to face credit card fraud or data errors. Their online stores are also likely to face phishing attacks, distributed denial of service (DDoS) attacks and man-in-the-middle attacks as explained below.

Credit Card Fraud

Credit card fraud is the most common security threat that online retailers face. It occurs when a hacker gains unauthorized access to customers' personal and payment information. To access this data, the hacker may penetrate the database of an e-commerce site using malicious software programs. At times, a hacker's intention when stealing customers' data is to sell it on black markets.

Distributed Denial of Service (DDoS) Attacks

This type of security threat aims at taking down an online retail store by sending overwhelming requests to its servers. The attacks originate from thousands of untraceable IP addresses. When this type of threat hits the servers, they slow down or completely shut down. An e-commerce site can also go offline temporarily when a DDoS attack affects its servers.

Man-in-the-middle Attacks

As hackers are becoming smarter with technology, they are devising ways of listening to the communications made by users of an e-commerce website. Through an approach known as a man-in-the-middle attack, these hackers maliciously trick users into connecting to a public wireless network. They gain access to people's devices once they are on public wireless networks. Hackers get to see a people's browsing history, credit card numbers, passwords and usernames if the websites they are visiting lack strong encryptions.

Bad Bots

Bots, either good or bad, are all over the worldwide web. Search engines such as Bing and Google use good bots for indexing search results. On the other hand, there are hackers that use malicious bots for gathering data such as product data, inventories and pricing data. These bots are also capable of accessing the database of an e-commerce site and listing the logins of user accounts.

Malware

In information technology, malware simply refers to malicious software programs. Attackers usually inject web pages or files with these malicious programs to help them in gaining access to online retails stores. Through means such as SQL injection, they can easily insert the malware into a website's database allowing it to compromise the data stored in the database.

Phishing Scams

E-commerce sites are also prone to phishing scams sent by known or unknown people in form of emails. These scams focus on targeting important user data like credit card numbers and login credentials. An attacker may use a scheme known as social engineering to lure online shoppers to give out their personal information. When sent in an email to an online shopper, a phishing scam may contain a link to a malicious site that resembles an e-commerce site.

Data Encryption Techniques

In a world where cybercrimes are on the rise, it's comforting to know that there are as many methods available to protect network security as there are ways of trying to penetrate it. The real challenge is deciding which techniques an internet security expert should employ that best suits their organization's specific situation.

Data encryption is a common and effective security method—a sound choice for protecting an organization's information. However, there are a handful of different encryption methods available, so how do you choose?

Today we're looking at the three most effective encryption techniques available for network security. But before we start our discussion on the effective data encryption techniques, let's take a few moments and go over the fundamentals of data encryption.

What is Data Encryption in Network Security?

Noted antivirus and endpoint security experts at Kaspersky define encryption as "… the conversion of data from a readable format into an encoded format that can only be read or processed after it's been decrypted."

They go on to say that encryption is considered the basic building block of data security, widely used by large organizations, small businesses, and individual consumers. It's the most straightforward and crucial means of protecting information that passes from endpoints to servers.

Considering the elevated risk of cybercrime today, every person and group that uses the internet should be familiar with and incorporate basic encryption techniques, at the very least.

How Does Encryption Work?

A woman wants to send her boyfriend a personal text, so she encrypts it using specialized software that scrambles the data into what appears to be unreadable gibberish. She then sends the message out, and her boyfriend, in turn, uses the correct decryption to translate it.

Thus, what starts out looking like this:

fUfDPzlyJu5LOnkBAf4vxSpQgQZltcz7LWwEtrughon5kSQIkQlZtfxtSTstut

q6gVX4SimlC3A6RDAhhL2FfhfoeimC7sDv9G1Z7pCNzFLp0lgAWWA9ACm8r44RZOBi

O5skw9cBZjZVfgmQ9VpFzSwzLLODhCU7/2THg2iDrW3NGQZfz3SSWviwCe7G

mNIvp5jEkGPCGcla4Fgdp/xuyewPk6NDlBewftLtHJVf

=RZx45

…eventually looks like this:

"I accidentally saw your web browser history. You and I are done."

Fortunately, the keys do all the actual encryption/decryption work, leaving both people more time to contemplate the smoldering ruins of their relationship in total privacy.

Next, in our learning about effective encryption methods, let us find out why we need encryption.

Why Do We Need Encryption?

If anyone wonders why organizations need to practice encryption, keep these four reasons in mind:

- Authentication. Public key encryption proves that a website's origin server owns the private key and thus was legitimately assigned an SSL certificate. In a world where so many fraudulent websites exist, this is an important feature.

- Privacy. Encryption guarantees that no one can read messages or access data except the legitimate recipient or data owner. This measure prevents cybercriminals, hackers, internet service providers, spammers, and even government institutions from accessing and reading personal data.

- Regulatory Compliance. Many industries and government departments have rules in place that require organizations that work with users' personal information to keep that data encrypted. A sampling of regulatory and compliance standards that enforce encryption include HIPAA, PCI-DSS, and the GDPR.

- Security. Encryption helps protect information from data breaches, whether the data is at rest or in transit. For example, even if a corporate-owned device is misplaced or stolen, the data stored on it will most likely be secure if the hard drive is properly encrypted. Encryption also helps protect data against malicious activities like man-in-the-middle attacks, and lets parties communicate without the fear of data leaks.

Let us now find out the important types of encryption methods.

The Three Important Types of Encryption Techniques

There are several data encryption approaches available to choose from. Most internet security (IS) professionals break down encryption into three distinct methods: symmetric, asymmetric, and hashing. These, in turn, are broken down into different types. We'll explore each one separately.

What is the Symmetric Encryption Method?

Also called private-key cryptography or a secret key algorithm, this method requires the sender and the receiver to have access to the same key. So, the recipient needs to have the key before the message is decrypted. This method works best for closed systems, which have less risk of a third-party intrusion.

On the positive side, symmetric encryption is faster than asymmetric encryption. However, on the negative side, both parties need to make sure the key is stored securely and available only to the software that needs to use it.

What is the Asymmetric Encryption Method?

Also called public-key cryptography, this method uses two keys for the encryption process, a public and a private key, which are mathematically linked. The user employs one key for encryption and the other for decryption, though it doesn't matter which you choose first.

As the name implies, the public key is freely available to anyone, whereas the private key remains with the intended recipients only, who need it to decipher the messages. Both keys are simply large numbers that aren't identical but are paired with each other, which is where the "asymmetric" part comes in.

What is Hashing?

Finally, there's hashing. Hashing generates a unique signature of fixed length for a data set or message. Each specific message has its unique hash, making minor changes to the information easily trackable. Data encrypted with hashing cannot be deciphered or reversed back into its original form. That's why hashing is used only as a method of verifying data.

Many internet security experts don't even consider hashing an actual encryption method, but the line is blurry enough to let the classification stand. The bottom line, it's an effective way of showing that no one has tampered with the information.

Now that we have gone through the types of data encryption techniques, let us next learn the specific encryption algorithms.

UNIT-IV- ELECTRONIC DATA INTERCHANGE

WHAT IS EDI?

Electronic Data Interchange (**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 with paper. Business entities conducting business electronically are called trading partners.
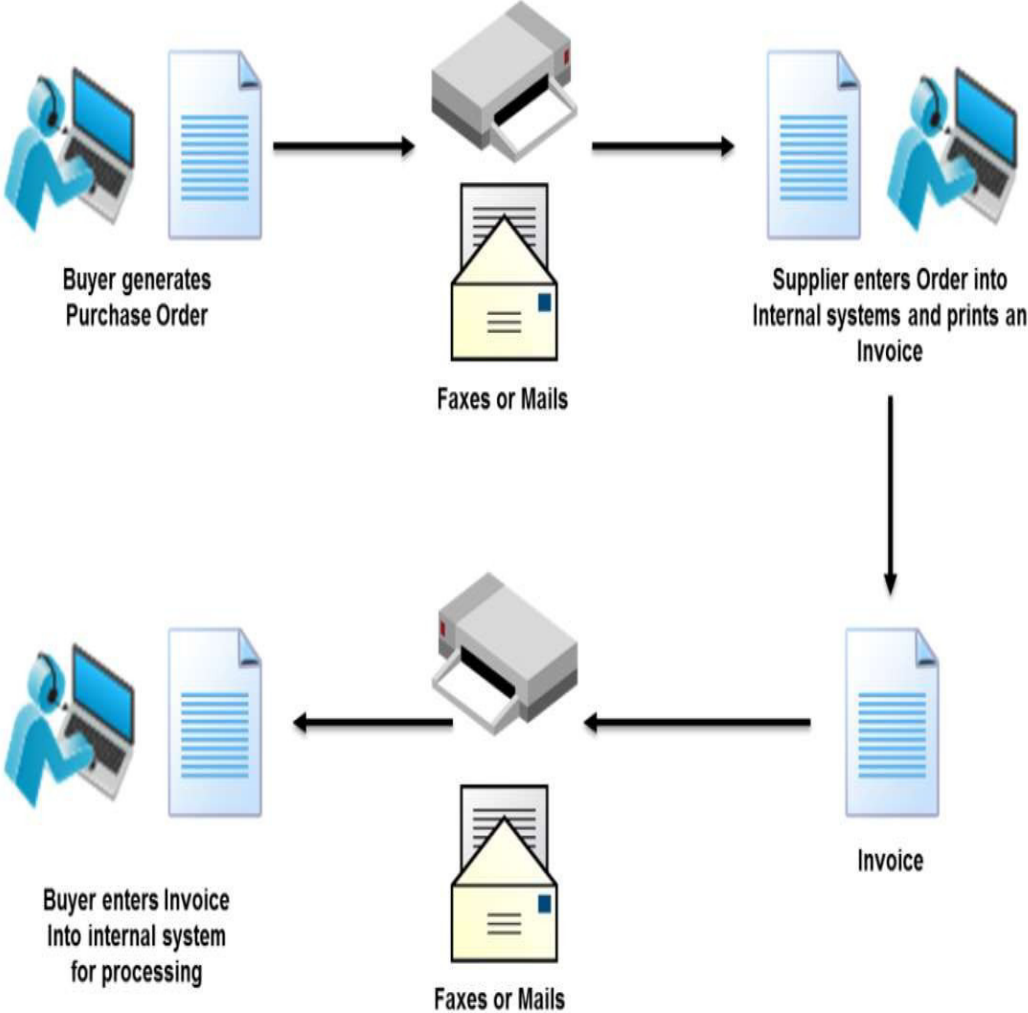
EDI implies a sequence of messages between two parties, either of whom may serve as originator or recipient. The formatted data representing the documents may be transmitted from originator to recipient via telecommunications or physically transported on electronic storage media." It distinguishes mere electronic communication or data exchange, specifying that "in EDI, the usual processing of received messages is by computer only.

Human intervention in the processing of a received message is typically intended only for error conditions, for quality review, and for special situations. For example, the transmission of binary or textual data is not EDI as defined here unless the data are treated as one or more data elements of an EDI message and are not normally intended for human interpretation as part of online data processing.EDI can be formally defined as the transfer of structured data, by agreed message standards, from one computer system to another without human intervention.
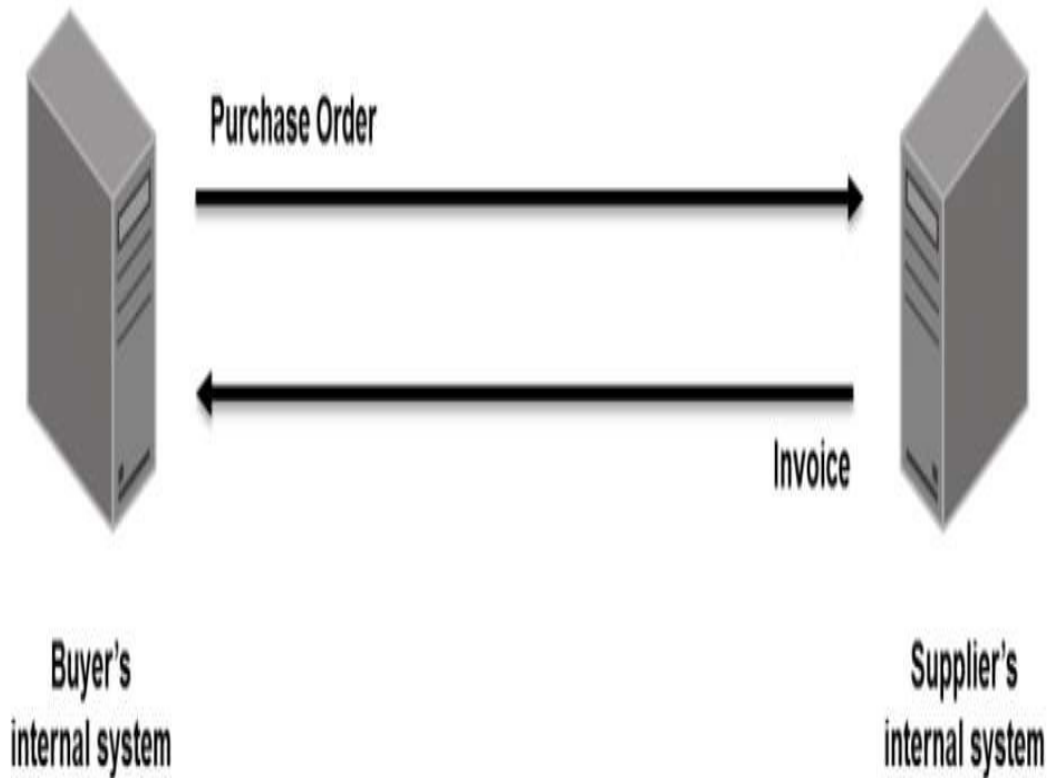
DIFFERENCES BETWEEN TRADITIONAL AND EDI SYSTEM

TRADITIONAL SYSTEM	EDI SYSTEM
This process normally takes between three and five days.	This process normally occurs overnight and can take less than an hour.
Buyer makes a buying decision, creates the purchase order and prints it.	Buyer makes a buying decision, creates the purchase order but does not print it.
Buyer mails the purchase order to the supplier.	EDI software creates an electronic version of the purchase order and transmits it automatically to the supplier.
Supplier receives the purchase order and enters it into the order entry system.	Supplier's order entry system receives the purchase order and updates the system immediately on receipt.
Buyer calls supplier to determine if purchase order has been received, or supplier mails buyer an acknowledgment of the order	Supplier's order entry system creates an acknowledgment an transmits it back to confirm receipt.

TRADITIONAL SYSTEM

Buyer generates
Purchase Order

Faxes or Mails

Supplier enters Order into
Internal systems and prints an
Invoice

Invoice

Faxes or Mails

Buyer enters Invoice
Into internal system
for processing

EDI SYSTEM

COMPONENTS OF EDI

The following components and tools are necessary for performing EDI are

Trade Agreement

A legally binding trade agreement between the trading partners.

Standard Document Format

The standard agreed upon format for the document to be electronically transmitted.

EDI Translation Management Software

Software used to convert the document application's format into the agreed upon standard format. For optimum performance the translation software should be on the same platform as our business application.

Communications Software

A programming tool that enables us to write communications protocols, or a separate application. It can be a module to the translator or a separate software application.

Modem

A hardware device used to transmit electronic information between computer systems. The higher the baud rate, the faster the communications will be.

VAN

Stands for Value Added Network. A network to which we can connect to transmit data from one computer systems to another. One network can act as a gateway to another.

Point-to-Point

A direct communication link from one computer to another. Some trading partners offer a direct connection to their EDI computer. Trading partners may opt for this method of communication instead of using a VAN.

ADVANTAGES OF EDI
1)Save Money- it is less costly than traditional system
2)End Repetition-it avoids repetition work
3)Save Time-it has a faster response time.
4)It aids in improved customers service and delivery.
5)It reduces error and clerical work.
6)It improves business cycle
7)It aids in better planning and forecasting .

Disadvantages of EDI:

1)One drawback to implementing EDI is that it costs some money and requires   expert EDI consultants or an IT professional to make it work. But these costs are typically offset by increased organization efficiency.
The most common documents exchanged via EDI are:
1. Purchase orders
2. Invoices and advance ship notices.
3. Bill of lading,
4. Customs documents,
5. Inventory documents,
6. Shipping status documents and
7. Payment documents.

Process of EDI:

Steps the Sender Must Take:

Document Preparation

Information necessary to produce a business document (purchase order, invoice, etc.) is collected in an electronic file.

Outbound Translation

The electronic file is converted by the sender's translation software into the standard format.

Outbound Communication

The sender's computer connects to a VAN. Upon successful receipt, the VAN processes and routes the transaction to the electronic mailbox of the receiver.

Steps the Receiver Must Take:

Inbound communication

The receiver's computer connects with the VAN and receives any files waiting in its electronic "in" box.

Inbound translation

The receiver's translation software "maps" or translates the electronic file from the ASC X12 standard message format into a format that the receiver's internal system can understand.

Document processing

The receiver's internal document processing system takes over and the newly
received document is handled according to normal internal procedures.
Important EDI Standards:
A: ASCX12 Standard: It is the main standard for electronic data interchange which is formulated and developed by the
U.S. Standards Committee. ANSI or American National Standards Institute is an institute which has established and monitored the U.S. standards since 1918. ANSI has several committees such as X12 standard committee which is also called ANSI/ASCX12. This committee also has some sub- committees each of which is responsible to establish the standards of one certain industry. Through general consensus they set or modify a standard. Such standards make the electronic data interchange possible.
B: EDIFACT Standards: EDIFACTS means Electronic Data Interchange for Administration, Commerce, and transport. EDIFACT is an EDI standard developed by the United Nations in 1987 and was recommended to be applied for electronic commerce. It includes a series of rules and instructions which could be used to convert the information of a commercial document to EDIFACT electronic messages by means of translator software and then these messages could be transmitted to client's computer via International Telecommunications Network. EDIFACT provides international standards for EDI; it also provides a set of syntax rules, data elements.

C: HL7 Standard: This documentation standard is designed by the American National Standards Institute and is used in hospital systems.

UNIT-V

E-Marketing Techniques

Ecommerce marketing is the act of driving awareness and action toward a business that sells its product or service electronically. **Ecommerce marketers** can use social media, digital content, search engines, and email campaigns to attract visitors and facilitate purchases online.

ADVANTAGES OF E-MARKETING
Following are some of the advantages of e-Marketing:
- Extremely low risk
- Reduction in costs through automation and use of electronic media
- Faster response to both marketers and the end user
- Increased ability to measure and collect data
- Opens the possibility to a market of one through personalisation
- Increased interactivity
- Increased exposure of products and services
- Boundless universal accessibility

DISADVANTAGES OF E-MARKETING
Following are some disadvantages of e-Marketing:
- Dependability on technology
- Security, privacy issues
- Maintenance costs due to a constantly evolving environment
- Higher transparency of pricing and increased price competition
- Worldwide competition through globalisation

Types of E-marketing Techniques:

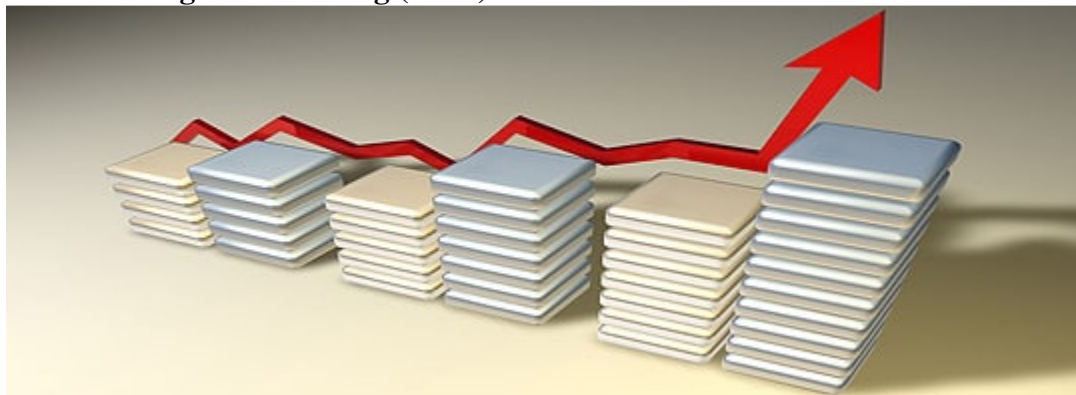**1. Search Engine Optimization (SEO):**

Although SEO comes under Search Engine Marketing (SEM) that I have mentioned in the next point, I have intentionally made SEO as a separate point. SEO starts when you start building your website. You have to keep focus to make your website SEO friendly. It includes designing a website with SEO friendly coding structure, making the website fast loading and secure, implementing the META tags on each page correctly, using well-optimized images with proper

alt tags, making the design responsive, adding an XML sitemap, and so on. For more, you can check our recently published 2016 SEO Checklist.

Helpful tools for SEO:

- **Bing Webmaster Tools and Google Search Console:** These are the free online tools to monitor and maintain the presence of your websites. They provide easy tools to submit your website to their search engines, help you quickly index your website pages, help you find the errors on your websites, help you to check how your websites are performing on their search engines, and much more.
- **Yoast SEO plugin for WordPress:** If your website is developed in WordPress, you can take advantage of this awesome and easy-to-use plugin to make your website more SEO friendly effortlessly.

2. Search Engine Marketing (SEM):

Basically, SEM is a type of Internet marketing procedure which helps the website owners to research, submit, and position out the website within search engines. As a result of that, your website will achieve maximum visibility and traffic.

In SEM the steps which are included are SEO, research of keywords, competitive analysis, link, and reputation building, and other search-engine services that can help your website to achieve a higher position in search engine results and can increase organic traffic.

Helpful tools for SEM:

- **Keyword Planner by Google AdWords:** To use this tool you just need to create a Google AdWords account. You do not need to start an ad campaign. You just need that account to access the Keyword Planner tool. This is a very good and free tool research on your targeted keywords to take further decisions.
- **Open Site Explorer by MOZ:** This tool can help you to check the backlink profile of your website to find link building opportunities.

3. Content Marketing:

Content Marketing is a marketing technique where you can produce valuable, engaging, and unique content for your readers. The content can be the description of your product, can be a press release, or can be an informative post for your blog. Or it can be any kind of attractive content that readers will love to share. Creating valuable content on a regular basis can definitely bring lots of revenue to you.

Helpful tools for Content Marketing:

- **Copyscape:** This is one of the best and cost-effective plagiarism checker tools that can easily check your articles for duplicate matching content on the web.
- **Grammarly:** This a great free tool to check all grammar, spelling, and punctuation mistakes on your content. It also comes with a free add-on for Microsoft Word for easy fixing all your mistakes at the time of writing your article.

4. Blogging:

Blogging is a great technique to enhance your content marketing goal. With the help of blogging, you can host your videos, images, podcasts, text articles, news topics on your blog. Blogging can promote your website to a vast audience. Generally, blog contents are easily shareable and search engines also love to index new blog posts regularly. This can surely increase engaging readers on your website.

Helpful tools for Blogging:

- **Blogging Platform:** There are several good blogging platforms to choose from. We have previously published 2 articles that may help you. Please check them here: Best platforms to create your blog and Choosing WordPress for your blogging.
- **Feed Burner:** This is a web feed management tool. Feed Burner can help you to create and share the RSS feed of your blog. Your new blog post will be distributed on the web and to the search engines as soon as you publish it.

5. Social Media Marketing:

Social media marketing is a process of earning viewers and increasing brand engagement on social media sites. If you can share and showcase your products, services, videos, images, blog posts over social media sites, viewers can get the chance to know about your brand from there and can get the chance to visit your website and may become your regular reader or customer.

- **Buffer:** Using buffer, you can easily able to schedule your new and old blog posts and website content to share on your social profiles automatically as per your scheduled This can help you to share your best content with the best suitable audience at a proper time.
- **Google Analytics:** Although this is a web analytics tool, this is also the best tool to measure the social traffic your website is getting. This will help you to understand how your marketing plan is working for each social media website.

E-MAIL MARKETING

Email marketing is a technique through which you can at first attract your website readers with your content; make them so happy that they will love to read your upcoming articles and news. In this case, you can probably ask them to join on your monthly or weekly newsletter service. If your visitors stats joining, your mailing list will automatically start growing. Then you can start sending your newsletter to your mailing list and can also able to send a targeted email that can generate sales on your website.

Useful tools for Email Marketing:

- **MailChimp:** This is a tool to easily manage and send emails to all your email subscribers. This is a very popular and comprehensive platform where you can create a highly engaging newsletter, schedule your email, and can also able to track the performance of your campaigns.
- **MailPoet Newsletters:** Again, if your website is developed in WordPress, then you can use this plugin to create your mailing list and can send a scheduled email newsletter to your subscribers all from your WordPress dashboard.

7. Online Advertising:

Online advertising helps you in delivering promotional marketing messages to your desired consumers with the help of the internet. So this is the very easiest way to target your desired audience and attract them to become your customer. This can be the easiest way of online marketing. But this is obviously not the cost-effective way. If you are ready to invest a decent amount of money for the promotional purpose, then this can be your best choice.

Good Platforms for Online Advertising:

- **Google AdWords:** This is the best place to start. Their tools help you to target your ads to a specific You can also easily control your budget on a daily basis. Once your budget is spent, the ad will pause automatically.
- **Facebook Ads and Twitter Ads:** Facebook and Twitter are the two most popular social media platforms where you definitely wish to place your ads to get a targeted audience. The system almost works similarly to Google AdWords.

8. Video Marketing:

With the help of this <u>video marketing</u>, you can promote your products or services by making a video. Nowadays video is considered to be the strongest marketing medium if used properly. Video marketing can improve up your website engagement, ranking, and sales in a huge manner.
A useful tool for Video Marketing:

- **YouTube Editor: YouTube** is considered to be the best video sharing platform. YouTube also provides nice video editing capability. In YouTube editor, you can also add annotations and transcripts to your videos to make it more SEO friendly.
- **PowerPoint to Video:** From Microsoft PowerPoint 2010 you can directly save a PPT presentation as videos. Please check <u>this tutorial</u> to know more.

9. Contextual Marketing:

Contextual marketing basically is an online and mobile marketing procedure that helps in providing targeted advertising based on the recent searches and browsing behavior of a user. So this way you can target those audiences who are already interested in the similar products and services you are selling. All leading advertising platforms like Google AdWords or Yahoo Ad Network are now implementing a contextual approach to their ads. It is going more and more popular every day.

10. Affiliate Marketing:

Affiliate Marketing is probably the oldest marketing method among all I have mentioned here. In this process, you can give other online influencers a chance to promote your product. If any of your influencers generate sales on your website you need to share a percentage of revenue with them. This process can be the best choice if you have lots of products. This process can also be very time and cost-effective for you.

Useful platform to try for Affiliate Marketing:

- **Commission Junction & Click Bank:** These are the two markets leading websites where you can open an advertiser or merchant account and can list your products for promotion. These websites have a huge list of great influencers who then apply to you to promote your product.

Banners

In the online world, a banner is a rectangular or square advertisement placed on a website, which includes graphic images and text, and links to the advertiser's website or to another page in the same website. Banner advertising refers to the use of a rectangular graphic display that stretches across the top, bottom, or sides of a website or online media property. Banner ads are image-based rather than text-based and are a popular form of online advertising.

The Basics of Banner Advertising
Internet advertising has gone from an uncertain bet to serving as the primary platform for most companies' marketing. In the U.S., the growth in digital advertising continues to grow by double digits on an annual revenue basis, with 2019 revenue exceeding $124.6 billion.

Banner advertising, also called display advertising, consists of static or animated images or media and are usually placed in high-visibility areas on high-traffic websites. Banner advertising is attractive because it can help create brand awareness, generate leads and re-target an audience (such as giving a visitor a chance to sign up for a newsletter or free trial before they click away).

Banner advertising functions mainly the same way as traditional advertising; however, the method by which the advertiser pays the host can differ greatly from traditional ad space sales. The host is paid for the banner advertisement through one of three methods: cost per impression (payment for every website visitor who sees the ad), cost per click (payment for every website visitor who clicks on the ad and visits the advertiser's website) or cost per action (payment for every website visitor who clicks on the ad, goes to the advertiser's website and completes a task, such as filling out a form or making a purchase).

Traditional banner advertising like the example above has expanded to other forms, such as Facebook Ads and Instagram Sponsored Ads. Facebook accounted for roughly 42% of online display advertising spending in the U.S. in 2019. The trend in online advertising has seen digital display ad spending (including banner ads, video, rich media, and sponsorships) surpass that of search-based ads in 2016 and continue to grow. As of 2019, 31% of all online ad spending goes to banner advertising.

Sponsorship
Definition
Advertising that seeks to establish a deeper association and integration between an advertiser and a publisher, often involving coordinated beyond-the-banner placements.

Information
Examples of sponsorships vary widely, as the whole point is to establish a more unique advertising opportunity than afforded by typical rotating advertisements. They may include several fixed ad placements, advertorials, co-branded content sections, or anything the advertiser and publisher can agree on.

Sponsorships attempt to deliver more than a "drive by" impression. Whereas much online activity is geared towards direct marketing, sponsorships add the element of brand marketing. Metrics such as CTR may be balanced with brand association, as sponsors seek to tap into the publisher's goodwill and establish credibility in their target market.

PORTALS

A **marketing portal** is an **online**, on-demand repository that helps corporate **marketing** departments empower large distributed teams with approved brand assets. ... It also helps a corporate **marketing** team control their brand messaging, while still giving employees the opportunity to personalize assets on their own.

A site featuring a suite of commonly used services, serving as a starting point and frequent gateway to the Web (Web portal) or a niche topic (vertical portal).

Information

Web portal services often include a search engine or directory, news, email, stock quotes, maps, forums, chat, shopping, and options for customization. These are only some of the most frequently offered services; large portals often include dozens or hundreds of bundled services.

Portals are one-stop destinations for advertisers and marketers, too, offering a endless variety of choices.

Types of Inventory:
* keyword (high)
* category (medium)
* run-of-site (low)
* geographic
* demography
Advertising Formats:
* banners & buttons
* text links & search results
* multi-format sponsorships

Online Coupon

Definition - What does *Online Coupon* mean?

An online coupon refers to a discount code or number that can be redeemed on a website. Like traditional coupons, online coupons are used to attract new customers and increase the loyalty of new customers. However, online coupons offer a retailer much clearer analytics on which promotions are more successful, and can even help track whether new customers become loyal customers.

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