Introduction to E-Commerce

❖ E-Commerce: The Revolution Is Just Beginning

In fact, the e-commerce revolution is just beginning. For instance, in 2007:

- Online consumer sales expanded by more than 25% to an estimated $225 billion.
- The major source of online retail growth is now increased spending by existing online buyers rather than new buyers as trust and consumer confidence build. Shoppers are buying expensive, "high-touch" goods online such as consumer electronics, home furnishings, and apparel.
- The number of individuals online in the United States increased to 175–200 million, up from 150 million in 2005.
- Of the total 120 million households in the United States, the number online increased to 78 million or about 65% of all households
- On an average day, 92 million people go online. Around 76 million send e-mail, 4 million share music on peer-to-peer networks, and 17 million research a product. About 50 million have used Wikipedia, 26 million have created a social network profile, 11 million have created a blog, and 3 million have used the Internet to rate a person, product, or service
- The number of people who have purchased something online expanded to about 116 million, with an additional 22 million just shopping.
- B2B e-commerce—use of the Internet for business-to-business commerce—expanded about 17% to more than $3.6 trillion
- The Internet technology base gained greater depth and power, as more than 65 million households have broadband cable or DSL access to the Internet.

❖ What Is E-Commerce?

- Electronic commerce or ecommerce is a term for any type of business, or commercial transaction that involves the transfer of information across the Internet.

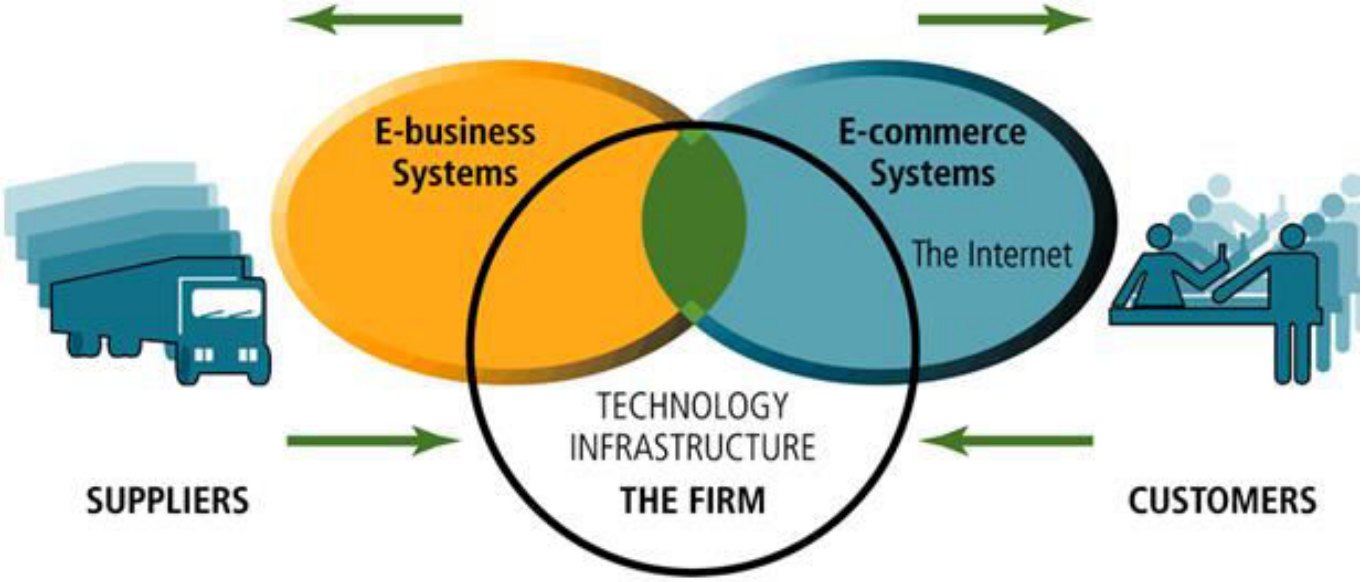
- E-commerce is the use of the internet and the web to transact business. More formally, digitally enabled commercial transactions between and among organizations and individuals.

- There are two types of transactions occurs in E-Commerce
    1. **Digitally enabled transactions** include all transactions mediated by digital technology. This means transactions that occur over the Internet and the Web.
    2. **Commercial transactions** involve the exchange of value (e.g., money) across organizational or individual boundaries in return for products and services.

❖ Difference between E-Commerce and E-Business

E-Commerce	E-Business
When a **commercial transaction takes** place over electronic network, then it is termed as e-commerce.	When **electronic medium is used** in all the day-to-day activities, then it may be termed as e-business.
E-Commerce covers outward facing processes that touch customer, suppliers and external partners.	E-Business covers internal processes such as production, inventory management, product management, risk management etc.
E-Commerce usually requires just a use of website.	E-Business involves use of CRM's, ERP's that connect different processes
It is more appropriate in B2C context	It is used in context of B2B transactions
E-Commerce involves mandatory use of internet	E-Business can involves use of internet, internet or extranet

Example:Buying pendrive from Amazon.com is considered as e-Commerce	Example: using of inerrnet for maintaining business processes like online customer support, supply chain management etc.



❖ Eight Unique Features of E-Commerce Technology

1) Ubiquity

- Internet/Web technology is available everywhere: at work, at home, and elsewhere via mobile devices, anytime.

- It liberates the market from being restricted to a physical space and makes it possible to shop from your desktop, at home, at work, or even from your car, using mobile commerce. The result is called a **marketspace**—a marketplace extended beyond traditional boundaries and removed from a temporal and geographic location

2) Global Reach

- The technology reaches across cultural and across national boundaries, around the Earth.

- E-commerce technology permits commercial transactions to cross cultural and national boundaries far more conveniently and cost-effectively than is true in traditional commerce. As a result, the potential market size for e-commerce merchants is roughly equal to the size of the world's online population (over 1.2 billion in 2007, and growing rapidly)

3) Universal Standards

- The technical standards for conducting e-commerce are universal standards—they are shared by all nations around the world.

- The universal technical standards of the Internet and e-commerce greatly lower market entry costs—the cost merchants must pay just to bring their goods to market. At the same time, for consumers, universal standards reduce search costs—the effort required to find suitable products.

4) Richness

- E-commerce technologies have changed the traditional trade-off between richness and reach. The Internet and Web can deliver, to an audience of millions, "rich" marketing messages with text, video, and audio, in a way not possible with traditional commerce technologies such as radio, television, or magazines.

- The internet has potential for more information richness because it is interactive and can adjust the message to individual users.

5) Interactivity

- The technology works through interaction with the user.
- Interactivity allows an online merchant to engage a consumer in ways similar to a face-to-face experience, but on a much more massive, global scale.

6) Information Density

- The Internet and the Web vastly increase information density—the total amount and quality of information available to all market participants, consumers, and merchants.
- E-commerce technologies reduce information collection, storage, processing, and communication costs. At the same time, these technologies increase greatly the currency, accuracy, and timeliness of information.

7) Personalization/Customization

- E-commerce technologies permit **personalization**: merchants can target their marketing messages to specific individuals by adjusting the message to a person's name, interests, and past purchases. The technology also permits **customization**—changing the delivered product or service based on a user's preferences or prior behavior.

8) Social Technology: User Content Generation and Social Networking

- The Internet and e-commerce technologies have evolved to be much more social by allowing users to create and share content in the form of text, videos, music, or photos with a worldwide community

❖ Introduction to Web 2.0

- Web 2.0. The term means such internet applications which allow sharing and collaboration opportunities to people and help them to express themselves online.

- The Internet and the Web have evolved to the point where users can now create, edit, and distribute content to millions of others; share with one another their preferences, bookmarks, and online personas; participate in virtual lives; and build online communities. This "new" Web is called by many "Web 2.0,"

- **Web 2.0 is:**
  1. Dynamic
  2. Interactive
  3. Participatory
  4. Freedom of information

- **Examples**

- Wikipedia is one of the oldest and best-known wiki-based sites.

- Social networking: The practice of expanding the number of one's business and/or social contacts by making connections through individuals. Social networking sites include Facebook, Twitter, LinkedIn and Google+.

- User-generated content (UGC): Writing, images, audio and video content among other possibilities -- made freely available online by the individuals who create it.

- Photobucket zooms from 4 million to 50 million users and 3 billion consumer generated photos to become the most popular Web photo posting site, offering users an easy way to post and send photos and video, and provides a convenient link to YouTube, MySpace, and blog pages

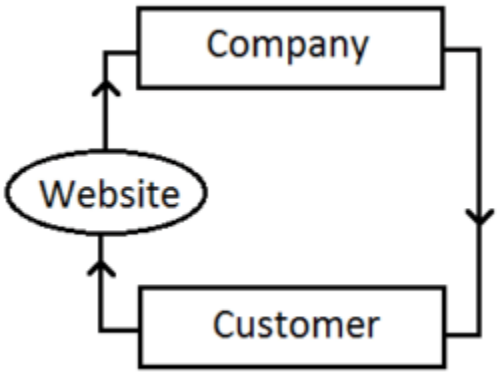
- YouTube, owned by Google after a $1.65 billion purchase, grows to the largest online consumer-generated video posting site and still searches for a profitable business model.

❖ Types of E-commerce

➢ There are a variety of different types of e-commerce and many different ways to characterize these types.

1) B2C—Business-to-Consumer
2) B2B—Business-to-Business
3) C2C—Consumer-to-Consumer
4) P2P—Peer-to-Peer
5) M-commerce—Mobile commerce

1) B2C—Business-to-Consumer

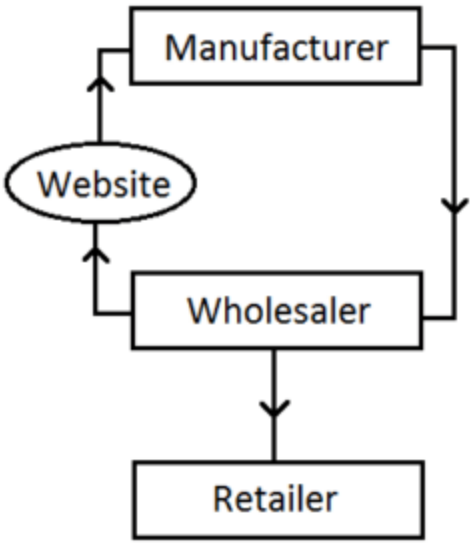


➢ The most commonly discussed type of e-commerce is Business-to-Consumer (B2C) e-commerce, in which online businesses attempt to reach individual consumers.

➢ In this model, the company sells their products, goods or services directly to the consumer online. Here the customer can view products on the website that they want to buy and can order it. After receiving the order details, the company will process the order and then send the products directly to the customer.

- For example, Amazon, Flipkart etc are this type of e-commerce business model which we are using in our daily life. We can view products on the websites like Amazon, Flipkart and can order it. After receiving the order, the selling company of the products processes it and sends it to us. Here a business company is selling their products to the customer with the help of an e-commerce website.

2) B2B—Business-to-Business



- Business-to-Business (B2B) e-commerce, in which businesses focus on selling to other businesses, is the largest form of e-commerce, The ultimate size of B2B e-commerce could be huge.

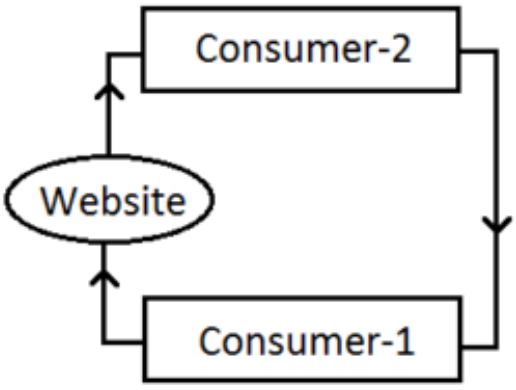
- B2B e-commerce can be simply defined as the commerce between companies. **In** Business-to-Business type of electronic commerce system, companies do business with each other. For say, a manufacturer selling a product to a wholesaler, a wholesaler selling a product to the retailer. Here manufacturer, wholesaler and retailer all are doing their separate businesses.

- Above diagram illustrates the B2B model. There are 3 businesses- wholesaler, manufacturer and the retailer. Here manufacturer has a website using which wholesalers can purchase products from the manufacturer. When a wholesaler places an order on the website, the information regarding the order will be received by the manufacturer through the website. Then after processing the order, the manufacturer will send the product to the wholesaler. After receiving the products wholesaler can sell it to the retailers. This type of business is called B2B model.

- There are two primary business models used within the B2B arena: **Net marketplaces**, which include e-distributors, e-procurement companies, exchanges and industry consortia, and **private industrial networks**, which include single firm networks and industry-wide networks.

3) C2C—Consumer-to-Consumer

- Here a consumer sells products, goods or services to other consumers using the internet or the web technologies. The C2C business model helps us to sell our assets or properties like a car, house, bike, electronics etc via online to other consumers. OLX, Quickr etc are this type of business model.



- Here, if consumer-1 wants to sell a product then he/she can publish the details of the product on the website like OLX or Quickr. The consumer-2 can view the details of the product on that website that consumer-1 wants to sell. If consumer-2 is willing to buy the product that consumer-1 is selling, then the buyer can directly contact the seller and the product will be sold. Here products are selling directly from a consumer to another consumer via the website.

4) P2P—Peer-to-Peer

- A peer-to-peer (P2P) service is a decentralized platform whereby two individuals interact directly with each other, without intermediation by a third-party. Instead, the buyer and the seller transact directly with each other via the P2P service.

- Use of peer-to-peer technology, which enables Internet users to share files and computer resources directly without having to go through a central Web server, in e-commerce.

- Peer-to-peer services bring together individuals, as opposed to bringing together businesses (B2B) or a consumer to a business. Some popular examples of P2P services are:

  - Open-source Software – anybody can view and/or modify code for the software
  - BitTorrent – a popular anonymous file-sharing platform where uploaders and downloaders meet to swap media and software files.
  - Air BnB – allows property owners to lease all or part of their property to short-term renters.
  - Uber – a platform for car owners to offer livery service to people seeking a taxi ride

- eBay – a marketplace for private sellers of goods to find interested buyers.

5) M-commerce—Mobile commerce

- Mobile commerce, or m-commerce, refers to the use of wireless digital devices to enable transactions on the Web. M-commerce involves the use of wireless networks to connect cell phones, handheld devices and personal computers to the Web.
- These wireless devices interact with computer networks that have the ability to conduct online merchandise purchases. Any type of cash exchange is referred to as an e-commerce transaction. Mobile e-commerce is just one of the many subsets of electronic commerce.

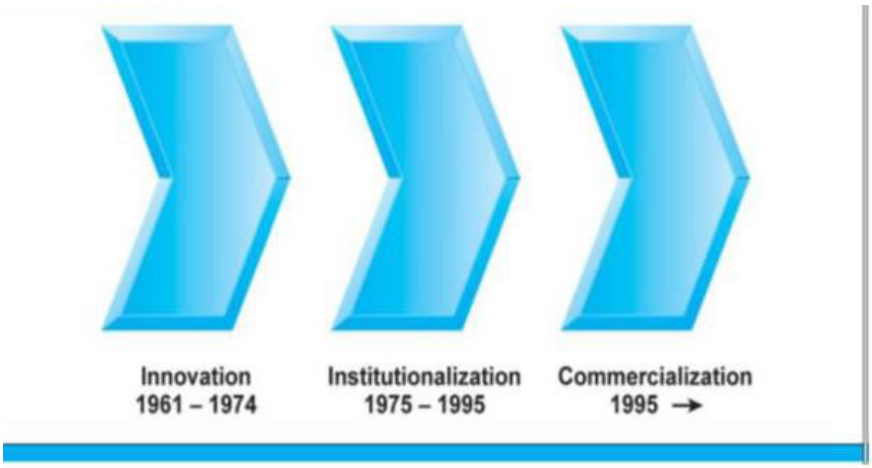
❖ The Internet: Technology Background

- **Internet:** interconnected networks of thousands of networks and millions of computers: links businesses, educational institutions, government agencies and individuals. The Internet provides around 400 million people around the world (and over 170 million people in the United States) with services such as e-mail, newsgroups, shopping, research, instant messaging, music, videos, and news

- **The World Wide Web:** The World Wide Web, or Web for short, is one of the Internet's most popular services, providing access to over one billion Web pages, which are documents created in a programming language called HTML and which can contain text, graphics, audio, video, and other objects, as well as "hyperlinks" that permit a user to jump easily from one page to another.

❖ The Evolution Of The Internet 1961–The Present

- The history of the Internet can be segmented into three phases



- Innovation Phase, 1964 -1974
- Institutionalization Phase, 1975 -1994
- Commercialization Phase,1995 - present

First Phase: The Innovation Phase

- In the first phase, the Innovation Phase, from 1961 to 1974, the fundamental building blocks of the Internet were conceptualized and then realized in actual hardware and software.

- The basic building blocks are: packet-switching hardware, client/server computing, and a communications protocol called TCP/IP.

- The original purpose of the Internet, when it was conceived in the late 1960s, was to link together large mainframe computers on college campuses. This kind of one-to-one communication between campuses

was previously only possible through the telephone system or postal mail.

Second Phase: The Institutional Phase

- In the second phase, the Institutional Phase, from 1975 to 1995, large institutions such as the Department of Defense and the National Science Foundation provided funding for the invention called the Internet.

- Once the concept of the Internet had been proven in several government-supported demonstration projects, the Department of Defense contributed a million dollars to develop the concepts and demonstration projects into a robust military communications system that could withstand nuclear war. This effort created what was then called ARPANET (Advanced Research Projects Agency Network). In 1986, the National Science Foundation assumed responsibility for the development of a civilian Internet (then called NSFNet)

Third Phase- The Commercialization Phase

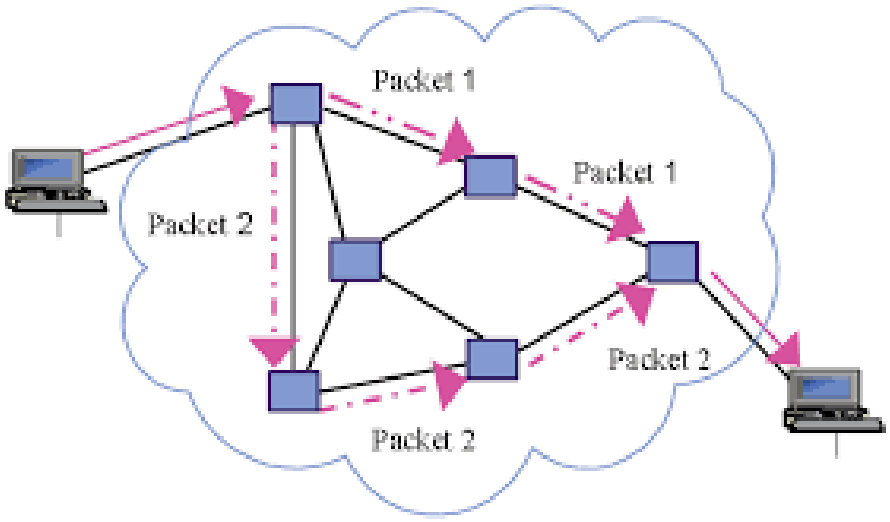
- In the third phase, the Commercialization Phase, from 1995–2001, government agencies encouraged private corporations to take over and expand both the Internet backbone and local service to ordinary citizens — families and individuals across By 2000, the Internet's use had expanded well beyond military installations and research universities.

❖ The Internet: Key Technology Concepts

- Behind this formal definition are three extremely important concepts that are the basis for understanding the Internet: packet switching, the TCP/IP communications protocol, and client/server computing.

1) Packet Switching

- Packet switching is a method of slicing digital messages into parcels called "packets," sending the packets along different communication paths as they become available, and then reassembling the packets once they arrive at their destination. Each packet is then transmitted individually and can even follow different routes to its destination



- Messages are first broken down into packets. Appended to each packet are digital codes that indicate a source address (the origination point) and a destination address, as well as sequencing information and error control information for the packet. Rather than being sent directly to the destination address, in a packet network, the packets

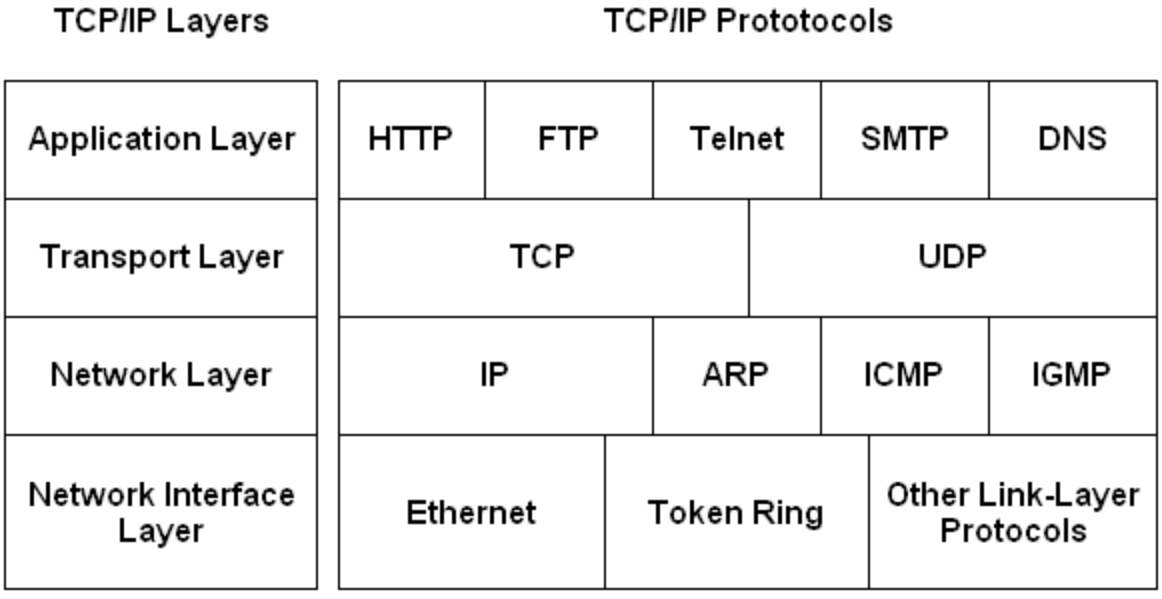
travel from computer to computer until they reach their destination. These computers are called routers.

2) TCP/IP

- TCP refers to the Transmission Control Protocol (TCP). IP refers to the Internet Protocol (IP). A protocol is a set of rules for formatting, ordering, compressing, and error-checking messages. It may also specify the speed of transmission and means by which devices on the network will indicate they have stopped sending and/or receiving messages.

- TCP establishes the connections among sending and receiving Web computers, handles the assembly of packets at the point of transmission, and their reassembly at the receiving end.

- TCP/IP is divided into four separate layers, with each layer handling a different aspect of the communication problem



- **The Network Interface Layer** is responsible for placing packets on and receiving them from the network medium, which could be a Local Area Network (Ethernet) or Token Ring Network, or other network technology.

- **The Internet Layer** is responsible for addressing, packaging, and routing messages on the Internet.

- **The Transport Layer** is responsible for providing communication with the application by acknowledging and sequencing the packets to and from the application.

- **The Application Layer** provides a wide variety of applications with the ability to access the services of the lower layers. Some of the best known applications are HyperText Transfer Protocol (HTTP), File Transfer Protocol (FTP), and Simple Mail Transfer Protocol (SMTP)

3) IP Addresses

- IP provides the Internet's addressing scheme. Every computer connected to the Internet must be assigned an address—otherwise it cannot send or receive TCP packets.

- An IP is a 32-bit number comprised of a host number and a network prefix, both of which are used to uniquely identify each node within a network.

- The format of an IP address is a 32-bit numeric address written as four numbers separated by periods and **each part is known as octet**. Each number can be zero to 255.

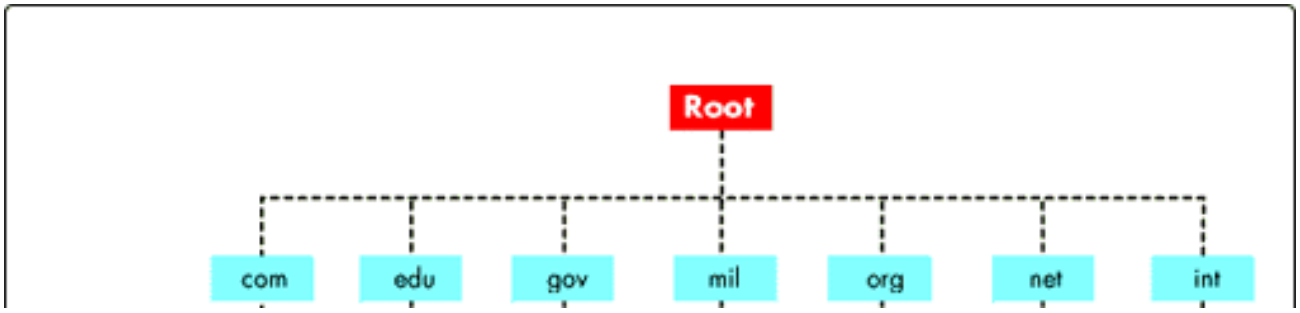
- The current version of IP is called Version 4, or IPv4. Because many large corporate and government domains have been given millions of IP addresses a new version of the IP protocol, called IPv6 is being adopted. This scheme contains 128-bit addresses

4) Domain Names and URLs

- Most people cannot remember 32-bit numbers. IP addresses can be represented by a natural language convention called domain names.

- The domain name system (DNS) is the way that Internet domain names are located and translated into Internet Protocol addresses

- **Uniform resource locators (URLs)**, which are the addresses used by Web browsers to identify the location of content on the Web, also use domain names as part of the URL. A typical URL contains the protocol to be used when accessing the address, followed by its location.



- how TCP/IP and packet switching work together to send data over the Internet.

How TCP/IP Works

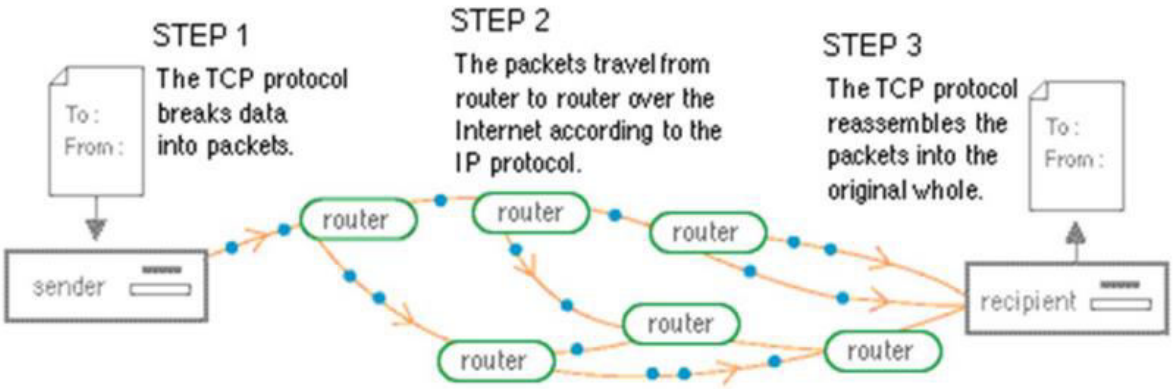
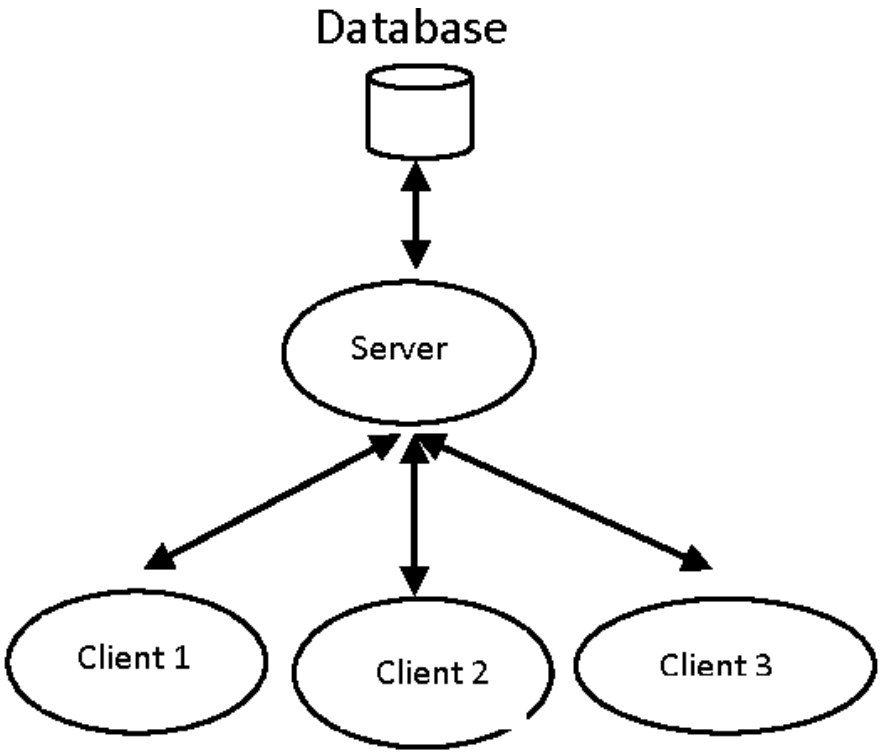


Figure 2. How data travels over the Net.

5) Client/Server Computing

- is a model of computing in which very powerful personal computers called clients are connected together in a network together with one or more server computers.

- Servers are networked computers dedicated to common functions that the client machines on the network need, such as storing files, software applications, utility programs such as Web connections, and printers.



❖ Other Internet Protocols and Utility Programs

1) HTTP:

- Hypertext Documents. HTTP (short for HyperText Transfer Protocol) is the Internet protocol used for transferring Web pages.

- The HTTP protocol runs in the Application Layer of the TCP/IP model .An HTTP session begins when a client's browser requests a Web page from a remote Internet server. When the server responds by sending the page requested, the HTTP session for that object ends.

2) SMTP, POP, and IMAP:

- **Sending E-mail**. E-mail is one of the oldest, most important,and frequently used Internet services. STMP (Simple Mail Transfer Protocol) is the Internet protocol used to send mail to a server.

- **POP (Post Office Protocol)** is used by the client to retrieve mail from an Internet server

- **IMAP (Internet Message Access Protocol)** is a more current e-mail protocol supported by many servers and all browsers. IMAP allows users to search, organize, and filter their mail prior to downloading it from the server.

3) FTP:

- Transferring Files. FTP (File Transfer Protocol) is one of the original Internet services. It is a part of the TCP/IP protocol and permits users to transfer files from the server to their client machine, and vice versa. The files can be documents, programs, or large database files. FTP is the fastest and most convenient way to transfer files larger than 1 megabyte, which many mail servers will not accept.

4) SSL:

- Security. SSL (Secure Sockets Layer) is a protocol that operates between the Transport and Application Layers of TCP/IP and secures communications between the client and the server. SSL helps secure e-commerce communications and payments through a variety of techniques such as message encryption and digital signatures.

5) Telnet:

- Running Remote. Telnet is a terminal emulation program that runs in TCP/IP. You can run Telnet from your client machine. When you do so, your client emulates a mainframe computer terminal .

- Telnet was the first "remote work" program that permitted users to work on a computer from a remote location.

6) Finger:

- Finding People. You can find out who is logged onto a remote network by using Telnet to connect to a server, and then typing "finger" at the prompt.

- Finger is a utility program supported by UNIX computers. When supported by remote computers, finger can you tell you who is logged in, how long they have been attached,and their user name.

7) Ping:

- Testing the Address. You can "ping" a host computer to check the connection between your client and the server. The ping (Packet InterNet Groper) program will also tell you the time it takes for the server to respond, giving you some idea about the speed of the server and the Internet at that moment.

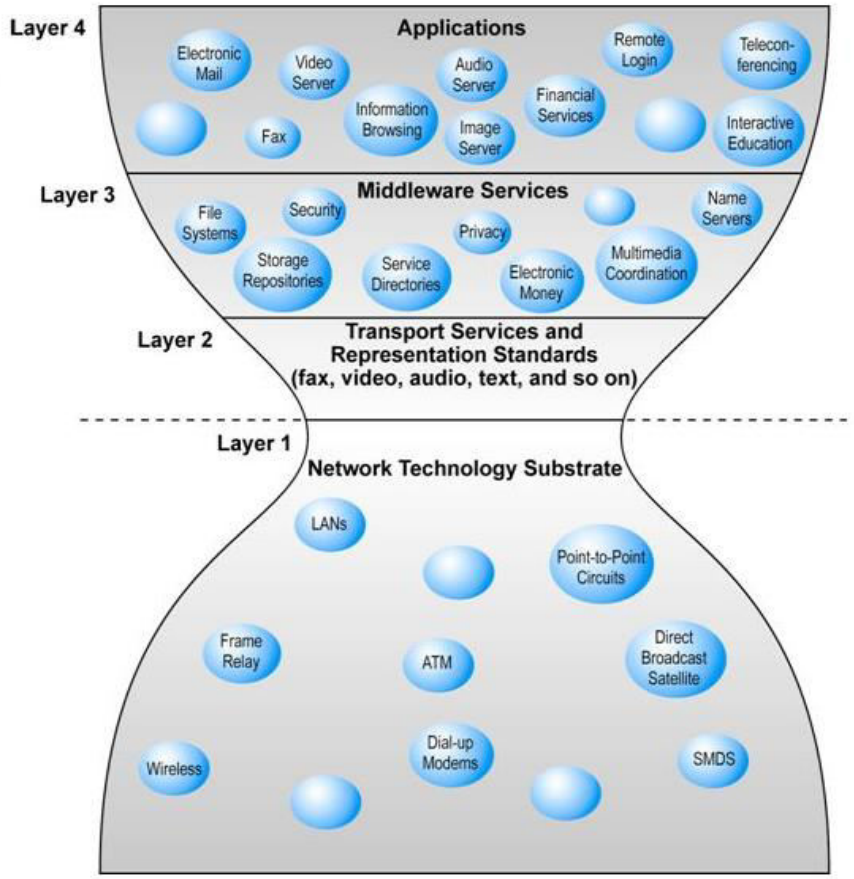
- You can run ping from the DOS prompt on a personal computer with a Windows operating system by typing: Ping <domain name>.

8) Tracert:

- Checking Routes. Tracert is one of a several route-tracing utilities that allow you to follow the path of a message you send from your client to a remote computer on the Internet.

❖ The Internet Today

- Illustrates the "hourglass" architecture of the Internet. The Internet can be viewed conceptually as having four layers: the network technology substrate, transport services and representation standards, middleware services, and applications.



- **The network technology substrate** is composed of telecommunications networks and protocols. **The transport layer houses** the TCP/IP protocol. **The applications layer** contains client applications such as the World Wide Web, e-mail, and audio or video playback. **Middleware** is the glue that ties the applications to the communications networks, and includes such services as security, authentication, addresses, and storage repositories.

❖ The Internet Backbone

- The Internet's backbone is formed by Network Service Providers (NSPs), which own and control the major networks

- The backbone has been likened to a giant pipeline that transports data around the world in milliseconds.

- Bandwidth measures how much data can be transferred over a communications medium within a fixed period of time, and is usually expressed in bits per second (bps), kilobits (thousands of bits) per second (Kbps), megabits (millions of bits) per second (Mbps), or gigabits (billions of bits) per second (Gbps).

- Connections to other continents are made via a combination of undersea fiber optic cable and satellite links. The backbones in foreign countries typically are operated by a mixture of private and public owners. The U.S. backbone is one of the most developed because the Internet's infrastructure was developed here.

❖ Network Access Points

- These hubs are called Network Access Points (NAPs) or Metropolitan Area Exchanges (MAEs), and use high-speed switching computers to connect the backbone to regional and local networks, and exchange messages with one another. The regional and local networks are owned by local Bell operating, and private telecommunications firms. they generally are fiber optic networks operating at over 100 Mbps. The regional networks lease access to Internet Service Providers, private companies, and government institutions.

❖ Campus Networks

- Campus networks are generally local area networks operating with a single organization— such as New York University or Microsoft Corporation.

- In fact, most large organizations have hundreds of such local area networks. These organizations are sufficiently large that they lease access to the Web directly from regional and national carriers.

❖ Internet Service Providers

- The firms that provide the lowest level of service in the multi-tiered Internet architecture by leasing Internet access to home owners, small businesses, and some large institutions are called Internet Service Providers (ISPs).

- ISPs are retail providers— they deal with "the last mile of service" to the curb, the home, the business office.

- There are major ISPs such as America Online, MSN Network, and AT&T World- Net and about 5,000 local ISPs in the United States.

- There are **two types of ISP** service: **narrowband and broadband.**

- **Narrowband service** is the traditional telephone modem connection now operating at 56.6 Kbps This is the most common form of connection worldwide.

- **Broadband service** is based on DSL, cable modem, telephone, and satellite technologies.

- Broadband—in the context of Internet service— refers to any communication technology that permits clients to play streaming

audio and video files at acceptable speeds—generally anything above 100 Kbps.

- The term **DSL refers to digital subscriber line** service, which is a telephone technology for delivering high-speed access through ordinary telephone lines found in your home or business. Service levels range from about 150 Kbps all the way up to 1 Mbps. DSL service requires that customers live within two miles (about 4,000 meters) of a neighborhood telephone switching center.

- **Cable modem** refers to a cable television technology that piggybacks digital access to the Internet on top of the analog video cable providing television signals to a home. Cable modem services ranges from 350 Kbps up to 1 Mbps. Cable service may degrade if many people in a neighborhood log on and demand high-speed service all at once.

❖ Intranets And Extranets

Intranet

- An intranet is a TCP/IP network located within a single organization for purposes of communications and information processing.

- An intranet is a private network that allows employees and staff in an enterprise to securely share knowledge and information easily within the company or organization. Information, tools, directories, and services available on a company's intranet are typically unavailable to the general public.

- The prefix "intra" implies that an intranet is designed for internal communications only. Intranets are usually restricted to specific local area networks (LANs) or wide area networks (WANs).

Extranet

- Extranets are formed when firms permit outsiders to access their internal TCP/IP networks.

- An extranet is a private network that leverages internet technology and public telecommunication system to share part of a business's information or operations over a secure system with suppliers, vendors, partners, customers, or other businesses. An extranet is often considered part of a company's intranet that is extended to authorized users outside of the organization.

❖ Internet and The Web: Features

- Many of the Web's services and features support e-commerce, including.

E-mail	Search Engine	Intelligent Agents (bots)
Instant Messaging (IM)	Online Forum & Chat	Streaming Media
Cookies		

1) E-mail

- E-mail uses a series of protocols to enable messages containing text, images, sound, and video clips to be transferred from one Internet user to another. Because of its flexibility and speed, it is now the most popular form of business communication.

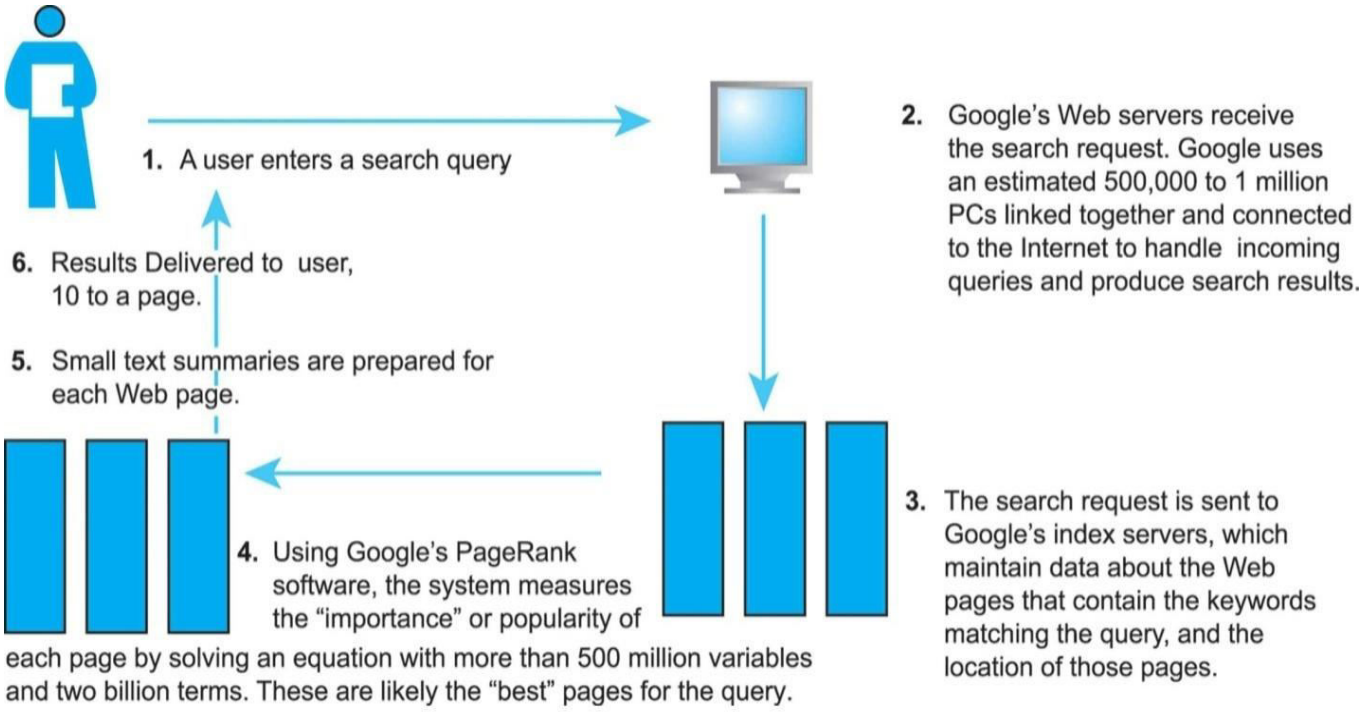
- E-commerce sites can buy e-mail lists from various sources and collate(bring together) them with lists of their current customers to create a targeted advertising message that can be quickly and economically delivered and will produce a creditable response.

2) Search Engine

- Identifies web pages that appears to match keywords, also called queries, typed by the user and provides a list of the best matches.

- Search engines (Google, Yahoo, bing, baidu) solve the problem of finding useful information on the web nearly instantly.

- How it works



- When users enter a search term at Google, MSN Search, Yahoo, or any of the other web sites serviced by these search engines, they receive two types of listing: sponsored links, for which advertises have paid to be listed (usually at the top of the search results page) and unsponsored "organic" search results.

Search Engine Marketing:

- Google followed in 2003 with its Ad Words program which allowed advertisers to bid for placement of short text ads on Google search results. The spectacular increase in Internet advertising revenues has helped search engines transform themselves into major shopping tools and created an entire new industry called "search engine marketing."

3) Instant Messaging (IM):

- One of the fastest growing forms of online human communication is instant messaging (IM). IM send text messages in real time, one line at a time, unlike e-mail.

- IM displays lines of text entered on a computer almost instantaneously. Recipients can then respond immediately to the send the same way, making the communication more like a live conversation.

- To use IM, users identify a buddy list they want to communicate with, and then enter short text messages that their buddies will receive instantly (if they are online at the time). And although text remains the primary communication mechanism in IM, users can insert audio clips or photos into their instant messages, and even participate in video conferencing. Can also share files.

- The IM systems are YAHOO, GOOGLE TALK, SKYPE, MSN etc. Ebuddy.com Instant messaging has been added to some e-commerce Web sites as a method of accessing customer support personnel.

4) Intelligent Agents (BOTS)

- Software programs that gathers and/or filters information on a specific topic and then provides a list of results for the user ranked in a number of ways, such as from lowest price to availability or to delivery terms.

- Many different types of intelligent agents or software robots are being used on e-commerce sites. For example, **search bots** are used to gather and filter information; shopping bots such as MySimon.com search online retail sites and provide a list of the availability(in inventory or not) and pricing for products. For instance, you can use MySimon's.com shopping bot to search for a Sony digital camera. The bot provides a list of online retailers that carry a particular camera model, as well as report about whether it is in inventory and the price and shipping charges.

- Another type of bot, called a **web monitoring bot,** allows you to monitor for updated material on the web, and will e-mail you when a selected site has new or changed information.

- **News Bots** will create custom newspapers or clip articles for you in newspapers around the world. Rss(Really simple syndication), is also a kind of automated program that send updates and news to subscribers, and is quickly becoming the most common type of web content monitoring tool.

- **ChatterBots**:INTELLIGENT AGENTS (COMPTUER PROGRAMS) that could converse with a customer over the telephone or the web either in text or voice modes. Some time called remote agents. Chatterbots were programmed to both recognize human speech and to respond with meaningful suggestions or questions.

5) Online Forum & Chat:

- An online forum (also referred to as a message board, bulletin board, discussion board, discussion group, or simply a board or forum) is a web application that enables internet users to communicate with each other, although not in real time.

- A forum provides a container for various discussions (or "threads") started (or posted) by members of the forum and depending on the permissions granted to forum members by the forum's administrator, enables a person to start a thread and reply to other people's threads. Most forum software allows more than one forum to be created.

- The forum administrator typically can edit, delete, move, or other wise modify any thread on the forum. In forum, member visit the forum to check for new posts Some forums offer an "e-mail notification" feature that notifies users that a new post of interest to them has been made.

- **An online Chat**(text, audio, video) is a common feature of many Web sites, particularly those that focus on building a community of like-minded users. EXAMPLE: Typically users log in to a "chat room" where they can communicate in real time. Forum & Chat enables a group of Web site visitors to bond and network and keeps visitors coming back to a site.

6) Streaming Media

- Streaming media enables live web video, music, video, and other large bandwidth files to be sent to users in a variety of ways that enable the user to play back the files.

- Video clips, Flash animations, and photographs are now fairly common on Web sites. Companies use these tools to demonstrate the

use of their products, display product features, or simply to create interesting and eye-catching sites to which visitors will return.

- Audio marketing materials, customer reports, and discussions are also often used on Web sites as e-commerce tools. Streaming video ads are also becoming more commonplace. As the capacity of the Internet grows streaming media will play an even larger role in e-commerce.

7) Cookies

- Cookies are a very important tool (technique) used by marketers to collect and store information about a user. These small text files are sent to the user's computer so that information from the site will load more quickly the next time they visit.

- cookies can retain nformation about the customer such as the number of pages visited, products examined, and other detailed information about a customer's behavior.

- Cookies enable sites to recognize returning visitors and target specific customers with special offers and marketing messages.

- Many people clear their cookies at the end of every day. Some disable them entirely using tools built into most browsers but maybe site did not opened correctly.

- Now browsers offer for example “start private browsing “ in Mozilla and Inprivate browsing in IE 8. Always open your site inprivate browsing mode when you are using Internet, to protect your privacy (bank account, debit card numbers etc).