

Internet technology and e-business



Chapter 7: Review Question : 3 3Q) How do the Internet and

Internet technology work, and how do they support communication and e-

business? Ans) The Internet is a worldwide network of networks that uses the client/server model of computing and the TCP/IP network reference model.

Every computer on the Internet is assigned a unique numeric IP address. The

Domain Name System (DNS) converts IP addresses to more user-friendly

domain names. Worldwide Internet policies are established by organizations

and government bodies, such as the Internet Architecture Board (IAB) and

the World Wide Web Consortium (W3C). Define the Internet, describe how it

works, and explain how it provides business value. The Internet has become

the world's most extensive, public communication system that now rivals the global telephone system in reach and range. Most homes and small

businesses connect to the Internet by subscribing to an Internet service e

provider. An Internet service provider (ISP) is a commercial organization with

a permanent connection to the Internet that sells temporary connections to

retail subscribers. • Explain how the Domain Name System (DNS) and IP

addressing system work.

It would be incredibly difficult for Internet users to remember strings of 12

numbers; the Domain Name System (DNS) converts domain names to IP

addresses. The domain name is the English-like name that corresponds to

the unique 32-bit numeric IP address for each computer connected to the

Internet. DNS servers maintain a database containing IP addresses mapped

to their corresponding domain names. To access a computer on the Internet,

users need only specify its domain name. DNS has a hierarchical structure.

At the top of the DNS hierarchy is the root domain.

The child domain of the root is called a top-level domain, and the child domain of a top-level domain is called is a second-level domain. The Internet is based on the TCP/IP networking protocol suite. Every computer on the Internet is assigned a unique Internet Protocol (IP) address, which currently is a 32-bit number represented by four strings of numbers ranging from 0 to 255 separated by periods. When a user sends a message to another user on the Internet, the message is first decomposed into packets using the TCP protocol. Each packet contains its destination address.

The packets are then sent from the client to the network server and from there on to as many other servers as necessary to arrive at a specific computer with a known address. At the destination address, the packets are reassembled into the original message. •List and describe the principal Internet services. A client computer connecting to the Internet has access to a variety of services. These services include e-mail, electronic discussion groups, chatting and instant messaging, Telnet, File Transfer Protocol (FTP), and the Web.

E-mail: E-mail enables messages to be exchanged from computer to computer, with capabilities for routing messages to multiple recipients, forwarding messages, and attaching text documents or multimedia files to messages. Although some organizations operate their own internal electronic mail systems, most e-mail today is sent through the Internet. The costs of e-mail is far lower than equivalent voice, postal, or overnight delivery costs, making the Internet a very inexpensive and rapid communications medium.

Chatting:

Many workplaces have employees communicating interactively using chat or instant messaging tools. Chatting enables two or more people who are simultaneously connected to the Internet to hold live, interactive conversations. Chat systems now support voice and video chat as well as written conversations. Many online retail businesses offer chat services on their Web sites to attract visitors, to encourage repeat purchases, and to improve customer service. Instant Messaging: Instant messaging is a type of chat service that enables participants to create their own private chat channels.

The instant messaging system alerts the user whenever someone on his or her private list is online so that the user can initiate a chat session with other individuals. Instant messaging systems for consumers include Yahoo! Messenger, GoogleTalk, and Windows Live Messenger. Companies concerned with security use proprietary instant messaging systems such as Lotus Sametime. News Groups: Newsgroups are worldwide discussion groups posted on Internet electronic bulletin boards on which people share information and ideas on a defined topic, such as radiology or rock bands.

Anyone can post messages on these bulletin boards for others to read. Many thousands of groups exist that discuss almost all conceivable topics. File Transfer Protocol(FTP): Transferring files from one computer to another computer. These files can be transferred through internet by using communication software's like chatting, instant messaging and many. Web: The Web is the most popular Internet service. It's a system with universally accepted standards for storing, retrieving, formatting, and displaying information using client/server architecture.

Web pages are formatted using hypertext with embedded links that connect documents to one another and that also link pages to other objects, such as sound, video, or animation files. When you click a graphic and a video clip plays, you have clicked a hyperlink. •Define and describe VoIP and virtual private networks, and explain how they provide value to businesses. The Internet has also become a popular platform for voice transmission and corporate networking. Voice over IP (VoIP) technology delivers voice information in digital form using packet switching, avoiding the tolls charged by local and long-distance telephone networks.

Calls that would ordinarily be transmitted over public telephone networks travel over the corporate network based on the Internet Protocol, or the public Internet. Voice calls can be made and received with a computer equipped with a microphone and speakers or with a VoIP-enabled telephone. Although there are up-front investments required for an IP phone system, VoIP can reduce communication and network management costs by 20 to 30 percent. A Virtual Private Network (VPN) is a secure, encrypted, private network that has been configured within a public network to take advantage of the economies of scale and management facilities of large networks, such as the Internet). A VPN provides your firm with secure, encrypted communications at a much lower cost than the same capabilities offered by traditional non-Internet providers who use their private networks to secure communications. VPNs also provide a network infrastructure for combining voice and data networks. Several competing protocols are used to protect data transmitted over the public Internet, including Point-to-Point Tunneling

Protocol (PPTP). •List and describe alternative ways of locating information on the Web.

The various alternative ways of locating information on the Web are namely:

Search Engines: Search engines attempt to solve the problem of finding useful information on the Web nearly instantly, and, arguably, they are the “killer app” of the Internet era. Today’s search engines can sift through HTML files, files of Microsoft Office applications, PDF files, as well as audio, video, and image files. There are hundreds of different search engines in the world, but the vast majority of search results are supplied by three top providers: Google, Yahoo! and Microsoft’s Bing search engine. **Intelligent Agent Shopping Bots :** Shopping bots use intelligent agent software for searching the Internet for shopping information. Shopping bots such as MySimon or Google Product Search can help people interested in making a purchase filter and retrieve information about products of interest, evaluate competing products according to criteria the users have established, and negotiate with vendors for price and delivery terms.

Many of these shopping agents search the Web for pricing and availability of products specified by the user and returns a list of sites that sell the item along with pricing information and a purchase link. **Web-Blogs:** A blog, the popular term for a Weblog, is a personal Web site that typically contains a series of chronological entries (newest to oldest) by its author, and links to related Web pages. The blog may include a blog roll (a collection of links to other blogs) and trackbacks (a list of entries in other blogs that refer to a post on the first blog **Wiki’s:**

Wikis, in contrast, are collaborative Web sites where visitors can add, delete, or modify content on the site, including the work of previous authors. Wiki software typically provides a template that defines layout and elements common to all pages, displays user-editable software program code, and then renders the content into an HTML-based page for display in a Web browser. Social Networking: Social networking sites enable users to build communities of friends and professional colleagues.

Members each typically create a “ profile,” a Web page for posting photos, videos, MP3 files, and text, and then share these profiles with others on the service identified as their “ friends” or contacts. Social networking sites are highly interactive, offer real-time user control, rely on user-generated content, and are broadly based on social participation and sharing of content and opinions. •Compare Web 2. 0 and Web 3. 0. Web 2. 0 facilitates interaction between web users and sites, so it allows users to interact more freely with each other.

Web 2. 0 encourages participation, collaboration, and information sharing. This web 2. 0 is also called as “ Second generation World Wide Web. ” Examples of Web 2. 0 applications are Youtube, Wiki, Flickr, Facebook, and so on. This is also termed as ' read-write web '. Web 3. 0 is also called as “ Semantic web” which means web for the future. In Web 3. 0, computers can interpret information like humans and intelligently generate and distribute useful content tailored to the needs of users. Web 3. 0 is known as the “ Third generation of World Wide Web”.

With the help of Web 3. 0, web content was easily carried in the form of natural language. It also consist of micro formats, natural language search,

recommendation agents which are commonly known as AI i. e. Artificial Intelligence. One example of Web 3. 0 is Tivo, a digital video recorder. Its recording program can search the web and read what it finds to you based on your preferences. Reference: Kenneth C. Laudon , Jane P. Laudon -- Management Information System: managing the digital firm 12th Edition.

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