

Chapter 7 The Web and E-mail

Computer Concepts 2014



7 Chapter Contents

- Section A: Web Technology
- Section B: Search Engines
- Section C: E-commerce
- Section D: E-mail
- Section E: Web and E-mail Security

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7 FastPoll True/False Questions Answer A for True and B for False

- 070100 <http://www.cnn.com> is an example of a URL.
- 070200 The Web uses WEP as its main protocol
- 070300 If your browser can't open PDF files, you can download the Adobe Reader plug-in.
- 070400 The Web uses cookies because HTTP is stateless.
- 070500 [/ left] is an example of an HTML tag.

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7 FastPoll True/False Questions Answer A for True and B for False

- 070600 A Web designer who wants to create interactive pages can use scripts, JavaScript and HTML5.
- 070700 A Web crawler is type of virus that affects cookies.
- 070800 Keyword stuffing is a technique for collecting user IDs from Web site logins.
- 070900 Most e-commerce shopping carts use cookies to keep track of the items you are purchasing.

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7 FastPoll True/False Questions Answer A for True and B for False

- 071000 Secure connections typically begin with https.
- 071100 POP, IMAP, and SMTP are Web page protocols.
- 071200 E-mail attachments are converted with MIME into ASCII code.
- 071300 Blocking third-party cookies helps eliminate Web bugs.

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7 Section A: Web Technology

- Web Basics
- HTML
- HTTP
- Web Browsers
- Cookies
- Web Page Authoring
- Interactive Web Pages

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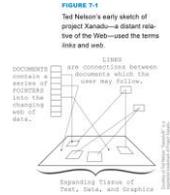
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7 Question

- 072100 The Web requires many technologies. Which one of the following statements is accurate about these technologies?
 - A. HTML, XHTML, and Ajax extend basic Web scripts so that Web designers can create pages with videos and interactive questions.
 - B. Explorer, Safari, Firefox, and Chrome are examples of Web browsers.
 - C. Cookies and HTML codes are stateless Web protocols.
 - D. Text editors like ActiveX and Notepad can be used to create HTML documents.

7 Web Basics

- The Web is a collection of document, image, video, and sound files
 - Web 2.0
 - Web 3.0
- A Web site contains a collection of related information



7 Web Basics

- A Web server accepts requests from browsers
- A Web page is the product or output of one or more Web-based files displayed in a format similar to a page in a book
- A Web browser is client software that displays Web page elements and handles links between pages
- Every Web page has a unique address called a URL



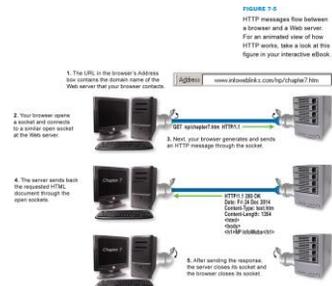
7 HTML

- Set of specifications for creating documents that a browser can display as a Web page
 - Markup language
 - HTML tags
 - HTML 5
 - XHTML
 - Source document

7 HTML

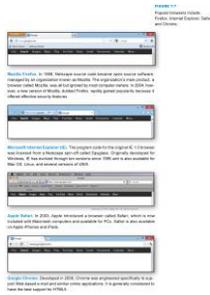


7 HTTP



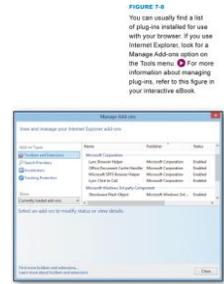
7 Web Browsers

- Popular browsers:
 - Mozilla Firefox
 - Microsoft Internet Explorer
 - Apple Safari
 - Google Chrome
- It is a good idea to upgrade when a new version of your browser becomes available



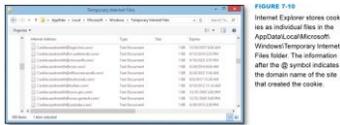
7 Web Browsers

- If your browser does not have built-in support for a file format required to display or play a Web page element, you can download the necessary software
 - A plug-in is a program that extends a browser's ability to work with file formats



7 Cookies

- Small chunk of data generated by a Web server and stored in a text file on computer's hard disk
 - Fix problems caused by HTTP's stateless protocol



7 Web Page Authoring

- HTML conversion utility
- Online Web page authoring tools
- Web authoring software
 - Adobe Dreamweaver
- Text editor



7 Interactive Web Pages

- Interactive and dynamic Web sites are possible when programming and scripting technologies supplement native HTML features
- An HTML form uses the <form> tag to accept typed input
- Client-side and server-side processes
- A computer scripting language called JavaScript is commonly used to add logic and other programmable elements to a Web page

7 Interactive Web Pages



7 Section B: Search Engines

- Search Engine Basics
- Formulating Searches
- Citing Web-based Source Material

7 Question

- 072200 Search engines are a key Web technology. When you use a search engine, you can be confident that:
 - A. Your searches will remain confidential.
 - B. Information accessed by a search engine is in the public domain.
 - C. Search engine results are totally impartial.
 - D. You can usually narrow a search by adding more key words.

7 Search Engine Basics

- A Web search engine is a program designed to help people locate information on the Web by formulating simple keyword queries



7 Search Engine Basics

- A Web crawler is a computer program that is automated to methodically visit Web sites
- A search engine indexer is software that pulls keywords from a Web page and stores them in an index database
- A search engine's query processor looks for your search terms in search engine's indexed database and returns a list of relevant Web sites
- Link popularity is measured by quality and quantity of links from one Web page to others
- A meta keyword is entered into a header section of a Web page when it is created and is supposed to describe the page contents
 - Keyword stuffing

7 Formulating Searches

- Most search engines work with keyword queries in which you enter one or more words, called search terms



7 Formulating Searches

- A search operator is a word or symbol that describes a relationship between search terms and thereby helps you create a more focused query

Operator	Description
AND	When two search terms are joined by AND, both terms must appear on a Web page before it can be included in the search results. The query returned AND users will receive pages that contain both the search terms and only those. Your search results might include pages containing information about one keyword only, about neither keyword, and one about keywords that had alternative spellings. Some search engines use the plus symbol (+) instead of the word AND.
OR	When two search terms are joined by OR, either one or both of the search terms need appear on a page. Using the query keyword OR can produce information about related items, related topics, related work, alternative spellings, and more on terms.
NOT	The search term following NOT must not appear on any of the pages found by the search engine. Entering keyword NOT can result in the search engine's list of pages that include keyword but not the term next. In some search engines, the minus sign (-) can be used instead of the word NOT.
+	To search for an exact phrase, enter it in quotes. For example, "keyword phrase."
*	The asterisk (*) is sometimes referred to as a wildcard character. It allows a search engine to find pages with any variation of a base word. For example, the query "keyword" would produce pages containing not only the word keyword, but also the words keywords, keyword, keyword, and keyword.
-	Keywords and phrases can be used to specify a range of search terms. Simply separate it from the search terms with a hyphen. For example, to view information regarding U.S. N. T. AND, you can enter "keyword" - U.S. N. T. AND.

7 Using Web-Based Source Material



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7 Section C: E-commerce

- E-commerce Basics
- E-commerce Site Technology
- Online Payment

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7 Question

- 072300 Online shoppers are justifiably worried that personal information and credit card numbers supplied in the course of an e-commerce transaction might be hijacked and used inappropriately. What technology can hackers use to hijack credit card numbers?
 - A. A packet sniffer
 - B. S-HTTP
 - C. HTML
 - D. SSL

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7 E-commerce Basics

- Business transactions conducted electronically over a computer network
 - B2C (business-to-consumer)
 - C2C (consumer-to-consumer)
 - B2B (business-to-business)
 - B2G (business-to-government)



B2C: Online storefronts offer goods, merchandise, and services to consumers.



C2C: Consumers sell to each other at popular auction and list sites such as eBay and Craigslist.



B2B and B2G: Businesses sell goods and services to other businesses or to the government.

FIGURE 7-28
E-commerce offers consumers many types of goods and services.

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7 E-commerce Basics

- Enhances traditional business models
- Styles of online advertisements
 - Banner ad
 - Hover ad
 - Pop-up ad
 - Click-through rate
- Ad-blocking software prevents ads from appearing on screens

FIGURE 7-29
Pop-up ads appear as separate windows.

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7 E-commerce Site Technology

- E-commerce offers some unique advantages over brick-and-mortar stores and mail-order catalogs
 - Easily search for merchandise
 - Easily compare prices and products
- Two popular models
 - B2C
 - C2C

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7 E-commerce Site Technology



7 E-commerce Site Technology



7 E-commerce Site Technology

- At C2C auction and online classified advertising e-commerce sites, consumers offer goods and services to other consumers
- C2C sites are hosted by an e-commerce provider such as eBay or craigslist



7 E-commerce Site Technology

- Many C2C sites uses e-mail forwarding to protect participants' privacy



7 Online Payment

- The most popular ways to make online payments include submitting your credit card number directly to a merchant and using a third-party payment service such as PayPal
- Online shoppers are justifiably worried that personal information and credit card numbers supplied in the course of an e-commerce transaction might be hijacked and used inappropriately

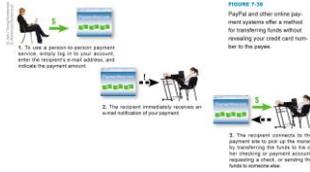
7 Online Payment

- A secure connection encrypts the data transmitted between your computer and a Web site
 - SSL (Secure Sockets Layer)
 - TLS (Transport Layer Security)
 - HTTPS (Hypertext Transfer Protocol Secure)



7 Online Payment

- Person-to-person payments are an alternative to credit cards
- The payment service is the only entity that sees your credit card number



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7 Section D: E-mail

- E-mail Overview
- Local E-mail
- Webmail
- E-mail Attachments
- Netiquette

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7 Question

- 072400 There are two main types of e-mail, each with advantages and disadvantages. If you are using Microsoft Mail, Mozilla Thunderbird, or a similar e-mail client, which type of mail does that software handle?
 - A. Webmail
 - B. Indexed mail
 - C. POP mail
 - D. HTTP mail

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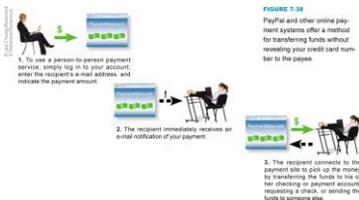
7 E-Mail Overview

- An e-mail message is an electronic document transmitted over a computer network
- The computers and software that provide e-mail services form an e-mail system
- An e-mail server acts as a central post office for a group of people
- A message header is divided into fields that contain the sender's e-mail address, the recipient's address, a subject line, and the date and time the message was written

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7 E-Mail Overview



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7 E-Mail Overview

- To use an e-mail system, you need:
 - Internet connection
 - E-mail account
 - E-mail software
 - E-mail client software
 - Webmail



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7 Local E-mail

- When you use local e-mail, an e-mail server stores your incoming messages until you launch your e-mail client and get your mail
 - Based on store-and-forward technology
- E-mail protocols
 - POP3
 - IMAP
 - SMTP



FIGURE 7-43
Outgoing mail can be stored in your Outbox until you connect to the Internet and send it to the SMTP server. Incoming mail can be stored on a POP3 server until it is downloaded to the Inbox on your hard disk.

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7 Webmail

- Webmail is typically a free service accessed using a browser

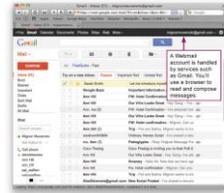


FIGURE 7-44
You can use a browser to access your Webmail account. The figure in your reference eBook takes you on a tour of Gmail.

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7 E-Mail Attachments

- E-mail attachments are files that travel with an e-mail message
 - E-mail software converts e-mail attachments using a conversion process called MIME
- When working with attachments, keep the following points in mind:
 - Don't send huge attachments
 - Explain all attachments
 - Don't open suspicious attachments
 - You can save attachments
 - You might have to download a plug-in or player

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7 Netiquette

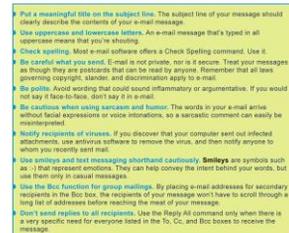


FIGURE 7-45
Principles of Netiquette

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7 Section E: Web and E-mail Security

- Cookie Exploits
- Spam
- Phishing
- Fake Sites

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7 Question

- 072500 Cookies can be exploited by hackers and marketers. What is the best way to handle cookies on your computer to avoid exploits, but maintain adequate functionality for e-commerce and other Web activities?
 - A. Delete cookies often
 - B. Block third-party cookies
 - C. Block all cookies
 - D. Opt out of cookies

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7 Cookie Exploits

- An ad-serving cookie can select and display ads that might interest you



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7 Cookie Exploits

- A Flash cookie, also called a local shared object, is the Flash equivalent of a conventional Web cookie
- A Web bug or clear GIF is typically a 1x1 pixel graphic embedded in a Web page or e-mail message. It is almost invisible due to its size and is designed to track who's reading the Web page or e-mail message
- Antispyware is a type of security software designed to identify and neutralize Web bugs, ad-serving cookies, and other spyware

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7 Cookie Exploits

- Individuals who prefer not to leave a trail of their Internet activities surf through an anonymous proxy service, which uses an intermediary, or proxy, server to relay Web page requests after masking the originating IP address



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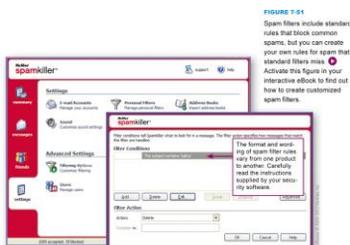
7 Spam

- Spam is unwanted electronic junk mail about medical products, low-cost loans, and fake software upgrades that arrive in your online mailbox
- Spam has turned into another major hacking tool for cybercriminals
- A spam filter is a type of utility software that captures unsolicited e-mail messages before they reach your inbox

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7 Spam



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7 Phishing

- Phishing is an e-mail based scam designed to persuade you to reveal confidential information, such as your bank account number or Social Security number
- If you don't want to become a phishing victim, be suspicious of e-mail messages that supposedly come from banks, ISPs, online payment services, operating system publishers, and online merchants

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7 Fake Sites

- A fake, or fraudulent, Web site looks legitimate, but has been created by a third party to be a very clever replica of a legitimate Web site
- Pharming is an exploit that redirects users to fake sites by poisoning a domain name server with a false IP address
- Pharming is more surreptitious and tougher to detect than most other hacker schemes



FIGURE 7-53 Most browsers include features that warn you about phishing and phishing attacks.

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7 Fake Sites

- Use antivirus software to clean up any spyware that might have infected your computer.
- Run antivirus software continuously just as you do antivirus software.
- Set your browser to reject third-party cookies.
- Consider using your browser's private browsing feature when you want cookies deleted at the end of your session.
- Check Flash Player settings to make sure you control the sites that store Flash cookies on your computer.
- Make sure your browser's anti-phishing tools are activated, or install a third-party anti-phishing tool to help you identify fake Web sites.
- Set up a disposable e-mail address at a site such as Hotmail or Gmail and use it when you don't want to disclose your primary e-mail address.
- Do not click links in unsolicited e-mail or pop-up ads, and never respond to e-mail offers, especially those that seem too good to be true.

FIGURE 7-54 Guidelines for Secure and Private Web Surfing

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7 What Do You Think?

- 073100 Do you think most people believe that their e-mail is private?
 - A. Yes B. No C. Not sure
- 073200 Do you agree with CalTech's decision to expel the student who was accused of sending harassing e-mail to another student?
 - A. Yes B. No C. Not sure
- 073300 Should the laws be changed to make it illegal for employers to monitor e-mail without court approval?
 - A. Yes B. No C. Not sure
- 073400 Would you have different privacy expectations regarding an e-mail account at your place of work as opposed to an account you purchase from an e-mail service provider?
 - A. Yes B. No C. Not sure

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NEW PERSPECTIVES

Chapter 7 Complete

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