Using Windows 7 & Microsoft® Office 2013

Computing Fundamentals

Key Applications

Living Online
Internet and Computing Core Certification Guide

This courseware is one in a series prepared by CCI Learning Solutions Inc. for use by students and instructors in courses on computer software applications. CCI designed these materials to assist students and instructors in making the learning process both effective and enjoyable.

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1. Launch your browser and navigate to the CCI Web site location http://www.ccilearning.com/data.
2. Enter: 7318 in the Courseware # box and click Run.
3. Click Run in the File Download – Security Warning window. (Alternatively, you can choose to Save the file to a location on your computer.)
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5. In the WinZip Self-Extractor dialog box, use the Browse button to specify the Windows Desktop as the location to unzip the file and then click Unzip.
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Lesson Objectives

In this lesson, you will prepare to browse the Internet by reviewing how web sites are organized, and identifying common web page elements. You will also learn how to perform basic tasks using a web browser. On completion, you will be familiar with:

- the difference between the Internet, the World Wide Web, and browsers
- the structure of a URL
- identifying common web page elements
- the basic functions of web browsers
- navigating in a browser
- using tabbed browsing
- working with bookmarks
- viewing the history

The Internet, Browsers and the World Wide Web

Exam 3 - Objective 1.1

Although people often use the terms Internet and World Wide Web (WWW) interchangeably, they are in fact separate but related things.

The Internet

The Internet is a vast global network that functions in much the same way as your school or company network. A network is an arrangement of computers that are connected in such a way that they can communicate and share information with each other. Networked computers use special networking hardware to form the connections that make communication possible.

The Internet is comprised of many smaller networks which are connected together so that they can communicate and share information. The hardware used to connect a computer to the Internet is the same hardware used to connect a computer to a company or school network, and the hardware that forms the core of the Internet is not much different.

In fact, the Internet is a collection of hardware. It consists of wires, routers, switches, microwave links, servers, and communication protocols. Because the Internet is so large, companies, schools and individual users do not connect to it directly; instead, they connect through a middleman called a service provider.

When you purchase (or subscribe to) Internet service, you pay an Internet Service Provider (ISP) for a connection to the Internet. (You actually connect to the ISP's network, which in turn is connected to the Internet.) The ISP provides the connection, and the connection provides access to the Internet (and all the smaller networks connected to it).

Clients and Servers

It is important to understand that on the Internet (as on any network), some computers function as clients and others function as servers. A client is any computer that requests a service or resource (such as a document or web page) from another computer on the network. A server is any computer that provides services or resources to other computers (clients) that request them.
There are many types of servers used on the Internet. Perhaps the most familiar is the web server. A web server hosts or stores a company's or an individual's web site. A web site is a collection of interconnected pages that contain information about a company, person, product, or service. The web site may be one of many hosted on a particular web server. Many organizations own and maintain their own web servers and host their own web sites. As an alternative, many Internet Service Providers (ISPs) host web sites for their subscribers.

When you connect to the Internet and visit a web page, your computer and your browser software act as clients – the computer requests Internet access from your ISP and the web browser requests web pages from the web server hosting the web site that you are visiting. You will learn about browsers shortly.

A Brief Introduction to Connection Hardware

Note: You will learn more about connections and hardware devices in a later lesson. The concepts introduced here will help you differentiate between hardware (Internet) and software (the World Wide Web).

Once you purchase Internet service through a service provider, you must use networking hardware designed to allow you to connect to the Internet.

Internet connections can be dial-up or direct. Dial-up connections use standard analog telephone lines and a device called a modem, which is installed inside the computer. The modem physically connects to the telephone network using a standard telephone wire. The modem dials the access number required to connect to your ISP. When a modem at the ISP "answers" the call, a connection is established. If you use a dial-up connection, you must establish a connection each time you want to access the Internet. Once your Internet session is complete, you disconnect (hang up).

In contrast, direct connections are always "on." That is, you do not need to establish a connection and then disconnect when you are through. Most users make direct connections to the Internet using a digital subscriber line (DSL) or a cable Internet connection. If you connect to the Internet at your school or company, you most likely make that connection through your organization's local area network (LAN), which in turn connects to an ISP.

Direct connections require that a network interface card (NIC) be installed in your computer. The NIC sends and receives data back and forth between your computer and the network. There are a wide variety of NICs available: some connect to a network using a wire called a network cable, and some connect to a network wirelessly. If the NIC uses a network cable, one end of the cable is inserted into the NIC and the other end is inserted into the network connection port on a networking device, such as a hub, switch or router. In some offices, the cable plugs into a network connection port on a wall plate. If the NIC uses a wireless connection, it sends and receives radio signals to and from a wireless access point somewhere in the vicinity.

Exercise

This exercise assumes that your computer is connected to a classroom network, that an Internet connection is available and that the organization's firewall does not block outgoing ping requests. At the time of this writing, the yahoo.com and ccilearning.com web servers all respond to ping requests.

In this exercise you will locate the hardware that connects your system to the Internet, and use a simple utility to test whether your Internet connection is functioning.

First, locate your network interface card (NIC) and see what type of connection it uses.
1. If the physical location of your computer permits, try to locate your network interface card (NIC). Ask your instructor for assistance if necessary. Does your NIC connect your computer to the network using a wire, or is the connection wireless?

2. If your NIC uses a wire, where does the wire connect to the network? Is there a box with connection ports near your desk? Do you plug into a wall jack?

3. Look at your NIC. Does it include a light that flashes on and off periodically? Most NICs include an indicator light to let you know that the device is sending and receiving data.

Next, use a simple network utility called ping that will indicate whether you are connected to the Internet.

4. Click the Start button, type: cmd in the Search box and press (Enter) to open a command prompt window.

5. In the command prompt window, type: ping www.yahoo.com then press (Enter).

If you are connected to the Internet, your screen should resemble the one shown below. Any line that begins with the word "Reply" is a response from the yahoo.com web server. If the server replies to you, then you are connected to the Internet.

6. In the command prompt window, type: ping www.ccilearning.com, then press (Enter).

Again, you should receive four reply messages from the ccilearning web server if you are connected to the Internet.

7. Close the command prompt window.
The World Wide Web

While the Internet is a network comprised of hardware connections, the World Wide Web is a system of interlinked documents that are accessible on that network called the Internet. There are countless millions of documents hosted on web servers – and if you can access a document by typing its address into a web browser, or by clicking a link that takes you to it, that document is part of the World Wide Web.

Documents hosted on web servers are generally referred to as web pages, and web pages usually contain links (called hyperlinks) to other pages located on web servers around the Internet. If you have ever visited a web site and clicked a link that took you to another web site (or to another page within the same web site), then you have used a hyperlink. These hyperlinks form the connections that make the World Wide Web possible – web pages around the world are connected to one another by hyperlinks.

The Internet is the network (that is, the hardware) that allows users to access documents on the World Wide Web, and the World Wide Web is the vast collection of "connected" documents available on the network known as the Internet.

Web Browsers

As you saw in the previous exercise, an Internet connection allows you to contact a web server and receive a reply. But in and of itself, this is not terribly interesting. To actually view web pages and navigate web sites, you need more than simply an Internet connection – you need a web browser.

A web browser is a program that enables you to view and navigate web pages on the Internet, and to experience the amazing rich media that is available on the World Wide Web. That is, a web browser is software. Web browsers are highly sophisticated programs. Their most basic function is to display pages created with hypertext markup language (HTML). HTML is a special language that web page designers use to add text, hyperlinks, applications, video clips, sound and animation to web pages. When web pages are designed properly, visitors can “point and click” to launch applications, navigate to specific areas of the web site, or visit related web sites – all within a web browser window.

**EXERCISE**

In this exercise you will visit the Yahoo and CCI Learning web sites using the Internet Explorer web browser. Later in this lesson, you will learn about browser features and functionality in depth.

1. Click the Internet Explorer icon in the taskbar to open the browser.
2. Click in the browser's address bar to select the current text, then type: www.yahoo.com and press Enter.

Your browser window should resemble the following figure.

This is the same web site you pinged in the previous exercise. Notice all the pictures and formatted text. Notice the wide selection of articles and stories on the page.
3. Click in the address bar to select the current text, then type: www.ccilearning.com and press Enter.
4. Scroll the page to examine its layout.
   Notice that it includes a banner, pictures, logos, and various navigation tools (such as tabs) to move
   around the web site. A web browser provides a mechanism for interacting with an amazing variety
   of media on the Internet.
5. Close your browser.

Understanding Web Site Addresses

Exam 3 - Objective 1.2

In the previous exercise, you entered a web site address into the browser address bar. Every web page
on the Internet has a specific address. This address is called a Uniform Resource Locator (URL). It is
the global address of documents and other resources on the World Wide Web. A URL consists of two
basic parts: a protocol identifier and a resource name. The protocol identifier and the resource name
are separated by a colon (:) and two forward slashes (/). Protocol identifier

http://www.ccilearning.com

Resource name

Web Site Protocols

Web browsers use various networking protocols to communicate with web servers (and other types
of servers) around the Internet. A protocol is simply a set of rules that enable computing devices to
communicate with one another. The protocol used to request web pages from a Web server is
HyperText Transfer Protocol (HTTP). Web servers also use HTTP to send web pages to the computers
that request them.

Browsers assume that you want to use the http protocol when you enter a web address. This allows
display the http:// protocol identifier in the address bar and others do not.

While http is the protocol used to view web pages, browsers also support protocols for functions such
as transferring large files, viewing news group articles, or sending and retrieving email. File Transfer
Protocol (FTP) is a protocol commonly used to transfer large files between a user's computer and a
special type of server called an FTP server. If you want to use your web browser to access an FTP
server to transfer a file, you must specify the ftp protocol in the browser address bar; for example:

Resource Names

The resource name portion of a URL specifies the location of a particular web page or file. The location
is referred to as a domain name.

A typical domain name consists of three labels separated by periods or dots as shown below:

www.ccilearning.com
Lesson 12

World Wide Web

<table>
<thead>
<tr>
<th>Server Name</th>
<th>Identifies the name of the web server</th>
</tr>
</thead>
<tbody>
<tr>
<td>Registered Domain</td>
<td>Identifies the organization that owns the domain name. Each domain name is unique and is registered with the Internet Corporation for Assigned Names and Numbers (ICANN).</td>
</tr>
<tr>
<td>Name</td>
<td></td>
</tr>
<tr>
<td>Top-level Domain</td>
<td>Identifies the category of the registered domain name.</td>
</tr>
</tbody>
</table>

Domain names are arranged into specific categories. These categories are identified by the top-level domain. You can generally determine what type of information a web site contains (or what it is meant to do) simply by reading the top-level domain. The original top-level domains are:

|.com            | Represents commercial or company sites. Most web sites in this domain sell a service or product, usually through an “online store” or web page from which you can purchase items directly. The .com domain is considered a generic top level domain and can be registered by anyone. |
|                |                                      |
|.net            | Another type of commercial web site. It is generally hosted on a network managed by an Internet Service Provider (ISP). |
|                |                                      |
|.edu            | Represents an education site created to share information about an academic institution, its curriculum, and other activities. This category may also be associated with research organizations. |
|                |                                      |
|.gov            | Refers to a site associated with a local, regional, or national government. (Depending on the country, there may be additional levels included in the URL to identify specific areas such as states, municipalities, townships, etc.) |
|                |                                      |
|.int            | Refers to international organizations. |
|                |                                      |
|.mil            | Refers to military organizations. |
|                |                                      |
|.org            | Identifies a site dedicated to a non-profit organization that may promote a specific cause such as foundations for heart and stroke, cancer, etc. |

An advantage of using these top-level domains is the ability to present your organization as global since the domain category does not identify where your web site is hosted. For example, although .com indicates that the site is commercial, the company that owns it could be in any country, or could have its headquarters in one country while its web site is being managed by an ISP somewhere else.

Other top-level domain names use a two-letter abbreviation and are meant to identify the state or country in which the web site is hosted; examples include:

| au Australia | fr France | jp Japan |
| br Brazil    | il Israel | mx Mexico |
| ca Canada    | in India  | tw Taiwan |
| cn China     | it Italy  | uk United Kingdom |
| dk Denmark   |           |         |

For example, an academic institution may be based in one country while maintaining schools in other countries, such as the web address of www.phoenix.edu. This address is the University of Phoenix campus located in Phoenix, Arizona, USA whereas the web address of www.university-of-phoenix-adult-education.org/university_of_phoenix_canada.html is for the university’s campus located in Vancouver, BC, Canada. Each school can manage its own web site in its own country and also display information from the web server at the school’s main location. To view general information about the school, you may need to enter www.abc-school.com, and then be re-directed to www.abc-school.cn to see the curriculum offered in China, or www.abc-school.fr for the school in France.
Some URLs include the path and filename of a specific page stored on the web server. For example, the URL http://www.opera.com/browser/tutorials/mail/setup/#account-setup displays a page called #account-setup stored in the /browser/tutorials/mail/setup folder on the web server named “www” at opera.com.

Common Web Site/Page Elements

Typically, the first page you see when you access a web site is the top level page, called the home page or index page. The home page serves as the “starting point” for a web site. Usually, a home page contains links to all the other pages on the web site – allowing you to navigate to different areas. In a well-designed web site, each lower-level page includes a “home” link that will return you to the web site’s home page with a single click.

Regardless of whether you are viewing the home page of a web site, or a page buried deep within the web site structure, the page likely contains a number of common elements. Some of the most common are pointed out in the following image:

- **Navigation Bar**
  - Well-designed web pages include a navigation bar (usually down the left side or across the top of the page) that provides links to various areas of the web site. A navigation bar is similar to a table of contents for the site and may be called a site map. The web page shown in the preceding image includes a navigation bar across the top.

- **Hyperlink**
  - Web pages often contain graphics or photographs. Pictures may be static (unchanging) or dynamic (a slide show of several pictures displays in the given location). Some web page designers use pictures to animate pages, or to launch actions, such as running a video. Some designers also use pictures as links to other web pages.
Many web pages contain forms with fields or blank spaces where you can enter information. The information you enter is then sent to the web server for processing. Most web pages contain at least one field, usually to allow you to search for an item on the website. In the web page shown in the preceding image, you are required to enter your registered user name and password before you can access items on the site.

A button is an interactive graphic that performs an action when you click it. In the web page shown in the figure, clicking the button sends the login information to the server.

Browser Features and Functions

Microsoft Internet Explorer
Developed by Microsoft in 1995 and was one of the first graphical user web browsers, Internet Explorer (IE) continues to be very popular for browsing the Internet as it is included with the Windows operating system.

Mozilla Firefox
Firefox was originally developed by Mozilla Corporation and Mozilla Foundation in 2004. As it is an open source web browser that is free to download, it has gained popularity with each new release.

Google Chrome
Chrome was developed and released as a stable product in 2008. It was originally available as freeware although a large portion of its code was released in 2008 as an open source project called Chromium; newer releases of Chrome are based on this version.

Opera
Opera Software releases its web browser as an individual product for download or as part of an Internet suite of products. It is one of the original web browsers introduced in 1994 and now is available for a number of computing devices, including several mobile devices.
Safari
This web browser was originally designed for the Apple computer and is the most commonly used one for any Apple computing device. Safari is also available in a Windows version.

Notice that even though the appearance of each is slightly different from the others, all of them include many of the same basic features, such as an address bar, a Home button, a bookmark button, and Forward, Back and Refresh buttons.

You will examine these features shortly.

Browser Functions

Browsers perform several functions. Among other things, they retrieve and display web pages, allow users to navigate around the World Wide Web, play media files, and support encryption to allow for secure web transactions. In the following section, you will examine a few of the basic functions of a browser.

Addressing

As you have already learned, you enter a URL into the address bar in the browser to indicate which web site you want to visit. When you type a web site address into the address bar, the browser sends a request to the appropriate web server. The server receives the request, retrieves the appropriate web pages, and then sends them back to your browser. The browser then formats and displays the web pages for you within the browser window.

The address bar displays the URL of the page currently displayed in the browser window. You can visit any web page by typing its URL into the Address bar and pressing Enter.

As you navigate to other pages within a web site (or as you visit pages on other web sites), the URL shown in the Address field updates to show the address of the current page. Most browsers maintain a history of URLs that you can access from the address bar. Clicking a URL displayed in the address bar history list has the same effect as entering the URL directly into the address bar.

In addition to displaying the URL, the address bar often includes several buttons. The Internet Explorer address bar is shown below:

The Internet Explorer address bar includes the following buttons:

<table>
<thead>
<tr>
<th>Button</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Search</strong></td>
<td>You can search directly from the Address bar in Internet Explorer, instead of first accessing a search engine page. Enter your search criteria in the Address Bar and then click the (Search) button or press Enter to view a list of web sites related to your search criteria.</td>
</tr>
<tr>
<td><strong>Show Address</strong></td>
<td>Click the (Show Address) button to display a history of the URLs of previously visited web sites.</td>
</tr>
</tbody>
</table>
### Refresh/Go
Click the **(Refresh)** button to re-display or refresh the contents of the current web page. Click **(Go to)** after typing in a web site address to go to that site.

### Stop
Click the **(Stop)** button to halt the downloading of information for a web page. The Stop button appears only while a page is loading.

As you become more familiar with various online communication methods, you may decide to use a service to shorten a URL. Shortened URLs are easier to work with when addressing email messages or posting updates to a blog.

## Uploading and Downloading

The terms uploading and downloading refer to the process of sending information from your computer to a server (uploading), and the process of receiving information from a server (downloading).

**Downloading** is the process of copying a file from a server on the Internet to your computer. Many people think of downloading as the act of copying specific files, such as music files, application files, document files, etc., from a web site to their computers. While this is true, it is also true that every time you visit a web site, one or more pages from the web site are downloaded to your computer.

Most web pages include several pictures, and these pictures are not part of the page itself, but are stored separately on the web server. The web page itself contains “placeholders” where the pictures will be inserted when you download the page from the web server to your browser. If pictures are excessively large in file size, they may take longer to display than the surrounding text. The same is true for multimedia elements such as audio or video files.

These elements are downloaded automatically, but separately, when your browser loads the web page, and these downloaded elements are stored on your hard drive in a special folder designed to hold temporary Internet files. Each browser includes a temporary Internet files folder for this purpose.

In contrast, **uploading** is the process of sending information from your computer to a server on the Internet. The most basic example of uploading is typing a URL into a browser's address bar. When you press **Enter**, the browser sends (or uploads) a request for the specified web page to the web server that hosts the page.

Other examples of uploading include entering a user name and password for a web site, or submitting information through a web form, or posting to a blog. Sometimes you may upload files or pictures that you want to share with others to a shared folder on the Internet, or to an FTP site.

Most users download much more information than they upload. Accordingly, most ISPs provide service that downloads information much faster than it uploads. Most home and small business owners purchase broadband Internet service – either cable Internet or Digital Subscriber Line (DSL) service. (You will learn more about these services later in this courseware.) The term "broadband" is used loosely, and generally applies to any direct high-speed connection. Broadband Internet service provides two speed measurements:

- **Downstream (download)** — Data moves downstream as it reaches you from a web server. Residential cable Internet service generally provides download speeds between 1 and 6 Mbps. Users can purchase DSL service with downstream speeds of 8, 12, or 24 Mbps.

- **Upstream (upload)** — Data moves upstream when you send or upload information. Residential cable Internet usually provides upstream speeds between 128 Kbps to 728 Kbps. Users can purchase DSL service with upstream speeds of 640 Kbps, 1 Mbps, or 3 Mbps.
Hyperlinks

As you have already learned, you can click a hyperlink in a web page to move to another (connected) web page or to a particular section within the current web page. A hyperlink is a reference to data that is located somewhere other than the present location. A hyperlink can point to a whole document or to a specific element within a document.

Generally, a hyperlink consists of an anchor (which is the location within a document from which the link can be followed), and a target (which is the destination web page or specific area within the current web page).

Hyperlinks often display as underlined or colored text. However, hyperlinks are not limited to text; pictures or icons or even specific areas on a graphic can be hyperlinks as well. When you view a web page in a web browser, hyperlinks behave in a specific manner. When you hover the mouse pointer over a hyperlink, the mouse pointer changes to a pointing hand ()index. When you click a hyperlink, you move to the web page that is designated as the target of that hyperlink. The web page may be part of the same web site, or may be a page on a different web site.

Some web pages contain links that are not readily visible on the screen until you position the mouse pointer over them, but once you see a, you know that you have found a hyperlink.

Sometimes hyperlinks are configured to open the target web page in the current browser window, while others open a new tab and then display the target web page within the new tab. Web developers also create hyperlinks that will download or copy files from a server onto your computer.

If you return to the anchor page after clicking a hyperlink, the hyperlink often displays in a different color, indicating that it has already been followed.

Other hyperlinks you will see on a web page are sponsored by companies who have paid to advertise on that web page. For instance, once a results list appears for search criteria, there will be links usually at the right side that list different organizations or services that may have information or products you can purchase.

Searching

While there are several well-known search engine sites on the Internet (you will learn how to use a search engine site later in this courseware), many modern browsers include a search box in the address bar, which allows you to search for information without first having to navigate to a search engine site.

In Internet Explorer, you can search directly from the address bar. Simply click in the address bar and start typing. If you enter a complete URL, you will go directly to the web site. If you enter a search term or an incomplete address, click a search provider in the menu to launch a search using the currently selected search engine.
A list appears with suggestions of search criteria for selection; this is the **Turn on suggestions** feature that is on by default. You can change this using the options command for the web browser.

You can also click the **Add** button in the drop-down menu to add search providers (such as Google or Ask.com) from the Internet Explorer Gallery web site.

Typically, a search engine returns tens of thousands of results. You can use the following techniques to narrow the number of results:

- Choose specific key words. For example, typing *lemon sharks* will show fewer results than simply typing *sharks*.
- Put quotation marks around a phrase or a group of keywords to force the search engine to look for occurrences of those words together rather than searching for each of those words individually.
- Use **Boolean operators**. Popular Boolean operators you can use with searches are the words **AND**, **OR** and **NOT**.
- Even if you do not type Boolean operators, most search engines interpret a space between keywords as an implied Boolean AND. That is, if you type *nuclear radiation* in the address bar, the space between the keywords is interpreted as a Boolean AND, and the results will include both words.

**EXERCISE**

In this exercise you will use hyperlinks to move around a web site.

1. On the taskbar, click the Internet Explorer icon.
2. Click in the address bar, type: **www.tolanoadventures.com** and press **Enter**.
   You should be viewing the Tolano Adventures home page.
   
   Take a few moments to move the mouse cursor around the screen to see if you can find links on the page. The only links on the page are in the navigation bar. The fours links are: Home, About Us, Services and Contact Us. Notice that these links do not appear with underlines, and the mouse pointer changes when you hover over them. The appearance of links is left to the discretion of the web page developer.

3. Position the mouse pointer on the **Services** link in the navigation bar, and then click the link.
   You are now viewing a list of services that Tolano Adventures provides.

4. Move your cursor to point at the **Biking/Cycling Tours** link in the list and then click this hyperlink to move to this page to view its contents.
   Notice that, as you click each hyperlink, the web browser navigates to the web page specified as the target for that link.

5. Click the **Home** link in the navigation bar to move to the home page for the web site.
Now try searching for information using the address bar in the web browser.

6. Click in the address bar, then type: elements. Observe the list box that displays beneath the address bar. If Turn on suggestions (send keystrokes to Bing) displays in the list box, click the link to display suggested search terms.

7. Click elements in the list box to display the first page.

Notice the number of results that display; this number will change over time as more items are added to the Internet. Also notice the list at the right side that lists different types of results for the search criteria – these items are links that have been sponsored by organizations who hope you will click the link to their site with the intent to view or purchase.

8. Click in the address bar, type: elements periodic table and press Enter.

Notice that the search returns fewer results. Each of the listed results includes the words elements, periodic and table. A Boolean AND is implied by the spaces between the words.

9. Click in the address bar, type: "periodic table of elements" and press Enter.

While the results list appears similar to the last search criteria entered, notice that because you included quotation marks, each of the listed results includes the exact phrase "periodic table of elements."

10. Click in the address bar, type: hydrogen+oxygen, then press Enter.

11. Click in the address bar, type: hydrogen+oxygen NOT H2O, then press Enter.

Did the number of returned results decrease?

12. Close the browser.

Browser Features

Browsers include several features which make them easy to use and easy to customize. Browser features help make browsing the World Wide Web efficient and fun.
Back, Forward and Refresh Buttons

Although web pages often provide their own navigation tools, every browser includes buttons that allow you to navigate among the sites you visit within any given browser session.

- The Back button moves back one page. The back button becomes active once you click a link or visit a different page by typing a URL in the address bar.
- The Forward button moves ahead one page. The forward button becomes active once you move back one page.
- The Refresh button reloads or re-displays a page. You may want to refresh a page if the content changes continuously, or if part of the page failed to load correctly.

The symbols used for these buttons are fairly universal. The following table illustrates how the buttons appear in various browsers.

<table>
<thead>
<tr>
<th>Button</th>
<th>Internet Explorer</th>
<th>Firefox</th>
<th>Chrome</th>
<th>Opera</th>
</tr>
</thead>
<tbody>
<tr>
<td>Back</td>
<td>←</td>
<td>←</td>
<td>←</td>
<td>←</td>
</tr>
<tr>
<td>Forward</td>
<td>→</td>
<td>→</td>
<td>→</td>
<td>→</td>
</tr>
<tr>
<td>Refresh</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>

If a menu bar is available in the web browser, it can usually be displayed using the Alt key. You can then use the View menu to go to a specific page or to refresh the screen. In general, the menu bar is hidden by default as the buttons enable you to navigate or access options faster.

Home Page

A browser's home page is the page that is displayed by default when you open the browser. Most browsers are configured with a default home page when you install them. For example, the default home page for the Internet Explorer browser is the www.msn.com page.

However, you can set the home page for your browser to any page you want. For example, users set their home page to a search engine or to their favorite web site. If you visit a site frequently, it can be efficient to set that site as your home page. It should be noted, however, that many companies prefer that employees set their home page to the company web site.

You can also set most browsers to display a blank page as the home page.

All web browsers include a button that will quickly return you to your default home page, no matter how many other web sites you have visited. Each browser uses its own version of a House symbol.

Tabs

Modern browsers allow for tabbed browsing. That is, you can view different web sites simultaneously – each in its own tab. Opening a new tab is the same as opening a new browser window. Browser tabs are similar to buttons in the Windows taskbar. You can open a separate web page in each tab, and switch between them by simply clicking on the tab. Only one tab can be the active tab at any given time.

Working with multiple open tabs allows you to compare information from different web sites, or copy and paste information from one web page into another.

To create a new tab, use one of the following methods:

- Click the New Tab button, or
- press Ctrl+T, or
right-click an active tab and then click **New tab**, or
- if the Menu bar is displayed, click **File** and then click **New tab**.

In Internet Explorer, when you open a new tab, the browser displays thumbnails of the sites you visit most often.

You can click a thumbnail to open that site in the active tab. You can also right-click a tab and select **Duplicate tab** in the menu to open a new tab that displays the same web site. For example, if you are viewing the MSN web site, you could read one article in one tab, open a duplicate tab, and then click a link to view a different article on the MSN site in the other tab.

To view a link on a web page in another tab without leaving the web page, right-click the link and then click **Open in new tab**. You can then view the contents of two different pages for the same web site.

To close a tab you no longer want to view, click the **(Close Tab)** button on that tab. If you have multiple tabs open, you can right-click the active tab and specify to close the tab, or close all the other open tabs.

If you have multiple tabs open, and you click the **Close** button for Internet Explorer, you will be prompted to specify whether you want to close the current tab or close all the open tabs.

**EXERCISE**

In this exercise you will use various features in the Internet Explorer browser.

1. Click the **Internet Explorer** icon in the taskbar.
2. Click in the address bar, type: **www.ccilearning.com**, and then press **Enter**.
3. Click in the address bar, type: **www.google.com**, and then press **Enter**.
4. Click the **(Back)** button to move back one page (to the CCI Learning page).
5. Click the (Forward) button to move forward one page to the Google page.

6. Click in the address bar, type: wikipedia, and then press Enter.

7. Click the (Home) button to return to the browser home page.

8. Click in the address bar, type: www.disney.com and press Enter.

9. Click the (Stop) button.

Note that the amount of text and graphics on the web page will vary at the time you stopped the download depending on the speed of your Internet connection.

10. Click the (Refresh) button.

11. Click the (Home) button to return to the home page.

Now try viewing two or more web sites and navigating between the web pages.

12. Click the (New Tab) button.


14. Press (Ctrl)+T to open a new tab and type: www.tolanoadventures.com in the address bar. Click (Go).

15. Click the first tab, which should be the home page of your web browser.

The web browser home page is now the active tab.

16. Click the tab for the Tolano Adventures web page to make the home page for this web site the active tab.

17. Click the CNN tab and then click (Close Tab).

You should now have only two tabs open: the home page for your web browser and the Tolano Adventures home page.

18. Click the tab for the home page of your web browser and click (Close Tab).

You should now have only one open tab, the Tolano Adventures home page.

19. Minimize the Internet Explorer window.

**Favorites/Bookmarks**

If you visit a site frequently, you can “bookmark” the site so that you can visit it without having to enter its URL. When you bookmark a site, you save the URL in a folder created specifically for storing bookmarks. Various browsers give different names to their bookmark folders. In Internet Explorer, bookmarks are stored in a folder called Favorites.

You can work with Favorites in Internet Explorer by opening the Favorites center. The Favorites center includes three tabs – one for bookmarks, one for news feeds and one for the browsing history.

- To display the Favorites Center, click (View favorites, feeds, and history), or press (Alt)+C.

The number of folders or web sites displayed in the Favorites pane will vary, depending on the web browser version and on previously set bookmarks. You can organize bookmarks into folders, move them, or remove them.

You can expand or collapse folders (“open” them to see a list of the contents or “close” them to see only the folder) by clicking the folder.
You can have the web browser place each of the links in a folder as a separate tab by clicking the arrow to the right of the folder name (or pressing \texttt{Ctrl}+\texttt{Enter}): 

You can share your favorites with others online through web sites, such as social networking sites, where you save the bookmarks and then apply keywords for that bookmark. This is known as \textit{social bookmarking} and works like a resource center where people can find addresses for sites devoted to particular topics using these shared bookmarks or favorites. You must, however, first register with a social networking site.

\textbf{Adding Favorites}

To add a web site to the list of favorites, use one of the following methods:

- Click the (View favorites, feeds or history) button and then click Add to favorites, or
- on the Menu bar, click Favorites and then click Add to favorites, or
- press \texttt{Alt}+\texttt{Z} and then click Add to favorites

You can create a new folder for the link, move it into another folder, or choose to have it appear at the main level on its own.

Once you add a web site to the Favorites list, access it by clicking it in the Favorites list.

You can also use the Favorites bar to add favorites you want to access frequently. Right-click anywhere in the blank area by the tab, click Favorites bar, and then click (Add to Favorites bar).
Deleting Favorites
To remove a bookmark in the Favorites list, use one of the following methods:
- right-click the bookmark, then click Delete from the shortcut menu, or
- select the bookmark, press Delete, and then click Yes to confirm the deletion.

To delete an item from the Favorites bar, right-click the button and then click Delete.

Organizing the Favorites List
The web browser gives you the option to choose where the Favorites link will appear. As you begin to add favorites, you may want to organize these links.

To organize the Favorites Center, use one of the following methods:
- Activate the Favorites Center and then drag the link to a new location, or
- activate the Favorites Center, click the arrow for Add to favorites and click Organize favorites, or
- activate the Menu bar, click Favorites and then click Organize favorites.

You can then choose any of the options in the dialog box to organize (or reorganize) the list of favorites.

If you choose to use the first method, as you drag the link to a new location, a thick horizontal black line appears to guide you in placing the link.

EXERCISE
In this exercise you will work with bookmarks.

1. Restore the Internet Explorer window.
2. Click in the address bar, type: www.ccilearning.com and press Enter.
3. Click (View favorites, feeds, and history) to display the Favorites Center. Click (Pin the Favorites Center) to keep the pane open.
   The Favorites Center should now appear at the left side of the window, and occupy the full height of the screen.
4. Click Add to favorites.
5. Ensure the text shows as: CCI Learning for the Name and click Add.

The Favorites Center should appear similar to:

Now try adding other sites to your Favorites Center.

6. In the Address field, type: www.foodnetwork.com and press Enter.
7. Click Add to favorites, type: Food Network as the name and then click Add.

The web site has been added to your list of favorite sites.
8. In the **Address** field, type: `www.travelchannel.com/tv-shows` and press **Enter**.

   This URL points to a specific page on a web site other than the web site home page. By including the `/tv-shows` in the address, you can go directly to this page on the web site, instead of having to navigate there from the web site home page.

9. In the list of links for More Shows, click the **Bizarre Foods** link.

10. Click **Add to favorites**, and then click **Add**.

11. Click **Back** to return to the previous page.

12. Scroll further down in the More Shows list of links, click **Truck Stop USA** (should be near the end of the list of shows).

13. Click **Add to favorites**, and then click **Add**.

   Notice how both pages on the Travel Channel web site are now bookmarked for later use.

Now that you have some favorites, you need to organize the links by topic.

14. Click the arrow for **Add to favorites** and then **Organize favorites**.

15. Click **New Folder**. Type: **Restaurant Tours Research** and press **Enter**.

16. Click the **Food Network** link in the list and then click **Move**.

17. Click the **Restaurant Tours Research** folder and then click **OK** to move the Food Network link into the Restaurant Tours Research folder.

18. Repeat steps 16 to 17 for the **Bizarre Foods** link and the **Truck Stop USA** link.

19. Click **Close** to exit the Organize Favorites dialog box.

Now try moving a link by dragging it to a different location.

20. Click the **Restaurant Tours Research** folder and drag it upwards to organize folders in alphabetical order.
The horizontal black bar that appears as you drag the folder indicates where the folder will be placed when you release the mouse button. Folders or web site links can also be reorganized within a folder.

21. Release the mouse button at the appropriate location.
Notice that the folders are listed in alphabetical order.

22. If required, drag the CCI Learning Solutions link into its appropriate alphabetical position in the list of favorites.

23. Minimize the Internet Explorer window.

Checking the History
Every browser includes a history function that stores the URLs of web sites you have visited in the browser's History folder.

The History folder stores the URLs of sites you have accessed within a defined period of time, and provides a convenient way to revisit web sites, especially if you cannot remember the exact URL. In Internet Explorer, the default amount of time to keep pages in History is 20 days. If you use the web for a lot of tasks, the History folder can become unmanageably large. A large History folder can be difficult to use, uses considerable disk space, and can slow the browser speed. You can, however, adjust the time period for storing pages, and you can empty the folder manually.

To display the history, activate the Favorites Center and then click the History tab.

Within the History tab, you can click the arrow for the View By Date drop-down to choose among various view options:

Once the list of sites appears in the preferred view, you can do one of the following:

- To go to a site, click the site link in the list.
- To see other pages you may have visited within a given site, right-click the link and then click Expand.
- To collapse the list of web pages for a site, click the site link.
- To delete a site from the list, right-click the link and then click Delete.

To delete the entire history, use one of the following methods:

- Click Safety, click Delete browsing history, or
- on the Menu bar, click Tools and then click Delete browsing history.
EXERCISE

In this exercise, you will work with the History folder.

1. Restore the Internet Explorer window, ensure the Favorites Center is open and then click the History tab.
2. Click Today.
   You should see a list of all the sites you visited today.
3. Click the arrow for the View By Date drop-down.
4. Click View By Site.
   Notice how the history list appears. The number of sites listed here will vary depending on who else may have used the web browser recently.
5. Click (Close the Favorites Center).
6. At the top right edge of the Internet Explorer window of the screen, click , click Safety and then click Delete browsing history.

7. Examine the settings listed in the dialog box. Can you predict what will happen when you click the Delete button?
8. Click Delete.
   When complete, the web browser displays a screen similar to the following:

   Internet Explorer has finished deleting the selected browsing history.

9. Close the message box, then open the Favorites center and click the History tab if necessary. The history tab should now be empty.
10. Minimize the browser window.
Lesson 12  
World Wide Web

**Plug-ins/Add-ons**

In order to present the interactive multimedia so abundant on the web today, a browser requires applications called plug-ins or add-ons. *Plug-ins* are programs that extend the capabilities of web browsers. When you visit a web site and your browser encounters a file type that it cannot natively support, you may be prompted to download and install a plug-in so you can view the web page properly.

Plug-ins are associated with a specific operating system (such as Windows or Macintosh) and sometimes with a specific browser (such as Firefox or Internet Explorer). In Firefox, plug-ins are generally referred to as add-ons. Adobe Flash Player, Windows Media Player, and Real Networks RealPlayer are examples of popular plug-ins.

Plug-ins generally have a particular file type associated with them. For example, Windows Media Player can be used to play files that include the .wma (Windows media audio) and .wmv (Windows media video) file name extensions. The player also supports several video and audio file formats (such as .avi, .mpeg, .midi, .wav).

Internet Explorer and Firefox both include several native plug-ins. These are automatically installed with the browser. However, as you browse the Web, you may be prompted to download and install new plug-ins or update the plug-ins that are already installed. It is good practice to occasionally upgrade plug-ins because upgrades frequently include increased functionality and security updates.

To install or upgrade a plug-in, it is often best to go to the vendor’s site because that is where you will find the latest version of the plug-in. Vendor sites also usually include information on the minimum system requirements (operating system version, hard disk space, RAM, processor speed, etc.) required for the plug-in as well as installation instructions.

In Internet Explorer, toolbars and ActiveX controls are also considered add-ons. ActiveX controls are small programs that are used on the Internet. They can enhance your browsing experience by allowing animation or they can help with tasks such as installing security updates at Microsoft Update. When you visit a site that uses an ActiveX control, Internet Explorer asks if you want to install the ActiveX control.

**Managing plug-ins/add-ons**

You can manage plug-ins and add-ons by opening the Manage Add-ons dialog box. Click the **Tools** button, and then click **Manage add-ons**. Under Add-on Types, click **Toolbars and Extensions**.

<table>
<thead>
<tr>
<th>Add-on Types</th>
<th>Name</th>
<th>Publisher</th>
<th>Status</th>
<th>Architecture</th>
<th>Load bit</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Toolbars and Extensions</strong></td>
<td>Adobe Systems Incorporated</td>
<td>Shockwave ActiveX Control</td>
<td>Enabled</td>
<td>32-bit</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Adobe Systems Incorporated</td>
<td>Shockwave Flash Object</td>
<td>Enabled</td>
<td>32-bit and ...</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Adobe Systems, Incorporated</td>
<td>Adobe PDF Reader</td>
<td>Enabled</td>
<td>32-bit</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Apple Inc.</td>
<td>QuickTime Object</td>
<td>Enabled</td>
<td>32-bit</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Microsoft Corporation</td>
<td>Windows Media Player</td>
<td>Enabled</td>
<td>32-bit and ...</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Microsoft Corporation</td>
<td>Lync Browser Helper</td>
<td>Disabled</td>
<td>32-bit and ...</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Microsoft Corporation</td>
<td>Windows Live ID Sign-in Helper</td>
<td>Disabled</td>
<td>32-bit and ...</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Microsoft Corporation</td>
<td>Messenger Companion Helper</td>
<td>Disabled</td>
<td>32-bit</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Microsoft Corporation</td>
<td>Office Document Cache Handler</td>
<td>Disabled</td>
<td>32-bit and ...</td>
<td></td>
</tr>
</tbody>
</table>
Display the Show drop-down list and select to view currently loaded add-ons, all add-ons, add-ons that are pre-approved by Microsoft (select the Run without permission option to view these), or ActiveX controls (select Downloaded controls to view these).

To turn an add-on on or off, click the add-on in the dialog box, then click either the Enable or Disable button.

To delete installed ActiveX controls, select the Downloaded controls option in the Show drop-down list, click the ActiveX control you want to delete, then click More information.

In the More Information dialog box, click the Remove button.

Lesson Summary

In this lesson, you reviewed how web sites are organized, and identified common web page elements. You also learned how to perform basic tasks using a web browser. You should now understand or be able to:

- the difference between the Internet, the World Wide Web, and browsers
- the structure of a URL
- identify common web page elements
- the basic functions of web browsers
- navigate in a browser
- use tabbed browsing
- work with bookmarks
- view the history
Review Questions

1. Which statement properly defines the concepts of Internet, Browsers and the World Wide Web?
   a. The Internet and the World Wide Web are two names for the same thing; and all pages of the
      Internet are viewed through browsers.
   b. The Internet is a network that hosts the linked pages which form the World Wide Web, and
      these pages are viewed through browsers.
   c. The World Wide Web is a network, and browsers are another name for the Internet.
   d. Any of the previous
   e. a or b

2. If there are several web pages that you visit regularly, what can you do to make accessing them
   more efficient?
   a. Define each page as a browser Home page.
   b. Bookmark each page.
   c. Delete each page from the History folder so that it will become active.
   d. Install an ActiveX control for each page.
   e. Any of the previous
   f. a or b
   g. a or c

3. If you use a phrase as a search term, which of the following is true?
   a. The search engine will interpret the space between each word in the phrase as a Boolean AND.
   b. The search engine will interpret the space between each word as a Boolean OR.
   c. The search engine will interpret the space between each word as a Boolean NOT.
   d. The search engine will reject the phrase because you cannot use more than one word as a
      search term.

4. Ann visited a site last Tuesday which contained a meatloaf recipe that she really wants to try, but
   now she can't remember the URL. What should she do?
   a. Conduct a new search for meatloaf recipes and hope that she can find this one recipe again.
   b. Click the browser's Back button until she gets back to the page she wants.
   c. Click the browser's Refresh button.
   d. Look for the URL in the History folder.

5. Which is the fastest method to use to view two or more web sites in your web browser?
   a. Start another session of the web browsers.
   b. Set up a separate monitor to open a new window for the web browser.
   c. Open a new tab and enter the web site address.
   d. Type the new site address into the address bar at the current page.

6. When you post information to a personal Web site to share with others, which
   action are you performing?
   a. Uploading   b. Downloading
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