



INTERNET

Applications of the Internet. Browser functions and accessing sites on the World Wide Web, terminology, searching, making purchases and security.

Based on Microsoft Internet Explorer Version 7 and Microsoft Windows XP SP2 operating system.

Written by GCCLC Volunteers

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August 2008

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Welcome to Lesson One

Introduction

Today you will join over one billion people world wide that are using the Internet. The Internet is so large that we will only get a very brief sample from this class. However, by the end of class you should be able to access the more than 30 billion websites that are now available for public use and feel secure in doing so. Since this is an Internet class, we will provide references to websites where more information may be obtained.

Internet History

In the 1950's and 60's, the Cold War spurred further research in radar and computers. The U.S. government feared that the Russians were pushing ahead of the west in science and technology.

Hundreds of millions of dollars went into research and it was a golden age for R&D around the country. New federal agencies, such as NASA (National Aeronautics and Space Administration) and ARPA (Advanced Research Projects Agency), were created.

The ARPAnet began as a government program thought up in the halls of the Pentagon. Several universities funded by ARPA were chosen to test the network. In 1969 only four computers were connected to the ARPAnet, - but it grew.

At the beginning of 1989 over 80,000 host computers were connected to what was now called the Internet. That same year, after some solemn thought, the aging ARPAnet was turned off; signaling a transfer of the Internet from the hands of the Nerds to the Suits.

While waiting for a meeting one day, Vint Cerf started daydreaming about a new method that would improve the efficiency of the network and allow different networks to connect together into one big network - an Internet. He jotted down some notes and then met with Bob Kahn to work out the details.

The Internet and the World Wide Web (WWW) are terms that mean about the same thing to most people. While they are related, their definitions are different.

The Internet is at its most basic definition an electronic communications network. It is the structure on which the World Wide Web is based. Think of the Internet as a bus and the Web as the people within the bus....grumpy passengers, screaming babies, and people talking too loud (actually, that's a pretty good representation of a lot of the Web!).

Born in 1989, the Web is based on hypertext transfer protocol (HTTP), the language which allows you and me to "jump" (hyperlink) to any other public web page. There are over 30 billion public web pages on the Web.

The growth of the Internet today has exploded into the latest craze. It is the newest wave of communication through electronic mail, file transfer, telnet access, transaction applications, and much more. The most popular part of the Internet is the World Wide Web, where anyone can access hypertext pages with the click of a button. The popularity of the Internet has launched many social and ethical issues. Recently, the Internet has been criticized for its uncensored information, but has been praised for its educational value.

As of September 18, 2006, 1.09 billion people use the Internet

A timeline for the Internet's development is provided in the appendix.

For more information visit: <http://www.historyoftheinternet.com/preface.html> or <http://computer.howstuffworks.com/internet-channel.htm>

Note and Caution. The World Wide Web part of the Internet is the greatest source of information the world has ever seen. However, it can also be a great source of misinformation, fraud and security risks. We will try to help you sort these out in this course. Also, the websites and products shown in this course are for use in the exercises and not necessarily endorsed by the GCCLC. And finally; the Internet is changing so rapidly that some of the material in this manual will have changed in the month between the manual update and start of class.

Browser

A browser is a software program that allows you to visit the Internet. There are a number of browsers available. We will use Internet Explorer 7 (IE7) which is the most current version. Internet Explorer is the most popular of the browsers and comes with the Windows operating system on your computer. Other browsers which are in use include Internet Explorer 6 (IE6) and Firefox shown below.

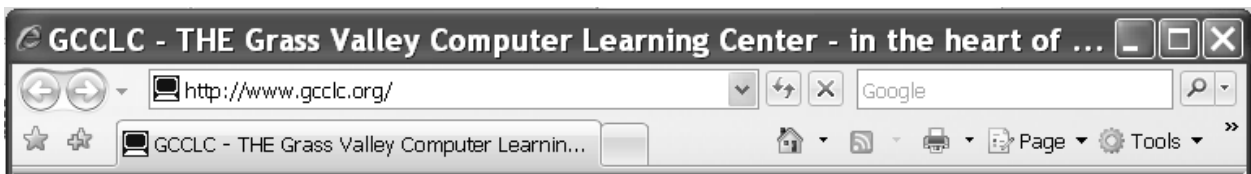


Internet Explorer 6



Firefox

Open Internet Explorer. You will see the following at the top of your screen. These are the browser controls.



The address bar contains the expression: **http://www.gcclc.org/**. This is the address or URL (Uniform Resource Locator) of the Gold Country Computer Learning Center website home page. To get to any website you only need to enter the address in the address bar and press **Enter** or click on the **green arrow** at the right of the address bar.

If you haven't already done so, turn on your computer and launch **Internet Explorer**. You can view the entire web page without the browser controls by pressing the **F11** key. To return to the original view press **F11** again.

Web Address

The web address must be entered exactly. There are no spaces. When it looks like there is a space it is probably an underline (_) which must be there. The address is case-sensitive (upper and lower case letters) and all punctuation must be followed. There are several parts of the web address:

http. This is the language of the World Wide Web. Since all websites have this the http:// does not need to be entered. The browser will take care of it.

www. This is called a subdomain. You may see other varieties such as ww2 or nothing at all. It should be copied just as it is.

gcclc.org. This is the domain name and sets each website apart. The domain name is purchased from an organization that ensures each is unique. The **.org** is the type of domain and there are many of them. Some common ones are:

| | |
|---------------|---|
| .com | Commercial business |
| .edu | Educational site such as a university |
| .gov | U.S. government |
| .mil | U. S. military |
| .org | Organizational site often used by non-profits, like GCCLC |
| .net | Internet administrative site |
| .store | Retail business |

There are others, a more complete list can be found at:

<http://www.computeruser.com/resources/dictionary/noframes/nf.domains.html>

As you can see above, some website addresses can be quite long.


Links

There are often many pages in a website, sometimes thousands. Links are used to access these pages or another website. A link can take almost any form: underlined words, colored words, pictures, graphics, etc. When a mouse cursor is placed on a link it turns




into a pointing hand.

On the left side of the GCCLC home page is a list of Quick Links. Put the cursor on the one labeled “sign up for lab-time” and click on it. This will take you to the page where you can sign up for our free computer lab with technical assistance. To return to the

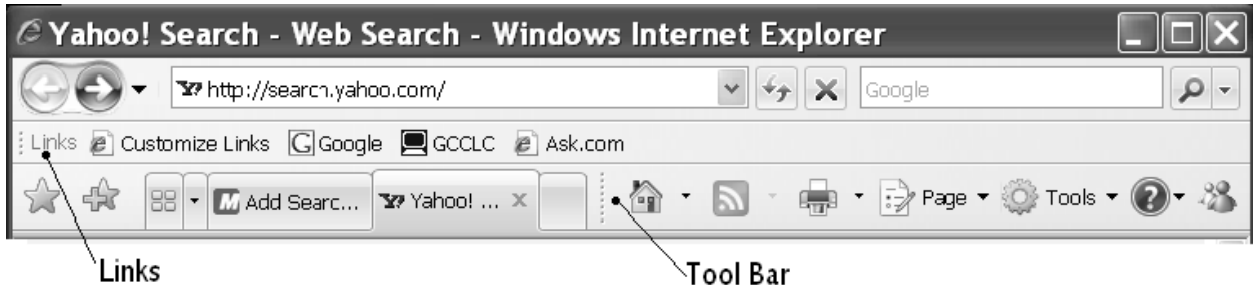
home page click on the **back arrow** (left arrow)  at the top of the browser. Try several other links and return to the home page after each selection. At the top of the GCCLC home page you will see a list of words starting with **About Us**. As you move your mouse cursor over each of these words it will turn into a hand and a pop down menu will appear. Move your cursor over these words and look at the menus. Go to **News** and click on the latest Newsletter. Return to the GCCLC home page. You can click on the **forward arrow** (right arrow) and return to the Newsletter, which hopefully, you will take time to read later.

Now move your cursor to **Links** and click on **Useful Links** in the pop down menu. Select any of the links listed and click on it. You will be taken to a new website. Click

on the little house  on the browser and you will be taken back to the GCCLC home page. You can make any page **Home** on your browser. You will do that later.

You can also put **Links** on your browser for sites you want quick access to. If the **Links** bar is not shown as indicated below then right click on the **Tool Bar** and select **Links**.

To add a link, drag the webpage icon to the **Links** bar. To change the name of the link or delete it, right click on the link.



Address Bar

You can click anyplace in the address bar and the current address will be highlighted. Pressing the **F6** key will have the same effect. You can now type a new address and press **Enter** or click on the **green arrow** to the right of the address bar to go to the website.

1. Press the **F6** key and type **www.whitehouse.gov** and press **Enter** or use the **green arrow**. Note that the browser has added the **http://**.
2. Edit this address by clicking once in the address bar (highlighting the current address) and then put the cursor just before the **g** in **gov** and click again.
3. Press **Delete** three times to delete **gov** and type **org** and press **Enter** (or use the green arrow).
4. Look at both the **.gov** and **.org** websites by using the **back** and **forward arrows**. Which website do you think is the official one of the U.S. Government?


Editing an address as you have just done is a very important thing for you to learn. Some websites are very long and you do not want to have to retype everything just because you may have typed one wrong letter or mark. Test your editing skills by going to the website **hubblesite.org/gallery/album/**. You will know when you have reached the correct site. Try some of the links on this site then go back to the home page.


Another way to enter an address is to copy and paste.

1. Go to the **Useful Links** again.
2. Highlight any of the links and Copy it. (You can right click on the link after highlighting and select Copy.)
3. Highlight the **address bar** by pressing **F6**.
4. Paste (right click to select Paste) the copied address into the **address bar** and press **Enter**.

Refresh and Stop.


Sometimes information changes after you have downloaded a website. Examples are weather, news, and the stock market. You can update the website by clicking on the

refresh button . To see how this works go to **yahoo.com**. Click on the link **finance** on the left side of the page. You will come to a page that has the stock market indices on the left side. Note a particular value and click on the **refresh button**. If do this after the stock market has closed, (4 PM Eastern), you will not see any change; try this at home.

If you change your mind about downloading a page after the download has started; or if a download is taking too long, stop the process by clicking on the red  next to the address bar.

Favorites

You will soon find there are many websites you want to remember, but don't want to write down all the addresses, especially since some can be very long. **Favorites** can be used to save these places. To save an address click on the **star with a plus sign**

 on the left side of the **browser**. A menu will come up. Click on **Add to Favorites**. In the resulting box be sure that the **Name** is one you will recognize in the future, you can change the name at any time. To practice, add the last three sites you visited to your **Favorites** (hint: use back arrow). After you get a large number of **Favorites** you may find you want to put them in individual folders to better keep track of them. You can always add a folder when the **Add to Favorites** box comes up. You can also do it ahead of time by clicking on the **star with a plus sign** and then select **Organize Favorites**. Try adding the following the folders: **Stuff, Computers, Home, and Fun** by clicking on the **New Folder** box, typing a name, then press **Enter** for each one. Now whenever you add a **Favorite**, file it in one of these four folders.

To access one of the **Favorites** you have saved, click on the **star without a plus sign** and your list of saved favorites will appear. Click on the site you want to view and it will open in the browser.

History

Every place you visit on the Internet is recorded in a **History** file. To select the **History** file click on the **star** on the left side of the **browser**. You can select how the information is displayed by clicking on the down arrow. Check to see what the **History** shows for sites you have visited today.


Tabs

The use of **Tabbed Browsing** enables you to have a large number of websites open at the same time. To see how this works, click on **Home** to return to the GCCLC website. You

will see a **Tab** that looks like this:



The box on the right of this **tab** will enable you to open another **tab**. Click on it. If you enter a new address in the address bar it will open in the new tab and you will have two active websites open. Try this with one of your **Favorites**. Return to **Home** and we will investigate another method of opening **Tabs**. Select the first **link** on the left side of the GCCLC home page and **Right Click** on it. Click on the words: **Open in New Tab**. A new **Tab** will open with the selected website. Continue to do this with most of the **Links** and notice each opens in a new **Tab**. You will now see the following icon on the left of

the **Tabs**.  By clicking on either the **down arrow** or the **box** you will see two new ways of displaying your **Tabs**. To close a **Tab** you merely select it (by clicking on it) then click on the **X** on the right side of the **Tab**.

Home

To change or create new **Home** pages, click on the **down arrow** next to the **house**.



By selecting **Add or Change Home Page** from the resulting menu, you can change your **Home** page or make multiple **Home** pages in separate **Tabs**.

IE7 Menu Bar

One of the things we were used to seeing in IE6 that is missing from IE7 is the **Menu Bar**. For most applications it is not needed. However, to add it, click on the **down arrow** next to **Tools** and then click on **Menu Bar**.

Exercises

You will find it interesting and good practice to visit some of the following websites. Browse these sites using their links.

- A good dictionary: www.merriam-webster.com.
- Each of the three nationwide credit reporting agencies will provide free credit reports to individuals. The only site authorized by the credit agencies to provide this information is www.AnnualCreditReport.com. However, the site that is advertised by the media is www.freecreditreport.com. If you visit the latter site to get your credit report you may be charged a monthly fee. Be sure to read the disclaimer on the left side of the site's home page.
- Interested in digital photography? Try this site: <http://kodak.com/> (Note the address bar after you enter site). Put cursor on **Consumer Products** then select

Taking Great Pictures from the resulting pop down menu. Be sure to try the link to **Tips**.

- Interested in local events? Try <http://new.mynevadacounty.com/Home/>. (Again notice the address bar after you enter the site.)
- This one is a long address, but lots of fun.
<http://www.oddcast.com/home/demos/tts/frameset.php?frame1=talk>
- Click on each horse to make him sing.
http://svt.se/hogafflahage/hogafflaHage_site/Kor/hestekor.swf
- Click on Los Angeles airport to watch planes land and take off.
<http://www.java.com/en/everywhere/airportmonitor.jsp>
- Want help with taxes <http://www.irs.gov/>. Also look at the non-government sites: www.irs.org and www.irs.com.
- Those of you who have visited, or would like to visit the Conservatory of Flowers in San Francisco will find this site useful and interesting. Note the unique way they handle links. www.conservatoryofflowers.org/
- To check out the effect a small spelling error can create go to www.microsoft.com and www.micorsoft.com You can open these in different **tabs** or as separate pages and use the **back** and **forward** arrows to compare.
- For information and statistics about almost anything try: www.nationmaster.com
- The most popular encyclopedia in the world is on the Internet and is written by its users. <http://en.wikipedia.org/>
- Try using www.healthline.com/symptomsearch to find information on a medical symptom.

At End of Class

- **Close all open windows.** (click the big **X** in the upper right corner of the screen)
- **Remove your CD.** (close the CD drawer)
- **Turn Off the computer correctly.** (don't use the power button on the computer)

Notes:

Lesson Two

Bits and Bytes

In order to understand some of the material presented in this course, we need to explain a little about how computers talk to each other and themselves. We call their language binary and it consists of a series of *ons* and *offs*. Each on or off is called a bit and is usually represented by a “0” for off and a “1” for on. If you look at the on/off switch on your computer (or many other electronic devices) you will often see the symbols “0” and “1”.

Obviously, you can't convey much information with just an on and an off. In fact it takes 8 bits just to represent a single letter of the alphabet. We call 8 bits a byte. The symbol for a bit is “b” (lower case). The symbol for a byte is “B” (upper case). So, if it takes a byte to represent one letter, it takes a lot of them to represent something important. Some examples are shown below with approximate values for file size.

- Typed page, 30,000 bytes (30 KB)
- Web page, 50,000 bytes (50 KB)
- Hi resolution photo, 1-6 million bytes (1-6 MB)
- MP3 (music) file, 4 million bytes (4 MB)
- Applications can be many megabytes. IE7 is 15 million bytes (15MB)

So it's easy to see how we can quickly get to one billion bytes or a gigabyte (GB).

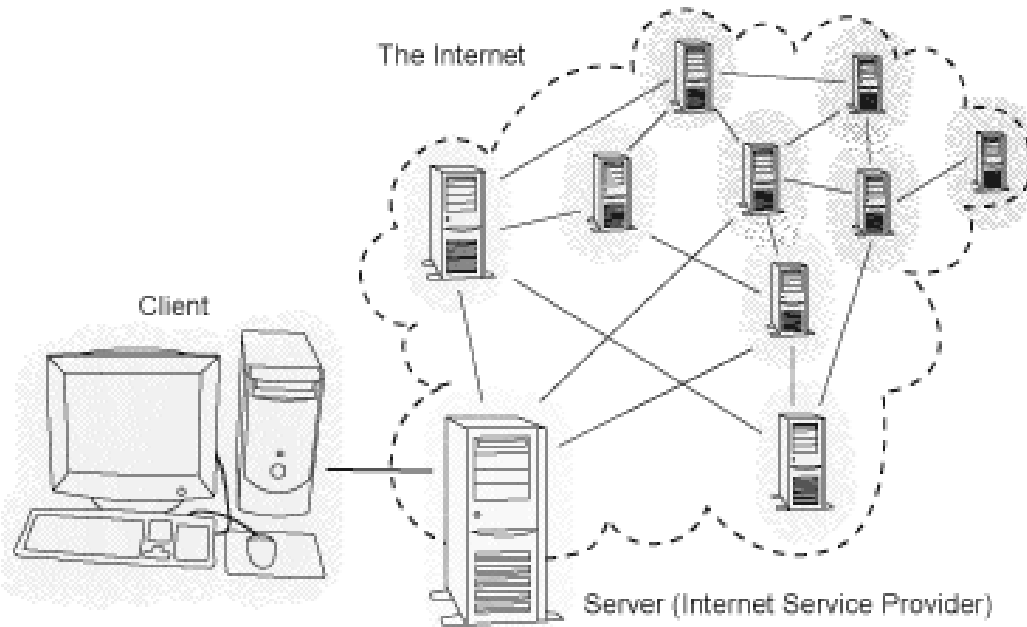
That's part of the story. The next thing we need to discuss is how fast a computer can move information around. We usually represent this as kilobits per second (Kbps), megabits per second (Mbps). Bandwidth is another term that is often used to represent computer speed. To say a computer connection has a large download bandwidth is the same as saying the computer has a fast download speed with download being the term that represents information coming to the computer from another source.

For more on Internet speed go to:

<http://www.helpwithpcs.com/internet/internet-connections.htm>

Internet Service Provider (ISP)

To access the Internet, your computer must be connected to an ISP and be online. There are thousands of commercial entities that provide ISP service, most often you connect to them by phone line or cable. Other methods used include dedicated lines (T1), satellite antenna, and power lines. The diagram below shows how the connection is made.



The Internet computers can be located next door or anywhere in the world. For instance, if you want to visit the official website for the Louvre in France you can go to the following address and you will be connected to a computer in France.

<http://www.louvre.fr>

If you look in the upper right corner of the website you will see that you can select English or French for the language of the site. While on a virtual visit to the Louvre can you find the Mona Lisa?

ISP Speed

Your ISP and the type of connection you have can drastically effect the rate at which information can come into your computer, called downloads. Information going from your computer to another computer is called an upload. Download and upload speeds for your ISP can be quite different with the upload speeds significantly less than the download speeds. Some examples are given below for downloads. Please note that ISP speeds are shown in *bits* per second (bps) and the files that are downloaded are in *bytes* per second (Bps). To find the speed of a download you must multiply the file size by 8 to get it in the same units as the ISP speed.

- **Dial Up:** The connection uses a phone line. You connect by dialing the number your ISP provides. Actually your computer does the dialing but you usually hear the process when you connect. Once you have connected the phone line, it is not available for other purposes. Maximum download speed is limited by the FCC to 53 Kbps. Your actual speed will depend on your phone line and the connection to

the ISP. A typed page will require at least 5 seconds and a website 9 seconds. Other types of downloads and videos are impractical for dial up.

- **DSL (Digital Subscriber Line):** Also uses the phone line but allows it to be used for other functions as well. Generally limited to just a few miles from the telephone switching station. Most providers allow you to select your download speed with higher speeds costing more (of course). A typical range would be 1 to 6 Mbps. So an application like IE7 would take from 20 seconds to 2 minutes to download.
- **Cable:** Cable connections use a separate line to your home and do not affect the phone line at all. Download speeds depend on location and number of people connecting at the same time you are. Speeds can be slightly greater than DSL

Searching

One of the most important things you can learn about the Internet is how to find what you want because there is so much available. However, it is also important to point out that for you to find it on the Internet, it must be in a computer somewhere. Information that is in a book on the shelf of a library may not be available on the World Wide Web unless someone has put it there.

Since anyone can create a website, search results should be viewed with care. A search can turn up thousands (or millions) of results. Many of the results can be interesting and informative. Some can be someone's opinion or a travelogue. But usually there is only one official website (look at whitehouse.gov and whitehouse.org as examples).

Guessing

Probably the easiest way to find a website is to guess at its address by typing the name or key words of the search. But this will only work a small percentage of the time. Always read the page carefully to be sure you have reached the official site. Some examples:

- | | |
|--------------------------------------|-----------------------|
| • State of California official site. | California.gov |
| • Whitehouse official site. | Whitehouse.gov |
| • Staples office supplies | Staples.com |

Now try your luck with the following:

- The Union newspaper.
- Penney's department store.
- K-Mart department store.
- Walker's office supplies.
- Barnes and Noble book store.
- Google search engine.

Did you happen to notice that some of the official sites have two web addresses?

Google

There are many search engines, as they are called. We will start with Google, the most popular one. To get to Google type **Google.com** in the address bar and press **Enter**. You will see the following page.



Our first search will be for the *Yuba River State Park*. Start by typing *yuba river* in the search box. Unlike addresses, case does not matter. Spelling often does not matter, Google will correct it. As an example type in *yuba rivr* (without the e) and press Enter. Distinct words do have to be separated. If we are lucky, the result we want (the official site) will be close to the top of the list and will look like this:

South Yuba River SP

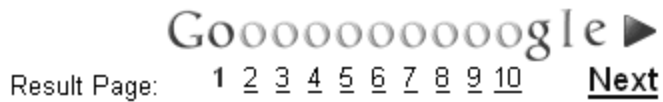
This 20-mile portion of the south fork of the **Yuba River** canyon stretches from Malakoff Diggins ... South **Yuba River** State Park offers many scenic vistas. ...
www.parks.ca.gov/default.asp?page_id=496 - 40k - [Cached](#) - [Similar pages](#)

Click on the top line which is the link to the official site. The last line of the entry shows the address of the official site and the material in the middle is a brief description of the site. By reading the entry you can usually tell if it's the site you want.

Also notice the information below the search box which looks like this:

Results **1 - 10** of about **1,200,000**

This shows there were over a million results that had the words *yuba* and *river* in them. Notice that Google automatically put an *and* between the words you chose so the results will always contain all the words you are using. If you go to the bottom of the page you will see the following diagram which will allow you to select other pages in the search.



Are you amazed that with over a million results, Google put the one you were interested in near the top of the page? This is of course what has made Google very popular. How Google does this is beyond the scope of this course.

If you hadn't been so lucky there are several other things you could have done. You could have put quotation marks around "yuba river". This would force Google to look for the words as a phrase instead of two distinct words. You could also have added other words like *state park* or *California*. Google will exclude common words like *where* and *how*. Another technique Google uses is to exclude words with a minus next to them. There can be no space between the minus sign and the excluded word. Example: If you want to get information about hybrid cars other than Prius you could search for

hybrids - prius. (where the "-" is a minus sign)

For a good description of how to use Google as a search engine go to:

<http://www.google.com/help/basics.html>

For the next search see if you can find information on the new underground tour at the Empire Mine in Grass Valley.

To see how Google uses phrases; try finding the words to your favorite song. As an example find the words to *One Tin Soldier* by searching "one tin soldier" lyrics. If you select the correct result it will actually play the music for you.

Google won't always place the result you want as number one. Try a search for weather and select **Intellicast**. Type your zip code in the box at the top and press **Enter**. You will see the forecast for your area. On the menu bar shown below, put your cursor on **Radar**, then click on **Regional Loop**. This will provide the Doppler radar information as seen on the TV weather reports



Web cams are video cameras all around the world that send their images to a website. For the next search try “*sierra nevada*” web cams. When you find the result try several of them. Did you see Grass Valley and Nevada City on the list?

Google is also handy for checking the meaning of a word. Type the word *pejorative* in the search bar and press **Enter**. Near the top right of the page you will see the following description.

Results 1 - 10 of about 1,730,000 for **pejorative** [definition]. (0.05 seconds)

Click on definition. This will take you to a new search engine called **Answers.com** and you will see the definition. Try finding the definitions of some of the following words recently found in the news media.

- excoriate
- propitious
- equivocal
- maladroit
- certiorari

Search Engines

Although Google is the most popular search engine there are others; they often provide overlapping coverage with Google. Here are some examples.

search.yahoo.com

answers.com

ask.com

search.live.com

Try *yuba river* on **ask.com** and see if you can find the official California Park website.

Search engines have many more features than just searching the web, one that is particularly useful is maps. Go to **www.ask.com** and click on maps on the right sidebar. Fill in your address (or an address of interest) in the box and click **Go**. Try the Street, Aerial and zoom functions. Also, try the directions capability by putting a different address in the **Add location** box. To see how this works use Sacramento in **Add location**.

Another interesting feature is images. In any one of these search engines type *san francisco* and click on **Images**. If you double click on any of the resulting images you can usually get a larger size. Unfortunately we don't have time in this course to look at all of the search engine features but you can try some on your own.

You can find an excellent discussion of how a search engine works and comparisons between engines at:

<http://www.lib.berkeley.edu/TeachingLib/Guides/Internet/SearchEngines.html>


This website is listed as a tutorial but it is a bit technical.

Internet Explorer Search

You can do a search directly from the Internet Explorer browser by entering the search words in the blank provided as shown below.

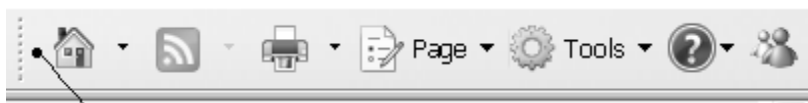


Then press **Enter** or click on .


To remove or change the default search engine click on the down arrow next to . Then click on **Change Search Defaults**. To add a search engine click on the down arrow and click on **Find More Providers**. Follow the instructions at the website that loads.

Tool Bar

In addition to the **Home** and **Print** icons there are some other useful tools.



Tool Bar

Clicking on the **Page** icon will give you options of things you can do with the webpage you are viewing. The **Tools** icon provides a list of some of the browser features that can be changed. These features will be discussed in Lesson Three. The **Question Mark** provides help information including a tour of IE7. RSS feeds, indicated by the symbol  will be discussed in Lesson Four.

Exercises

- Google is a number just like thousand and million are numbers. Can you find the size of a google?
- Try your luck at finding the very first web page on the Internet
- What teams played in the 1952 World Series and who won? What was the score?
- See what turns up when you look for images of: sharks, birds, fish and trees or any thing you might have an interest in.
- Can you find a street map of Singapore?
- Do a search for your name or address.
- Google has been copying complete books and reports. They now have a reference library of millions of documents. Become an expert. Try using **scholar.google.com** to get information on any subject. Suggestion: Try gardening or hybrid car.
- Try to find the website of your Congressional or State representative
- Search for a medical or health issue.
- Find how many Japanese yen can be purchased with \$1000. Or try Euros.
- To see how fast your computer download and upload speed is, try **http://speedtest.net/index.php**
- Going to Sacramento, Lake Tahoe, the bay area, try looking at the traffic cameras at **http://www.kcra.com/traffic/index.html**
- Go to **http://NYTimes.com**. Pick any news story. Double click on any word or term you would like to know more about. Check the result to see where the answers are coming from.

At End of Class

- **Close all open windows.** (click the big **X** in the upper right corner of the screen)
- **Remove your CD.** (close the CD drawer)
- **Turn Off the computer correctly.** (don't use the power button on the computer)

Notes:

Lesson Three

Shopping

The Internet will allow you to shop just like you would if you visited brick and mortar stores except you can get more information, faster. Of course sometimes you need to see and feel things to make a final decision. On the Internet you can:

- Get technical and other information about a product such as autos, computers, and high definition TV.
- Do a price check from various sources.
- Make your final purchase from an Internet-only store like Amazon.com or from a brick and mortar store like Barnes and Noble that also sells over the Internet.

Making a Purchase

As an example we will try to make a purchase of the movie *Gone with the Wind*. You may feel that you know enough about this movie and just want to go ahead with the purchase. However, there is a wealth of information on the Internet you might find interesting if not useful.

First do a search on Google for *Gone with the Wind*. Look for ratings, official site, etc.

Now try Google Video. Look for the original trailer. (Note all videos require a broadband ISP).

Try Yahoo Movies and search for the movie. (Look at the left sidebar in www.yahoo.com).

Yahoo Shopping will provide price comparisons.

In the actual purchase you must decide if you want to make your final purchase in a store or have it shipped to you. Some websites will not charge shipping if you make a minimum purchase. Also, some sites do not charge tax. You should evaluate the trustworthiness of the place of purchase. You can do this through a friend's recommendations, your own experience and website evaluations.

We will use **Amazon.com** as our place of purchase. Yahoo shopping may or may not show them. Other price comparison websites can be found by doing a search on Google for **price comparison**.

When you click on **Buying Info** in the Yahoo shopping site, you are taken to the Amazon.com website for *Gone with the Wind*. Note the extensive list of details and reviews. Also note the availability of copies listed as **new and used**. Click on **Add to Shopping Cart** then **Proceed to Checkout**. You will now be asked for your e-mail

address. This should be your actual address. For the purposes of the class, you may use your computers e-mail address. Amazon.com will not sell e-mail addresses and they will need to communicate with you regarding the status of your order. When you click on **Sign in using our secure server** you will be taken to another form which is necessary to complete your order. The most important point here is that you are now connected on a secure link and all the information you provide is safe. To verify this; note that **http** has changed to **https** and there is a lock at the end of the address bar.

You will continue through this process providing answers to questions and how payment is to be made. You will be given one final chance to review all your information (and change it if necessary) before your order is placed. An e-mail will be sent to you telling you that the order has been received. A later e-mail will be sent when the item is shipped.

In addition to security, which is the most important thing, you may want to read about a sites return policy. This is usually found under the sites **Help** menu.

Travel

There are many sites that will help you with all aspects of your travel reservations such as airline, train, hotel, shuttle, and rental car. Of course you can do an Internet search for information on your destination. We will use a couple of techniques as sample approaches. First let's try a simple flight reservation on Southwest Airline.

1. Go to **http://www.southwest.com**. Click on **Travel Tools** to see what other services this site offers. It is useful to use the reservation site to check on baggage allowances and other questions you might have.
2. Click on **Book Travel**. You are going to plan a trip to Disney World in Orlando, FL. (You can go to the Disney website to get your park tickets). Select *Depart from Sacramento, Arrive in Orlando*, and return *Round Trip*.
3. Select depart and return dates. Use *Anytime* for depart and return times.
4. Select number of travelers.
5. Click on **Select Flight**. You may now change the dates of travel and see new schedules.
6. Pick flights and click on **Price**
7. Click on **Purchase**. You will add your personal data here and payment method. Note that the site has become secure. After entering data and clicking **Purchase** (we will not do this part) you will get your confirmed reservation and your money will be taken.

This is certainly not the only way to make reservations. Another site to try is **http://farechase.yahoo.com/**. Enter your travel information and see if another airline can give you a better deal. Or just go to another airline site (use search). The Yahoo site can help with hotels. Another hotel reservations site is **http://www.hotels.com/**. or try a

search for **hotel Orlando**. With a little patience you can find the price, location and days you desire. Southwest does not allow seat selection, many airlines still do and you can make the selections on line.

To find which terminal you leave from and parking information go to <http://www.sacairports.org>. A search for *Sacramento airport* will find this site. Click on **Airline Links** on the left to find your terminal. Click on **Parking & Ground Transportation** to find parking lots and rates.

More IE7 Features

Shortcuts

Internet Explorer has a number of shortcuts that will allow you to rapidly change your browser functions. These can be found at the following Microsoft website. Go to <http://www.microsoft.com>. Click on **Download and install Internet Explorer 7**. Click on **Get keyboard shortcuts**. Try these shortcuts for more insight as to what the browser will do, for instance **Alt + Home** is another way to get to your home page. Try pressing the **F11** key. Try holding down the **Ctrl** key then press (+) a few times then **Ctrl (-)** a few times.

Tools

The appearance and functionality of IE7 can be changed in many ways using the **Tools** drop down menu.

- The **Pop-up Blocker** should be set to **On**. Certain pop-ups can be allowed by changes in the settings.
- The **Phishing Filter** should also be set to **On** although the effect of this may be to significantly slow down the browser.
- It is best to have **Windows Update** set to update your computer automatically. This will allow security updates to be provided as soon as possible. If you have a dial-up connection you will have to download manually.
- Click on the various **Toolbars** to see how they change the appearance of your browser. You may add or remove at any time.
- Except for the **General** tab, most of the settings in **Internet Options** should be left as they were installed.

Exercises

- Plan a trip to a different location using a different set of websites.
- Try a purchase selection such as a digital camera, new computer or hybrid car.
- Try www.sidestep.com and www.cheaptickets.com for travel information.

At End of Class

- **Close all open windows.** (click the big **X** in the upper right corner of the screen)
- **Remove your CD.** (close the CD drawer)
- **Turn Off the computer correctly.** (don't use the power button on the computer)

Notes:

Lesson Four

Downloads

Care must always be taken when downloading from the Internet. Some websites can put malicious software on your computer. You will receive a cautionary warning when you try to download. As an exercise you will download IE7 and put it on your desktop. For those who don't have IE7 and want to download at home, you will copy it to a disk that you may then use for home installation.

1. Go to **<http://www.microsoft.com>**
2. Click on **Download** and install Internet Explorer 7.
3. Take a tour or watch the video. Video requires wide bandwidth
4. Click on download get Internet Explorer 7 now
5. Follow instructions
6. Check download times
7. Click on **Continue**. You may get some warnings.
8. Click **Save**
9. Select **Desktop**
10. Install from Desktop or copy to disk

RSS Feeds

RSS stands for *Really Simple Syndication*. The **RSS Feed** provides a method for you to connect to websites that are constantly changing. Examples are news, weather, movie schedules and TV programming. When you visit a site that has RSS feeds the RSS icon



will be illuminated. By clicking on the icon you will be shown the feed and given the opportunity to put it in your feed favorites. Try going to **<http://news.yahoo.com/>**. Click on the icon and the list of feeds will be shown. You can add the feed to your favorites by clicking on **Subscribe to this feed**.

Banking

Using your computer and the Internet to do your banking is called *online banking*. It is very popular and safe. You can check your accounts, pay bills, transfer money between accounts, apply for loans and almost anything you can do in a bank except get cash. You can make your transactions paperless or print the information. Banks make your information available for a year or more so you can go back and get old records. Although we say bank, this applies to almost all financial institutions including credit unions.

We will look at online banking demonstrations from two banks, Wells Fargo and Bank of America. You may find similar demonstrations for your bank. A search will find the websites for these banks as: **<https://www.wellsfargo.com>** and

<https://www.bankofamerica.com> Note these sites come up as secure. This is not true of all banks.

On the Wells Fargo home page click on any of the subjects under **Learn More About: Banking** to get information on each of these subjects. For the demo, click on **Online Banking**. On the right side of the page click on **Take a Tour**. You will have your choice of **Broadband** or **Dialup** versions. It's very useful to watch this information. You can sign up from the home page.

The Bank of America site is <https://www.bankofamerica.com>. Additional information can be found at **Products & Services**. For a tour or to sign up Click on **Online Banking**. Click the **View Demo** button for a tour. You will then be given an opportunity to select low or high bandwidth versions.

Security

Overview

The **Big 3 internet threats** are *Hackers*, *Viruses* and *Spyware*. To minimize these threats, you use a Personal Firewall, Anti-Virus and Anti-Spyware software. These are the "must have" Internet security software products. There are many products available both free and for purchase. These can be as individual products, or often as suites that include a firewall, anti-virus and other security and privacy features.

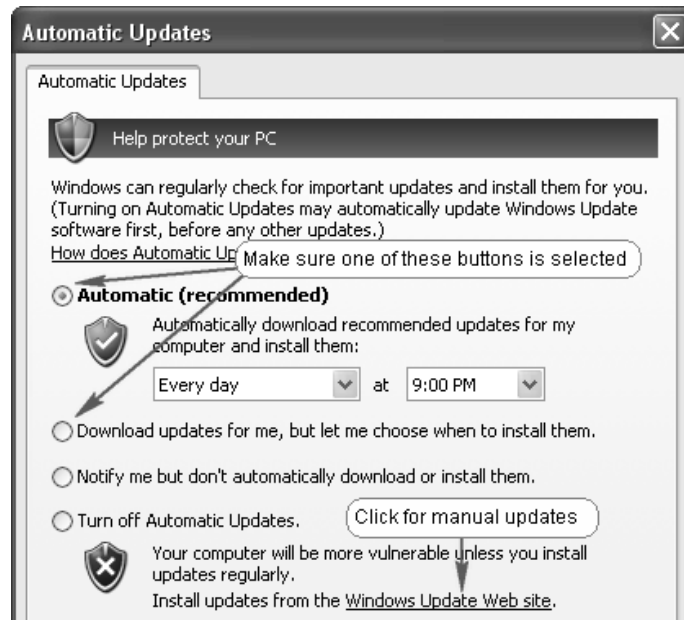
The Internet is just like a large telephone system that connects your computer to millions of other computers that are also on the Internet. To call your phone, people need to know your phone number. Similarly, on the internet, your IP address must be available to be able to send you a web page. So, when you are looking at the home page of Google, gccclc.org, or Yahoo with your Internet browser, those web sites know your IP address to send you their web page. The point is, your computer's Internet address has to be public information. So not only is it available to Google, but also to hackers. To prevent hackers from getting access, you need to keep Windows up-to-date with the latest patches and install a firewall.

For an explanation of common security terms see Appendix II. More information on security can be found at: <http://www.virus.org/articles/computer-viruses/what-is-computer-malware.html> and <http://computer.howstuffworks.com/virus.htm>.

Windows Updates

1. Click **Start** then **Control Panel** and **Automatic Updates**. Make sure that you have NOT selected *Turn Off Automatic Updates*. The recommended setting is *Automatic*.

2. Manually check for updates (good to do occasionally) by clicking the **Windows Update Website** link at the bottom of the window as shown.



Personal firewall.

These have two basic functions, inbound and outbound protection. They protect your system from unwanted scans coming from the Internet and they usually offer outbound control. For instance, an inbound scan can stop a *Trojan horse* reaching your computer. Outbound controls stop a *keylogger* or *spyware* trying to call out from your system.

If you are using Windows XP, it has a built-in firewall that is incoming only. **Click Start then Control Panel and Windows Firewall.** Check that it is switched on. If you decide to use another firewall, be sure to turn off the one in XP. If you decide to try out several firewalls, be sure to fully uninstall one before installing another. ***Running two software firewalls on the same computer may cause problems.***



Anti-Virus

Anti-Virus software scans your hard disk to find and remove viruses. To some extent these products can also scan and may be able to remove worms and Trojan horses. To be effective, you should update the virus definitions using a vendor's automatic update service. Since most infections get into your system via e-mail, be sure that the product you pick includes an e-mail scanner and that it is compatible with your e-mail software. Most web mail services and ISP's providing POP3 e-mail should provide Anti-Virus checking of all your e-mail.

Important Anti-Virus Notes: Running two anti-virus programs on the same computer may cause problems. Be sure to fully uninstall one before installing another. Look for software that has an automatic update feature and that filters incoming and outgoing e-mail. Outdated virus definitions are useless for new viruses.

Anti-Spyware

Anti-Spyware removes commercial *Trojan horses*, *keyloggers*, *redirectors*, etc. often included with or hidden inside of freeware products and services. Unlike personal firewall and anti-virus software, it is OK to use two or more anti-spyware programs at the same time. In fact, many experts recommend it because no existing product can remove 100% of spyware currently in circulation. Three commonly used anti-spyware programs can be obtained free from the following sites:

http://www.lavasoftusa.com/products/ad_aware_free.php (Ad-Aware)

<http://www.safer-networking.org/en/download/index.html> (Spybot)

<http://www.microsoft.com/athome/security/spyware/software/default.msp> (Windows Defender)

Note: Because of a special program used on the Learning Center computers that restores the computers to a pre-defined state on every reboot - we don't need or use Anti-Virus or Anti-Spyware programs.

Other Internet Functions

The internet is used for many things. Here are a few of the more common ones.

Blog

A Blog is short for Web Log and is like a diary that is kept on the Internet for all to see. It can include your own text, comments from others, pictures, and videos. Many people keep Blogs for trips they have taken and thus they can be a good source of information if you plan to visit the same location.

1. To search for a Blog go to Google.

2. Click on **more** then **Blogs**.
3. Try doing a search for Paris France. If you just do a search for Paris you may end up with a ton of blogs on Paris Hilton. If you like music try a search for Mozart.

There are many places where you can set up your blog. Some of these are Google, Yahoo and Wordpress or just do a search for blogs.

Videos

Videos are very popular on the Internet and **youtube.com** is one of the most common sites to see them. On the You Tube home page you can do a search or select from any of the current favorites. You might try entering:

http://youtube.com/watch?v=gXagKiuaL_4 in the **address bar**. The first part is very cute.

Groups

Groups, or sometimes called discussion groups, are places on the Internet where you can communicate with others about a topic you might be interested in (actually there really isn't any requirement that you be interested in the topic). You can usually read comments without being a member but most groups require you to register to post comments.

1. To view a sample group discussion go to **yahoo.com**
2. Click on **Groups** in the left margin.
3. Type in **Computers** in the search bar.
4. Move to the bottom of the page to view the selections. For some of the older selections you will see responses.

Chat

A chat site will let you carry on a text conversation with one or more people. Some chat sites allow the use of video cameras. Each person in the "chat room" must be using the same provider. Some of the providers are Yahoo's Messenger, Google's Gmail and MSN messenger.

Exercise

- Internet Explorer 7 has a large number of add-on features. To view and add them go to **http://www.windowmarketplace.com**. Then click on **IE Add-ons**.

At End of Class

- **Close all open windows.** (click the big **X** in the upper right corner of the screen)
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Notes:

Appendix I

Internet Timeline

- 1957: The United States Department of Defense formed a small agency called ARPA (Advanced Research Projects Agency) to develop military science and technology.
- 1961-1965: The Massachusetts Institute of Technology (MIT) started to research sharing information in small, phone-linked networks. ARPA is one of their main sponsors.
- 1966: The first ARPANET plan is unveiled by Larry Roberts of MIT. Packet switching technology is getting off the ground, and small university networks are beginning to be developed.
- 1969: The Department of Defense commissions the fledgling ARPAnet for network research.
The first official network nodes were UCLA, Stanford Research Institute, UCSB, and the University of Utah. The first node to node message was sent from UCLA to SRI.
- 1971: more nodes join the network, bringing the total to 15. These new nodes include Harvard and NASA.
- 1973: ARPAnet goes global when the University College of London and Norway's Royal Radar Establishment join up.
- 1974: Network intercommunication is becoming more sophisticated; data is now transmitted more quickly and efficiently with the design of TCP (Transmission Control Program).
- 1976: Unix is developed at AT&T; Queen Elizabeth sends out her first e-mail message.
- 1979: USENET, the mother of all networked discussion groups, is developed.
- 1982: Internet technology protocols are developed, commonly known as TCP/IP (Transmission Control Protocol and Internet Protocol). This leads to one of the first definitions of an "internet" being a connected set of networks.
- 1984: Number of hosts is now up to 1000, with more being added every day.
- 1985: The first registered domain is Symbolics.com.
- 1987: Number of hosts breaks the 10,000 mark.
- 1988: First large-scale Internet worm affects thousands of Internet hosts.
- 1989: Tim Berners-Lee develops the World Wide Web.
- 1993: The World Wide Web's annual growth is now at a staggering 341,634%.
- 1994: ARPAnet celebrates 25th anniversary.
- 1995-1997: RealAudio introduces Internet streaming technology, dial-up systems emerge (America Online, Compuserve), the Internet backbone continues to be

strengthened with the addition of MCI, Microsoft and Netscape fight for WWW browser supremacy, and there are now more than 70,000 mailing lists.

- 1998-present: The Internet continues to experience staggering growth. More people use the Internet to get connected to others, find information, conduct business, and share information than ever before in history.

Appendix II

Some Common Security Terms

Malware. A term given to all forms of Computer Software designed specifically to damage or disrupt a computer system.

Computer Virus. A program written to run on a victim computer without the permission or knowledge of the user. A virus must meet two criteria:

The 'virus' must be able to execute itself. The virus will often place its own code in the path of execution of another program.

The 'virus' must be able to replicate itself. For example, it may replace other executable files with a copy of a virus infected file. Viruses can infect desktop computers and network servers alike.

Viruses can be programmed to perform many actions, for instance some viruses have destructive payloads such as deleting files or formatting of hard disks. Some viruses do not have any destructive payloads, they quite simply replicate themselves, some make themselves known by displaying a message or playing audio. Even these benign viruses can cause problems for the computer user. This is simply because they will by their nature alter elements of programs in order to replicate that in some environments could cause system stability problems. In addition many viruses contain bugs, which could result in system stability problems and data loss.

Trojan Horse. Trojan Horses are impostors; they are executable files that claim to be something desirable but, in fact, are malicious. A very important distinction from true viruses is that they do not replicate themselves, as viruses do. Trojans do contain malicious code, that, when triggered, cause loss, or even theft of data. In order for a Trojan Horse to spread, you must, in effect, invite one onto a system for example, by opening an e-mail attachment.

Worm. A computer program that has the ability to copy itself from machine to machine. Worms use up computer time and network bandwidth when they are replicating, and they often have some sort of evil intent. Worms normally move around and infect other machines through computer networks. Using a network, a worm can expand from a single copy incredibly quickly. A worm usually exploits some sort of security hole in a piece of software or the operating system

Keylogger. A computer program that captures the keystrokes of a computer user and stores them. Modern keyloggers can store additional information, such as images of the user's screen. Most malicious keyloggers send this data to a third party remotely (such as via e-mail).

Spyware. Computer software that is installed surreptitiously on a personal computer to intercept or take partial control over the user's interaction with the computer, without the user's informed consent. While the term *spyware* suggests software that secretly monitors the user's behavior, the functions of spyware extend well beyond simple monitoring. Spyware programs can collect various types of personal information, but can also interfere with user control of the computer in other ways, such as installing additional software, redirecting Web browser activity, or diverting advertising revenue to a third party.

Botnet. A botnet connects a number of Internet computers that, although their owners are unaware of it, have been set up to forward transmissions (including spam or viruses) to other computers on the Internet. Any such computer is referred to as a zombie - in effect, a computer "robot" or "bot" that serves the wishes of some master spam or virus originator. Most computers compromised in this way are home-based. According to several sources botnets currently pose the biggest threat to the Internet.

Phishing. The act of sending an e-mail to a user falsely claiming to be an established legitimate enterprise in an attempt to scam the user into surrendering private information that will be used for identity theft.. The e-mail directs the user to visit a website where they are asked to update personal information, such as passwords and credit card, social security, and bank account numbers, that the legitimate organization already has. The website, however, is bogus and set up only to steal the user's information. In 2006, 3.5 million Americans fell victim to phishing scams and lost a total of \$2.8 billion.

Rootkit. A general description of a set of programs which work to subvert control of an operating system from its legitimate operators. Usually, a rootkit will obscure its installation and attempt to prevent its removal through a subversion of standard system security. Rootkits have their origin in benign applications, but in recent years have been used increasingly by malware to help intruders maintain access to systems while avoiding detection.

Browser Redirect. A browser redirect is a form of browser hijacking. It may arrive in the form of a flood of obscene pop-up windows assaulting you after a mistyped URL, or malicious code taking over your browser completely.