

Internet Workshop



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Course Summary

This **1-hour course** introduces participants to Internet concepts and terminology as well as how search engines work and ways of evaluating Internet resources as well as use websites for SLIS students.

Learning Objectives

At the end of this course, participants will be able to:

- Define Internet terminology (URL, HTTP, Server, Client, Domain Name, IP address Web Browser, List server, bandwidth, FTP etc.)
- Use Internet Explorer and Firefox features, Favorites
- Evaluating Search engines and search results
- Set a default home page and take off popup blockers
- Check for browser updates, versions.
- Install browser extensions and plug-ins to play You Tube videos etc.
- Use Websites for SLIS students

Topic 1 Internet Concepts

Bandwidth: capacity of a line to carry data.

- Many individuals have a 56K modem. This means they can receive or send 56 kilo bytes of data per second over a common telephone wire.
- Some individuals and business have a T1 line which means they can send or receive 1.44 mega bytes of data per second over a fiber optic cable.
- A few organizations have upgraded to a T3 line so they can transmit or receive 45 mega bytes of data per second.

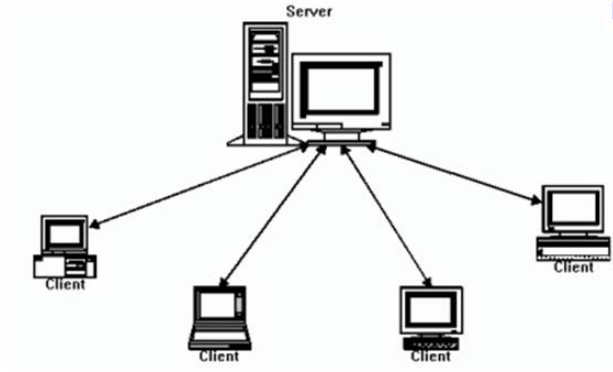
Browsers: Firefox 3.6 and Internet Explorer 8

- provide an interface to interpret and display the data that is transferred into your computer
- Firefox provides a web page editor and many features, such as bookmarks and plug ins for audio and video but is losing market share to IE because it is difficult to print web pages and several other incompatibilities.
- Internet Explorer supports sound and video as well as "hot" spots on web graphics. It renders web printouts accurately.

Bookmarks: Firefox and Internet Explorer store web addresses you save and recall them when you request them.

- In Firefox, click on Bookmarks >> Bookmark this page.
- In Internet Explorer, click on Favorites>>Add to favorites

Client- Server: describes the relationship between two computer programs in which one computer program, the client makes a request of the other computer program the server. The server responds with the requested item. On a network the server can respond to any number of connected clients.



FTP: file transfer protocol.

- This is a way to transfer files from a remote computer to a local computer and vice versa over the Internet.

Anonymous FTP: No password is required

- A server will give files without requiring that you use a password or give information.

TCP/IP: Transmission Communications Protocol/ Internet Protocol

- This language allows unlike computers to talk to one another. The TCP part breaks down raw data in "packets" at one end and reassembling everything at the other end.
- The IP part sends the data to the correct location using the unique number assigned to every networked workstation in the world, for example the lab PC 13 is 136.242.10.2

Internet providers: Vendors who allows you to use their servers. You need a commercial Internet service provider or use a university account to:

- send your email
- host your web pages
- allow you to connect to remote computers

Web address: hypertext transfer protocol (http) allows data to be transferred from the server to the client.

READING WEB ADDRESSES

Let's look at the URL (uniform resource locator) for the lab:

<http://slis.cua.edu/tech/index.cfm>

Here's what it all means:

- **"http"** means hypertext transfer protocol and refers to the format used to transfer and deal with information
- **"slis"** stands for the section of the host server that supports text, graphics, sound files, etc. (It is not an essential part of the address, and some sites choose not to use it)
- **"cua"** is the second-level domain name and usually designates the server's location, in this case Catholic University of America
- **"edu"** is the top-level domain name (see below)
- **"tech"** is the directory name
- **"index"** is the file name

Only a few top-level domains are currently recognized, but this is changing. Here is a list of the domains that have been in operation for the past several years and are generally accepted by all:

.edu — educational site (usually a university or college)

.com — commercial business site

.gov — U.S. governmental/non-military site

.mil — U.S. military sites and agencies

.net — networks, internet service providers, organizations

.org — U.S. non-profit organizations and others

Topic 2 How Search Engines Work

To find information on the billions of Web pages that exist, search engines do not search the entire internet itself because this would be too time consuming. They search databases of information about the Internet, indexes of terms found in the Web pages.

Special software programs, called spiders or crawlers or robots, automate repetitive tasks at a speed impossible for humans to reproduce and are used by search engines to traverse the Internet, building lists or indexes of the words found on Web sites and noting their locations on the Web site. They also record links, link citations, and link anchor text to help determine the

topic of the page. Links are also stored to help search engines discover new documents to crawl later.

Web crawling- the process of building indexes. In order to build and maintain a useful index, a search engine's spiders must look at a huge number of pages, so they encode or compress the data to save space, and then store the data for users to access.

To make sure its search results are up-to-date, the spider returns periodically to sites to check for any information that has changed or been added. The frequency with which this happens is determined by the administrators of the search engine. If the index hasn't been updated since a Web page has been removed, renamed or relocated the search engine treats the page as an active link, even though it is a dead link. That is why you will get a 404 page not found message.

To return the most meaningful results, an engine may store the number of times the word appears on the page or assign a weight to each word, with increasing values the closer the word appears to the top of the page. Even whether the word was capitalized and its font size may also be calculated in assigning a weight.

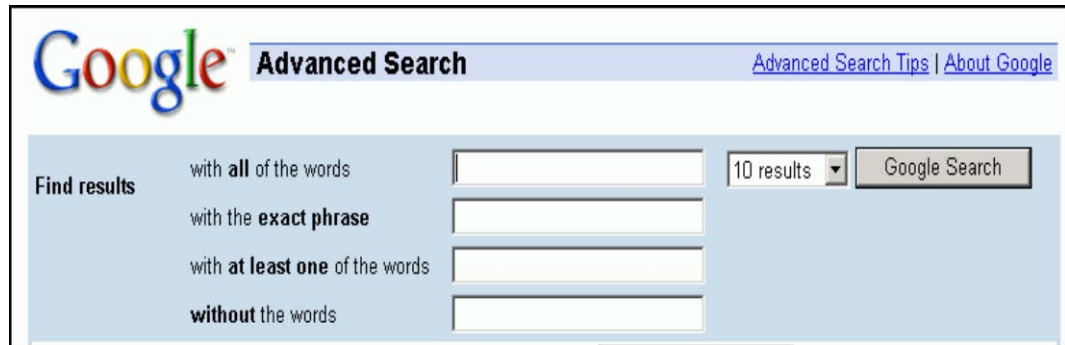
Some search engines, such as Google, give additional weight to words occurring in the title, subtitles, meta-tags, sub-headings and links. Other positions of relative importance are noted for special consideration. Google tracks only the significant words on a page.

Other systems give special weight to meta-tags, which are an unseen section of code in the Web page, which allow the owner of the page to specify key words and concepts under which the page will be indexed. There is a danger that an owner can embed devious meta-tags to attract people to a site. Now search engines protect against this by correlating meta tags with page content, rejecting meta tags that don't match the words on the page.

Topic 3 Advanced Search Pages of the “Big Three”

Displayed next are screen captures of the Advanced Search pages in Yahoo!, Google, and Live Search. To access the advanced search, on the Yahoo! Search and Live Search home pages, click on “Options” to the right of the search box, then on the “Advanced Search” in the resulting drop-down box. From the Google homepage, click on the “Advanced Search” link to the right of the search box.

Note Boolean options



Google Advanced Search [Advanced Search Tips](#) | [About Google](#)

Find results with **all** of the words 10 results

with the **exact phrase**

with **at least one** of the words

without the words

Note Boolean options



Live Search | MSN | Windows Live

Live Search



Advanced search

Search terms | [Site/Domain](#) | [Country/Region](#) | [Language](#)

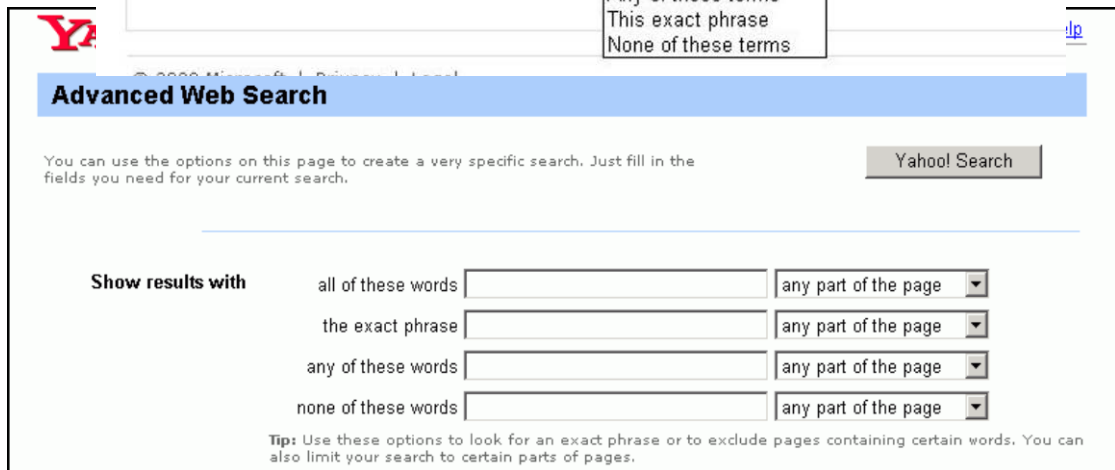
Look for results that meet the following criteria:

All of these terms

You can add words or phrases one at a time. [Get more search options](#)

- All of these terms
- Any of these terms
- This exact phrase
- None of these terms

Note Boolean options



Advanced Web Search

You can use the options on this page to create a very specific search. Just fill in the fields you need for your current search.

Show results with

all of these words	<input type="text"/>	any part of the page <input type="button" value="v"/>
the exact phrase	<input type="text"/>	any part of the page <input type="button" value="v"/>
any of these words	<input type="text"/>	any part of the page <input type="button" value="v"/>
none of these words	<input type="text"/>	any part of the page <input type="button" value="v"/>

Tip: Use these options to look for an exact phrase or to exclude pages containing certain words. You can also limit your search to certain parts of pages.

Topic 4 Advanced Search: Fielded Search

In Yahoo!, the advanced Web search option allows you to use a Boolean search in conjunction with confining your search to certain sections of the page: in any part of the page, only in the title or the URL of the page; Google, in addition to the title and URL, allows you to also specify that you want to find your search terms anywhere in the page, in the text of the page, or in links to the page. For example, to focus your search on web pages dealing with snow skiing, you could specify that *skiing* NOT *water* be found in the text of the page.

Yahoo!

Show results with			
all of these words	<input type="text"/>	any part of the page	▼
the exact phrase	<input type="text"/>	any part of the page	▼
any of these words	<input type="text"/>	in the title of the page	▼
none of these words	<input type="text"/>	in the URL of the page	▼
		any part of the page	▼

Tip: Use these options to look for an exact phrase or to exclude pages containing certain word can also limit your search to certain parts of pages.

Topic 5 Advanced Search: Format Search

Yahoo! and Google allow you to limit your search to documents in certain formats – for example, only PDF files, or only Excel. Google also allows you to exclude documents in certain formats. These screen captures show the formats available.

Yahoo! Format Search

Formats available include: Web pages (.html), Adobe Acrobat (.pdf), Excel (.xls), PowerPoint

Google Advanced Search [Advanced Search Tips](#) | [About Google](#)

Find results with **all** of the words 10 results ▼

with the **exact phrase**

with **at least one** of the words

without the words

Language Return pages written in ▼

File Format return results of the file format ▼

Date Return web pages updated in the ▼

Numeric Range Return web pages containing numbers between and

Occurrences Return results where my terms occur ▼

Domain return results from the site or domain

(.ppt), MS Word (.doc), RSS / XML (.xml) and text (.txt).

Language	Return pages written in	any language
Region	Search pages located in:	any region
File Format	<input type="checkbox"/> Only return results of the file format	any format
Date	Return web pages first seen in the	any format
Numeric Range	Return web pages containing numbers between <input type="text"/> and <input type="text"/>	Adobe Acrobat PDF (.pdf)
Occurrences	Return results where my terms occur	Adobe Postscript (.ps)
Domain	<input type="checkbox"/> Only return results from the site or domain	Autodesk DWF (.dwf)
Usage Rights	Return results that are	Google Earth KML (.kml)
SafeSearch	<input checked="" type="radio"/> No filtering <input type="radio"/> Filter using SafeSearch	Google Earth KMZ (.kmz)
		Microsoft Excel (.xls)
		Microsoft Powerpoint (.ppt)
		Microsoft Word (.doc)
		Rich Text Format (.rtf)
		Shockwave Flash (.swf)

Google Format Search

File Format	<input checked="" type="checkbox"/> Don't return results of the file format	any format
Date	Return web pages first seen in the	any format
Numeric Range	Return web pages containing numbers between <input type="text"/> and <input type="text"/>	Adobe Acrobat PDF (.pdf)
Occurrences	Return results where my terms occur	Adobe Postscript (.ps)
Domain	<input type="checkbox"/> Only return results from the site or domain	Autodesk DWF (.dwf)
Usage Rights	Return results that are	Google Earth KML (.kml)
SafeSearch	<input checked="" type="radio"/> No filtering <input type="radio"/> Filter using SafeSearch	Google Earth KMZ (.kmz)
		Microsoft Excel (.xls)
		Microsoft Powerpoint (.ppt)
		Microsoft Word (.doc)
		Rich Text Format (.rtf)
		Shockwave Flash (.swf)

Google choices include a rich variety of formats: Adobe Acrobat (.pdf), Adobe Postscript (.ps), Autodesk (.dwf), Google Earth (.kml and .kmz), Excel (.xls) Powerpoint, (.ppt), MS Word (.doc), Rich Text Format, and Shockwave Flash (.swf). Google also allows you to **exclude** any of these formats from your search results.

Topic 6 Other Advanced Search Options

There are many other advanced search options available in the “Big Three,” among them are confining your search to:

1. A specific domain (e.g., .mil, .gov, .com, .org, .edu)
2. Pages modified within a certain time period (e.g., last week, last 3 months, last 6 months, last year, last two years)
3. Pages from a certain country or region
4. Pages in a certain language
5. Pages that exclude adult-content Web sites
6. Pages containing numbers in a specified numeric range
7. Pages that are similar to a page

- 8 Pages that link to a page
- 9 Pages on a certain topic. Topic-specific searches in Google include:
 Google Book
 Google Scholar
 Google News Archive
 U.S. Government sites
 A specific university's site
- 10 Pages relating to computer technologies:
 Apple Macintosh
 Microsoft
 BSD Unix
 Linux
 Computer code that is public (open source code)
11. Subscription sites (if your organization has a subscription: e.g., Wall Street Journal, Lexis-Nexis, Factiva)
12. Pages that have specific usage rights (not filtered by license; free to use and share non-commercially; free to use and share, even commercially; free to use, share, and modify, etc.)

Topic 7 Critical Importance of Web Site Evaluation

When you find web sites for your information requirements, it is critically important not to take what you see on the web at face value, but rather apply some evaluation techniques to insure that you are not scammed, spoofed, fleeced, psished, spammed, set-up, taken-in, spied on, spread a virus, or get any of a host of other maladies. Additionally, with the millions of web pages that can be retrieved on general search terms, you may waste a lot of time with useless information.

Getting Ready to Search

Before you start to search for web sites, it is very helpful to answer a few quick questions to focus your search strategy.

- What is the scope of the search?
 Sometimes you may need only a quick fact, but other times you may need in-depth analysis of the topic.
- Do you need current information or details from the past?
 Search engines crawl websites for new information that is added to the index, which can take several days. Sometimes the pages that are retrieved on your search terms can be several days out of date.
- Who is the patron? Is this research for your job?
- What will the answer include?

Topic 8 Developing Evaluation Criteria

For you home and work-related research on the World Wide Web, it is very important to have a checklist that you can quickly apply as soon as the site is displayed on your screen. Your checklist may vary according to your interests and needs however there are some questions to keep in mind.

Authority:

- Can you tell who the author or sponsor of the site is?
- Can you determine what the qualifications of the author/s are?
- Is the source trustworthy?
- Does the site contain fact or opinion?
- Is the information accurate?
- Can you verify the information with another site?
- Does the site provide contact information?

Currency:

- When was the site last updated?
- Is currency important to this topic?

Value:

- What is the scope of the site?
- What is the purpose of the site?
- What is the site worth to you?
- Is the audience clearly indicated?

Navigation:

- Is the site searchable and/or can you browse?

- Does the site contain original information or just links to other sites?
- Can you locate content within a few clicks?
- How many links lead to a dead-end?
- Do you have to scroll side-to-side as well as up and down?

Cost and Accessibility:

- Is the site available on a consistent basis?
- Is response time fast?
- Is there a fee to use the site? Can others still have access to part of the site?
- Is text available for sound files?
- Are images given ALT tags for screen readers? (An image has an ALT tag when you can roll your mouse over it and text displays about the content of the image.)

Topic 9 Applying Evaluation Criteria

Let's apply some evaluation criteria to websites on various topics to assess their strengths and weaknesses for our work.

Authority:

Who are the authors of the Web page, or who is responsible for it? What gives them their authority or expertise to write? Try to check for their credentials.

Exercise: A patron wants information on growing tomatoes for a small fresh produce business

Enter URL: http://www.rittenhouse.ca/hortmag/Bruce/Growing_Tomatoes.asp Can you determine the qualifications of the author? _____

Sponsorship:

Some websites on a specific issue are 'sponsored' or hosted by other, more general websites. You can sometimes find out information about a website by examining its sponsoring site. Here are some common ways to check the website's sponsorship.

1. Check links in the '**About this site**' page or at the site's header or footer. You will often be taken to the organization which sponsors the website.
2. Edit the web page's URL to find the 'root level' of the website. Enter URL: <http://memory.loc.gov/ammem/gmdhtml/rrhtml/rrmapRailro01.html> Take off the file name from the end of the URL "rrmapRailro01.html." Who sponsors this page?

3. The [Whois database](http://www.networksolutions.com/whois/index.jsp) (<http://www.networksolutions.com/whois/index.jsp>) allows you to search for a domain name and find out information about the organization or individual that manages the website.

Exercise:

Enter URL: <http://www.mortgage.com> . Who sponsors this site and what is their contact information?

Enter the URL as **mortgage.com** in the Whois database.

Who sponsors the site and what is their contact information? _____

Objectivity:

What is the author's point of view? What is the purpose of the site?

Exercise : A researcher needs information on global warming.

Enter URL: <http://www.ourcivilisation.com/aginatur/iceage.htm>

What perspective does this author have on the subject of global warming? What is his purpose?

Currency:

When was the information on the page originally written? Has the site been updated for new information? Is the latest information important to this research?

Exercise: A librarian wants information about LC's surplus book program

Enter URL: <http://www.loc.gov/acq/surplus.html>

When was this page created/last updated? _____

What issues might arise with this page? _____

Coverage:

Does this site address the topic you are researching? Is the information basic and cursory or detailed and scholarly?

Exercise: A patron entered a question about ways to display the flag in a school.

Enter URL: http://www.fotw.net/flags/us_days.html

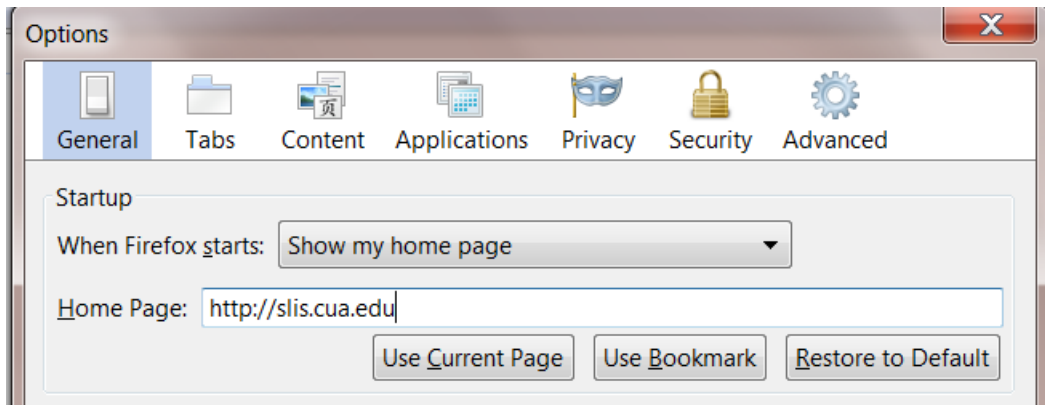
Does this site provide the answer the patron needed? Why or Why not? _____

Evaluation Tips:

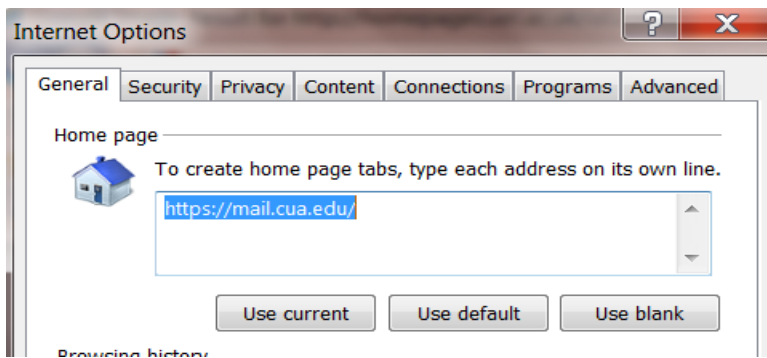
- Always evaluate who is hosting a website and/or authored it. Notice if they have a particular bias in providing information. Does the resource have a reputable organization or expert behind it?
- Analyze the information to determine if it is factual or opinionated.
- Determine the currency of the information and relate the timeliness to research needed.
- Evaluate the scope of the site in relation to the answered needed. Is the information available in other formats?
- In the URL, a tilde ~ usually indicates a personal web directory rather than being part of the organization's official web site.

Topic 10 Setting a Default Home Page

Firefox- click Tools>>Options and enter your desired home page.



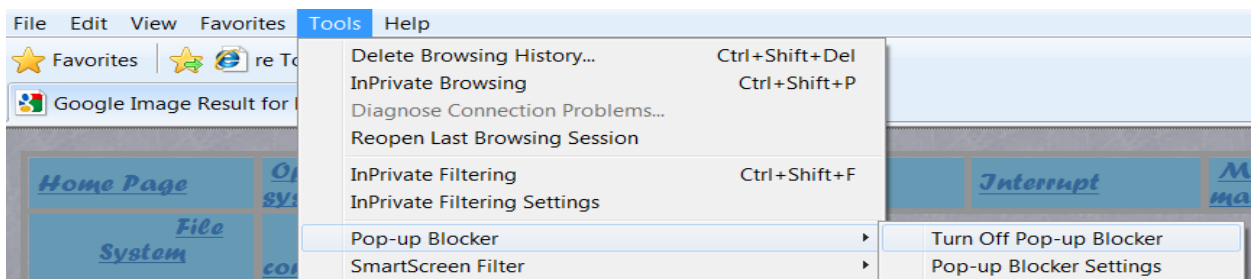
Internet Explorer- click Tools>>Internet Options and enter your desired home page.



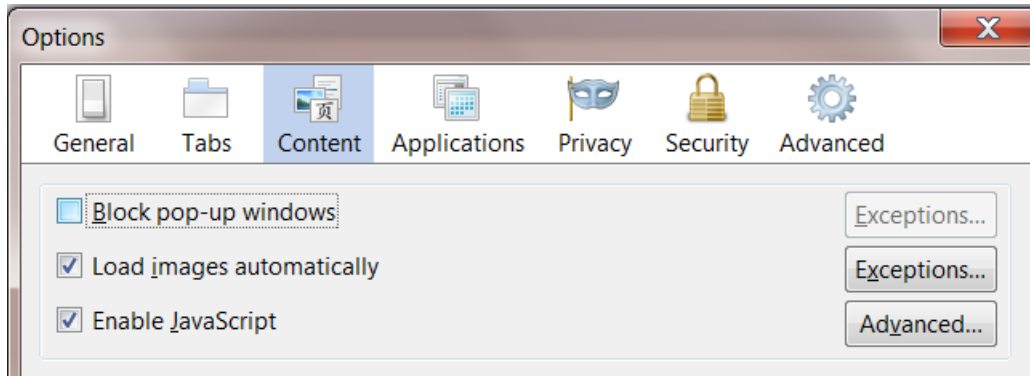
Topic 11 Taking Off Popup Blockers

You will need to remove Pop up Blockers to run many online courses and database systems such as Cataloger's Desktop.

In Internet Explorer click>>Tools >>Pop-up Blocker >>Turn Off Pop-up Blocker.

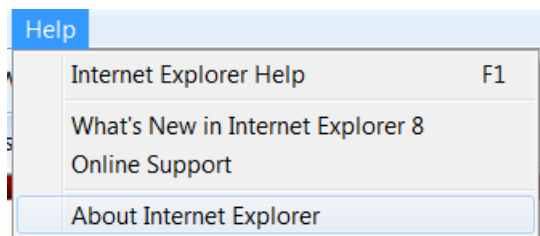


In Firefox, click Tools>>Options>>General and Unblock pop-up windows.

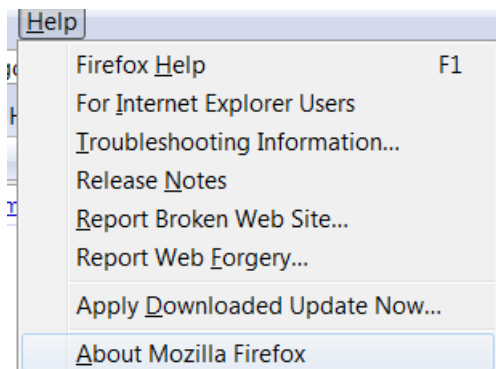


Topic 12 Check for Browser Updates, Versions

In Internet Explorer, click Help>>About Internet Explorer. The current version is IE 8 and you should download and install the latest version to run your library science programs.



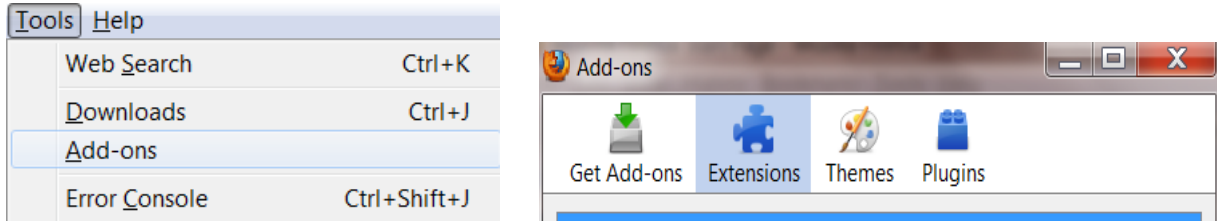
In Firefox, click Help>>About Firefox. The current version is 3.6.12 and you should download and install the latest version to run your library science programs.



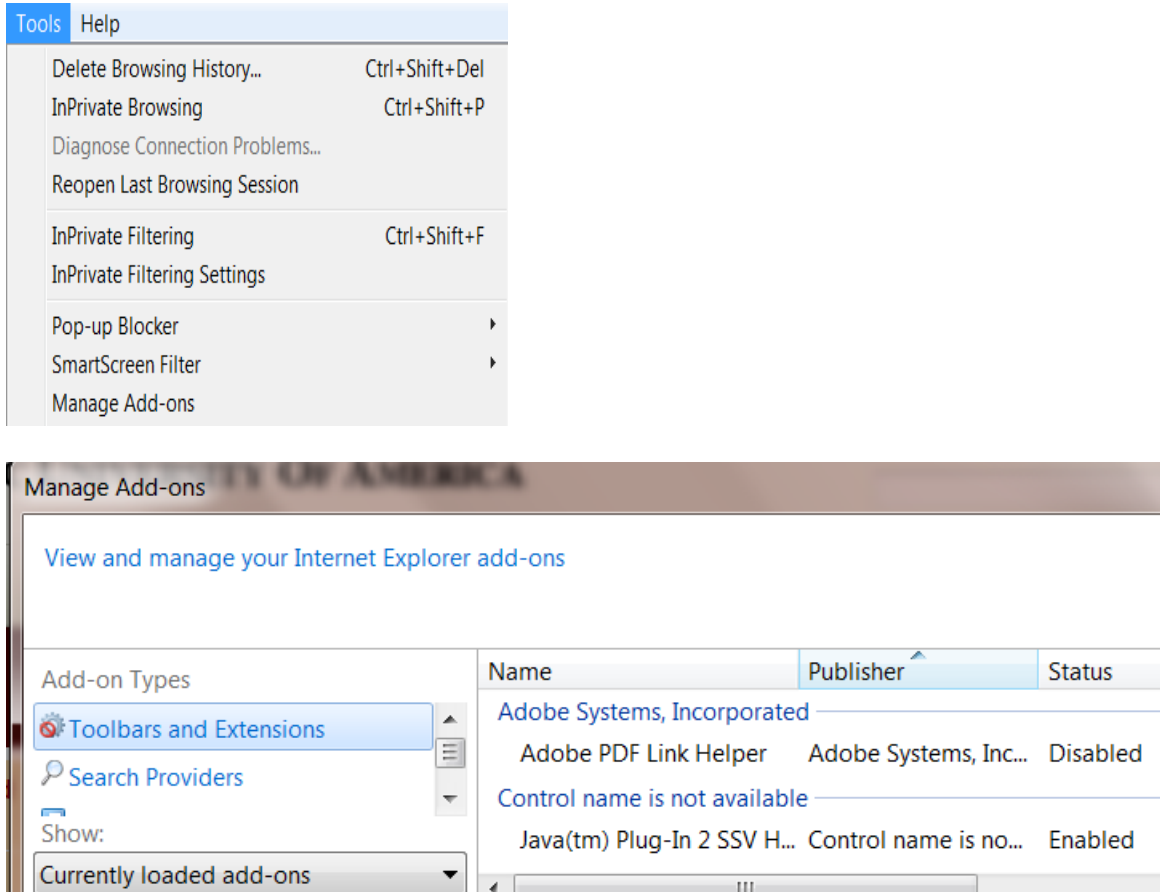
Topic 13 Installing Add-ons or Plugins to play videos etc.

In order to play videos from sites such as YouTube you may need to install Plugins or Add-ons which are small programs to enable features in a major program.

In Firefox, click Tools>>Add-ons and Get Add-ons

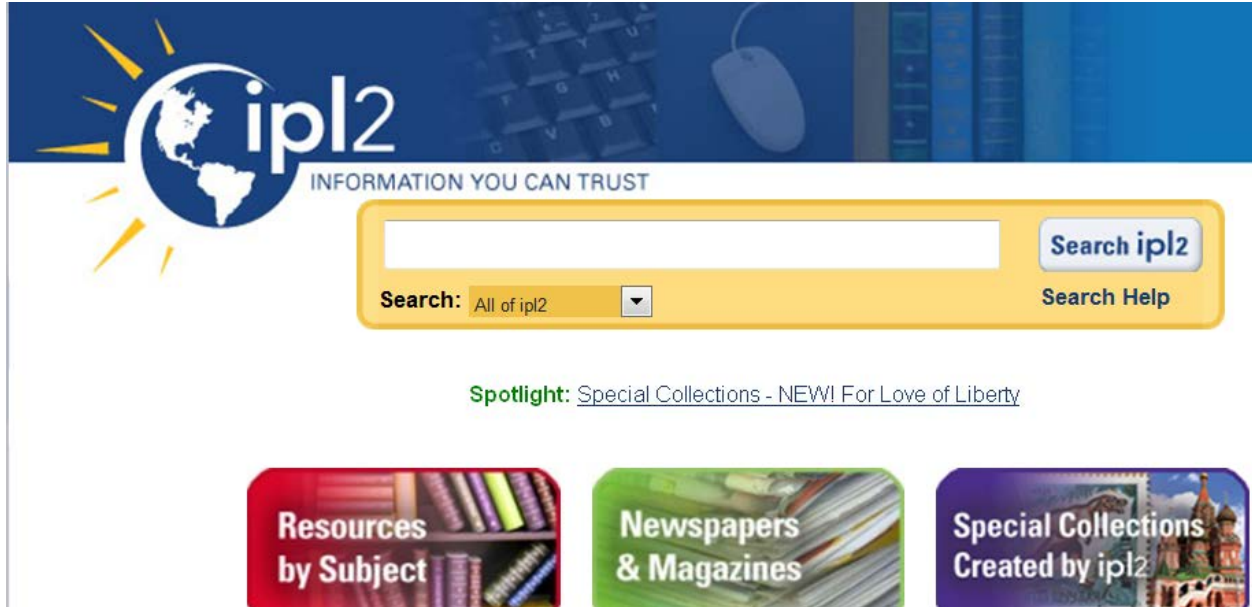


In Internet Explorer, click Tools>>Manage Add-ons and usually there will be a Java update that is needed.



Topic 14 Internet Web Sites for SLIS Students

Internet Public Library: <http://www.ipl.org> . Great reference resources and well organized collections. Information has been evaluated by librarians.



Government Information: <http://usa.gov> Government Information Portal



Switchboard: <http://www.switchboard.com> Find a business or person.



Find a Business Find a Person Find a Car Search the Web

Your Phone Directory for Yellow Pages and White Pages

Business Name or Category [Choose a Category](#)

Location

Search

[Help](#)

Metacrawler: It searches the search engines. <http://www.metacrawler.com>



Web | [Images](#) | [Video](#) | [News](#) | [Yellow Pages](#) | [White Pages](#)

[Advanced Search](#) | [Preferences](#)