

Computer Literacy

CSC 1100

Lecture 3

Internet and World Wide Web

Topics

- Internet basics
- Internet data
- Internet service providers
- Web browsers
- Internet search methods
- URLs
- Hyperlinks
- Search engines and subject directories
- Internet capabilities

Internet

What is internet?

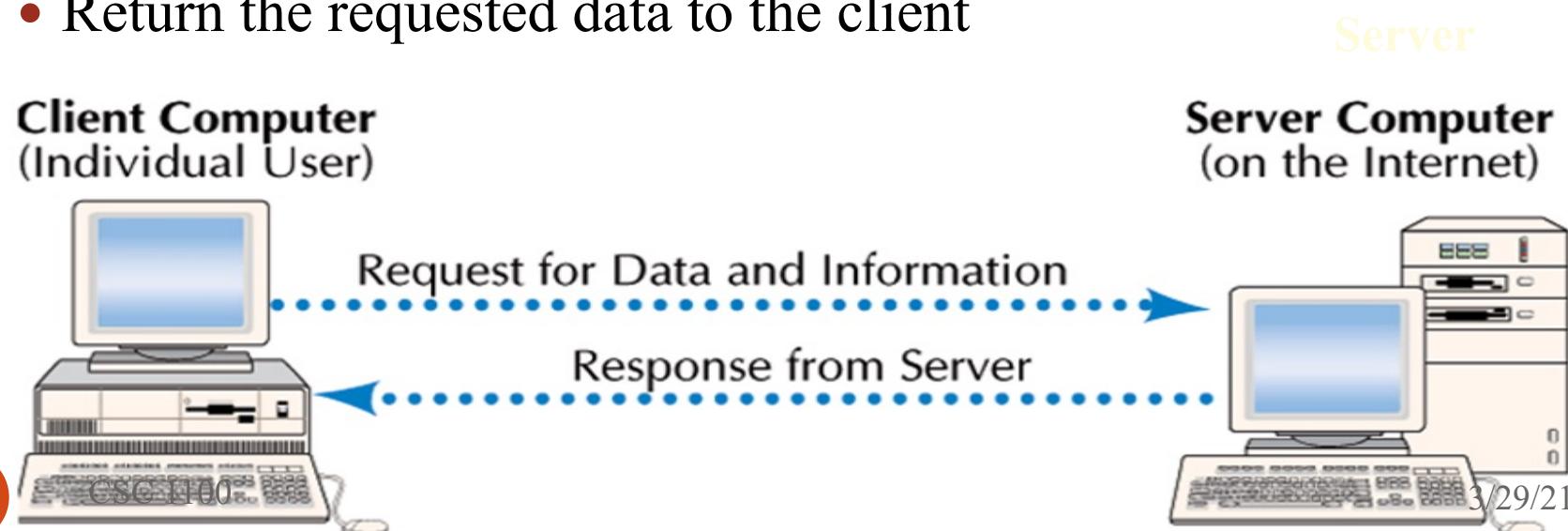
- **Internet** A communication network that is itself a connection of many other networks
- A Network can consist of two or more computers connected together by a medium such that they are able to share resources or information.
- Resources include files, Printers, Hard-drives or CPU(Central Processing Unit).

The Web vs. The Internet

- The World Wide Web (WWW): Is a collection of internet resources (such as FTP, telnet), hyperlinked text, audio, and video files, and remote sites that can be accessed and searched by browsers based on standards such as HTTP and TCP/IP.
 - It is part of the Internet
 - Hypertext Markup Language (HTML) is used to create Web pages
 - Hyperlinks connect Web pages to each other
 - Hypertext Transfer Protocol-HTTP is a web's application layer protocol
- Internet
 - Massive network of networks.
 - Use various protocols such as
 - SMTP: Simple Mail Transfer Protocol
 - FTP: File Transfer Protocol

Client and Server

- Client computer:
 - Users connect to the Internet
 - Request data and Web pages
- Server computers
 - Store Web pages and data
 - Return the requested data to the client



IP address

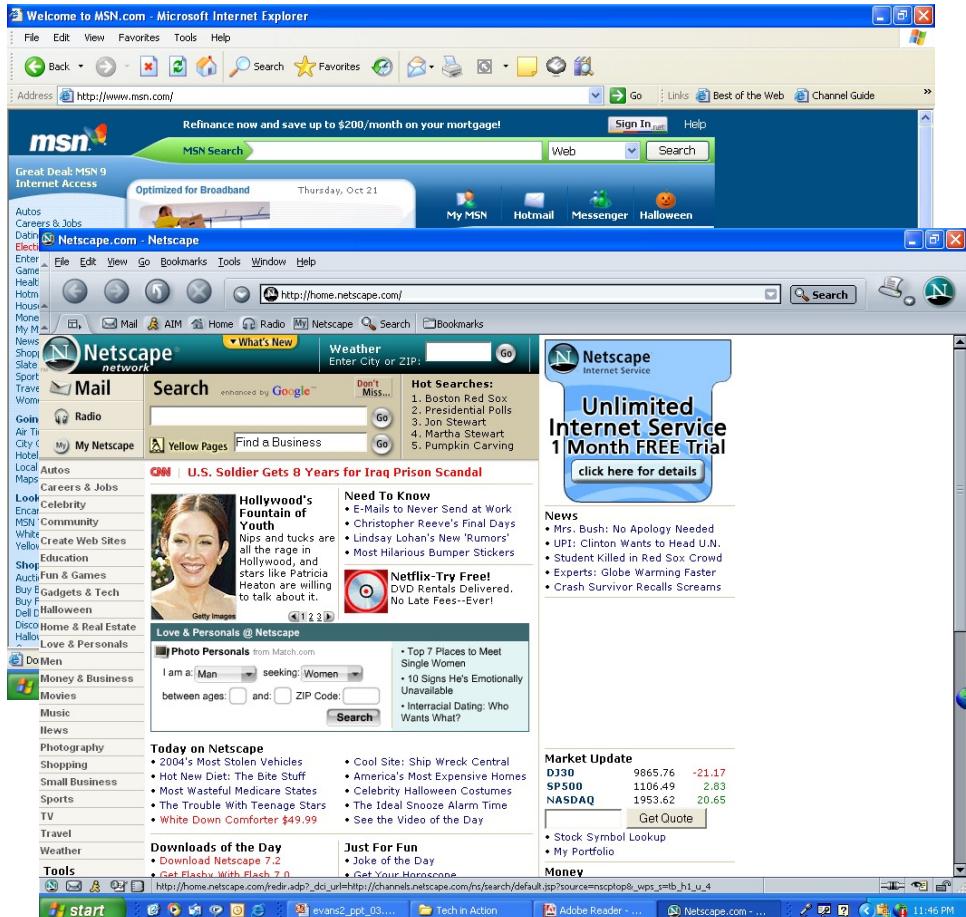
- Internet Protocol (IP) address: uniquely identifies a computer on the network.
- It is a 32-bit binary number that is divided into 4 groups of 8 bits known as octets.
- 131.123.35.4. IP address can be either Dynamic/static

Internet Service Provider

- ISP (Internet service provider)
 - Internet service provider is a company that provides the connections and support to access the internet.
 - ISP can be National, regional or local companies
- Choosing an ISP - Factors to consider:
 - Cost, **Internet upgrades**, Bandwidth and network capacity of ISP, Customer service, Reliability(How long has it been in business and how many satisfied clients do they have?), Local access numbers,
 - E-mail options (Do you need more than one E-mail account?), Trial period

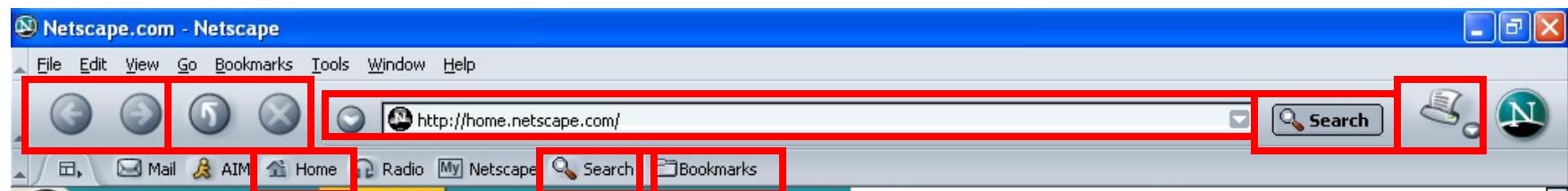
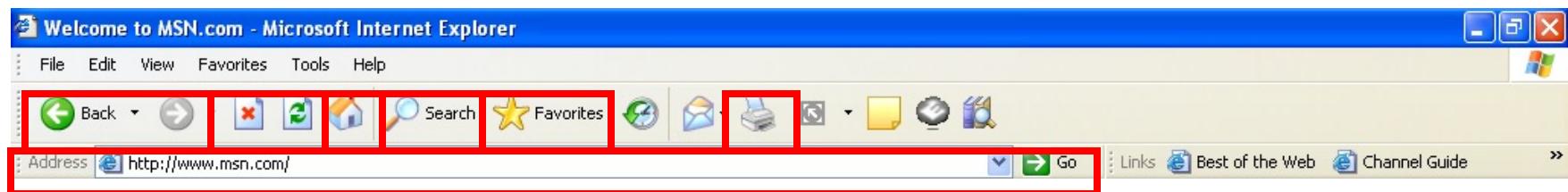
Navigating the Web: Web Browsers

- Computer software
- Graphical
- Enables Web navigation
- Popular browsers:
 - Internet Explorer
 - Netscape Navigator
 - Mozilla firefox



Browser Toolbars

X



Getting Around the Web

- Web sites
- URLs
- Hyperlinks
- Favorites and Bookmarks

Web Sites

- Web site:
 - Collection of related Web pages
 - First page known as Home or Index page

- Web page:
 - HTML document
 - Text and graphics
 - Unique address
 - Hyperlinks

Home page



Related
pages

URL

- **URL:**

- Uniform Resource Locator
- Unique Web page address
- HTTP: protocol from server to browser

**Protocol
identifies
the means of
access**

**Domain name
contains the
host and top-
level domain**

**Path identifies the
subdirectories
within the Web
site**

URL <http://www.nytimes.com/Pages/cartoons/>

URL Continued

- The part www.nytimes.com represents the Host name.
- **Pages/cartoons** is the Path name to the object **cartoons**
- Objects can be Images, audio files, html files etc

Domains are groups of Computers on the same network and are a method to isolate communications between the members in the domain and the other data traffic.

.aero	Members of the air transport industry
.biz	Businesses
.com	Can be used by anyone
.coop	Cooperative associations
.edu	Degree granting institutions
.gov	United States government
.info	Information service providers
.mil	United States military
.museum	Museums
.name	Individuals
.net	Networking organizations
.org	Organizations (often nonprofits)
pro	Credentialed professionals

Hyperlinks

- Provide access to other Web pages
- Specially coded text or graphics
- Cursor becomes a hand with finger pointing upward



Favorites and Bookmarks

- List created of favorite Web pages
- Easy method of returning to Web pages
- Internet Explorer uses Favorites
- Netscape uses Bookmarks

Netscape
Navigator



Internet
Explorer



Search Engines

- ❑ Searches for keywords
- ❑ Returns a list of Web pages
- ❑ Popular search engines:
 - Google
 - Alltheweb
 - Dogpile
 - Indexer
 - Spider
 - Search engine Software
 - www.metasearch.com

Subject Directories

- ❑ Web pages organized by topics and subtopics
- ❑ Popular subject directories:
 - Yahoo
 - Looksmart
 - MSN

Internet search methods

- **Search methods** are used by **search tools** to increase the effectiveness and efficiency of Internet searches.

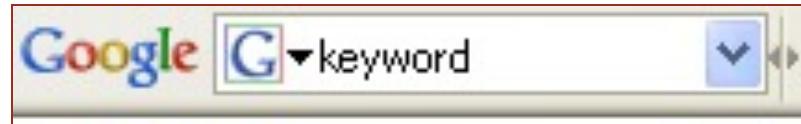
Search methods:

- Keyword
- Field
- Boolean
- Miscellaneous

Keyword Search



- Keying a main idea, phrase, or concept (called a search string) in the search box with or without quotation marks.
 - Unique terms or phrases
 - Synonyms or word variations
 - “to be or not to be” will return results only of entire phrase
 - Use quotation marks to identify a phrase



Field



- Field – The search is conducted for a specific title, domain, URL, or host.
 - Useful for drilling down and focusing on specific content.
 - Allows the user to adjust the breadth and depth of a search.

Find results

with all of the words	<input type="text"/>	10 results	<input type="button" value="Google Search"/>
with the exact phrase	<input type="text"/>		
with at least one of the words	<input type="text"/>		
without the words	<input type="text"/>		

Boolean Logic



A method used to refine a search with the use of operators with keywords:

- AND, OR
- + and – symbols
- Place symbol immediately before keyword
- Star Wars +I =Star Wars episode I

Search Methods – Boolean cont'd

- Vacation Paris **OR** London
 - **OR** broadens a search by including results that match either of the words
- Vacation Paris **AND** France
 - **AND** narrows a search by combining terms
- **Note:** Boolean operators are often implied in a search and therefore not required by the user; however, sometimes they are very helpful in narrowing the search results.

Your time is valuable

- Search engines have become an important part of the online experience of Internet users.
- Learn to use advanced search features.
- Get better results in less time.



Evaluating Web Sites

- Who is the author of the article or Web site sponsor?
- What audience is the site geared toward?
- Is the site biased?
- Is the information current?
- Are links available

Capabilities of the Internet

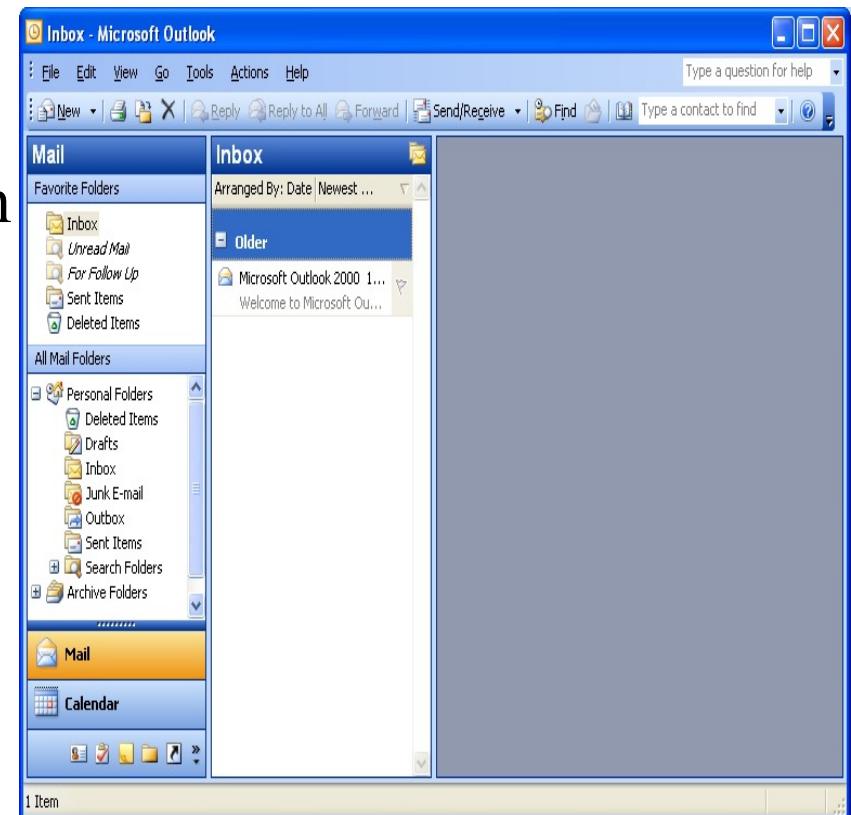
Three Main Functions

- Communicate
- Retrieve
- Shop, Buy, and Sell

Capabilities of the Internet

Communications Capabilities

- **E-mail or Electronic Mail:** A service that transports text messages from a sender to one or more receivers via computer.
- Primary means of communication
- E-mail accounts
 - Client-based
 - Web-based
- Spam
 - Prevention



What is spam?

- Spam also known as junk e-mail refers to unsolicited message received in your inbox.
- Junk e-mail might include advertisements, fraudulent schemes, pornography, flyers, advertisements and catalogs or legitimate offers. Because it's very inexpensive for marketers to send junk e-mail, it's not uncommon for people to receive a large amount of it.

Avoiding spam

- ❑ Don't volunteer to receive email
- ❑ Don't give email to anyone unless you know them
- ❑ Don't publish email on website
- ❑ Keep multiple email addresses
- ❑ Don't respond to unsolicited email
- ❑ Never ask to be removed from a spammer's list
- ❑ Never buy anything from spammer
- ❑ Using a second email when posting newsgroups
- ❑ Use spam filter
- ❑ etc

Capabilities of the Internet

Communications Capabilities

- **Mailing Lists:** Each mailing list has subscribers who receive messages as part of an ongoing discussion of the list's topic.
 - **Moderated:** A mailing list in which the messages are first screened by an individual to determine their suitability given the purpose of the list.
 - **Newsgroups:** Worldwide discussion areas where notices can be posted for anyone to view.

Capabilities of the Internet

Communications Capabilities

- **Usenet or User's Network:** A system of worldwide discussion groups, not an actual physical network.
- **Netiquette:** A list of simple newsgroup guidelines that keep people from making mistakes.
- ***Chat Session or Internet Relay Chat (IRC):*** A live interactive discussion in which parties on the network exchange ideas and observation electronically.
 - Portal: A gateway or hub site, such as Yahoo!, that provides chat rooms

Capabilities of the Internet

Communications Capabilities (Continued)

- **Instant Messages:** A combination of real-time chat and e-mail by which short text messages are rapidly exchanged over the Internet, with messages appearing on recipient's display screen immediately upon arrival.
- **Internet Telephony or Voice Over the Internet or Voice over IP:** Real-time voice conversations transmitted between computers on the Internet.
- **Telnet:** A network capability that permits remote sign-on to any computer on the Internet from the computer an individual is using at that time.

Reality check

- A discussion about internet's communication can be confusing; some features overlap or at least sound similar. However, there are important differences for the users.
- Email is delivered to your mailbox automatically and the messages wait there until you are ready to read them. With e-mail, you have very little control over what you receive. People who have your email address can send you whatever they wish.
- A mail list will also deliver messages that appear automatically in your electronic mail-box, but this service is selective. You have to subscribe to a mailing list to get the messages.

Reality check cont'd

- Newsgroups and chat sessions are services that do not deliver messages to your mailbox. Instead, you must sign on to Usenet groups and chat sessions each time; then you can receive and send messages on the display screen of your computer while you are using it.
- Usenet newsgroups are bulletin boards; you access, review, and contribute information. Chat sessions, on the other hand, are like conversations; they are live, interactive discussions.

Capabilities of the Internet

Retrieval Capabilities

- **FTP (File Transfer Protocol):** Used for transferring files containing documents or software between computers on the Internet.
- **Web Directory:** A listing of Web sites and their URLs, categorized by topic.
 - *Keyword:* A string of letters or words that indicates the subject to be searched.
- **Search Engines:** Software programs that look through the Web to locate sites matching a keyword entered by the user.

Capabilities of the Internet

Retrieval Capabilities (Continued)

- **Portal:** A gateway or hub on the Internet from which other sites can be visited.
 - *Vertical Portal or Vortal:* A Web site that specializes in providing information related to a particular industry such as automobiles, healthcare, or investments.
 - *Horizontal Portal:* Provides services and links to Web sites of interest to a wide variety of users.

Capabilities of the Internet

Retrieval Capabilities (Continued)

- **Webcasting:** The prearranged delivery, or push, of information of interest to a user's desktop automatically.
- *Pull:* To get something from a Web site by clicking on a link or entering a URL.
- *Push:* The capability of a Web site for automatic Internet delivery of information, including software updates, to a user's desktop.
- *Channel:* A Web site designed to push information to a user's desktop.

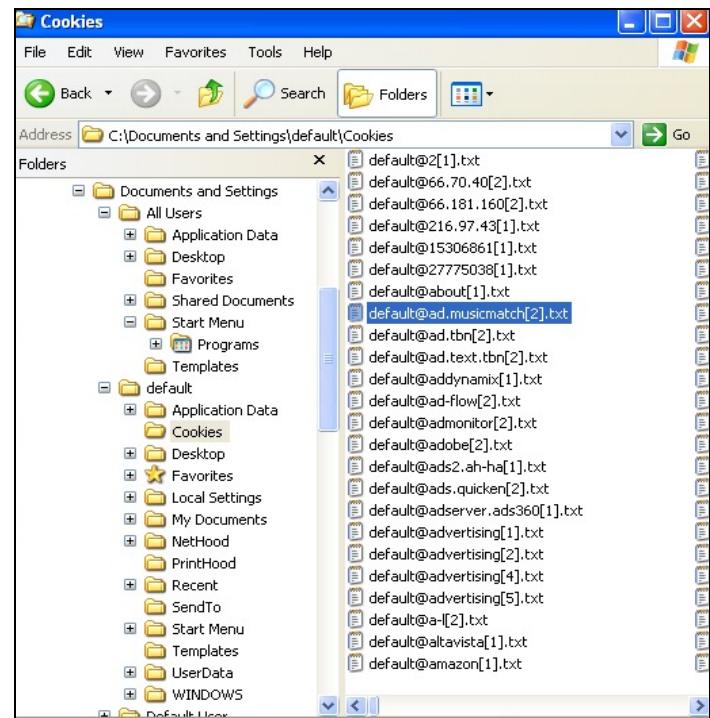
Capabilities of the Internet

Shop, Buy, and Sell

- **Electronic Commerce/e-commerce:** Conducting commercial activities on the Internet.

Cookies

- Text files stored on client computers when visiting Web sites
- Used on return visits to Web sites
- Unique ID number
- Personal information remembered
- Privacy risk
 - Selling information



Web Entertainment

- Multimedia:
 - Involves forms of media and text graphics, Audio, and Video.
 - Streaming audio and video
 - Plug-in
- Games

What is a plug-in?

- A **plug-in** is a set of software components that adds specific abilities to a larger software application.
- If supported, plug-ins enable customizing the functionality of an application. Additional plug-ins can be downloaded from the Internet.
- To add a plug-in, you must be logged on as an administrator.

Popular plug-ins

PLUG-IN/PLAYER NAME	WHERE YOU CAN GET THE PLUG-IN/PLAYER	WHAT THE PLUG-IN/PLAYER DOES
Adobe Acrobat Reader	www.adobe.com	Lets you view and print Portable Document Format (PDF) files
Authorware Player	www.macromedia.com	Helps you view animations
Flash Player	www.macromedia.com	Lets you play animation and other graphics files on the Web
QuickTime Player	www.apple.com/quicktime	Lets you play animation, music, Musical Instrument Digital Interface (MIDI), audio, and video files on the Web
RealOne	www.real.com	Lets you play streaming audio, video, animations, and multimedia presentations on the Web
Shockwave Player	www.macromedia.com	Lets you play interactive games, multimedia, graphics, and streaming audio and video on the Web
Windows Media Player	www.microsoft.com	Lets you play MP3 and WAV files, listen to music files and live audio, and view movies and live video broadcasts on the Web

Review Questions

1. Why is Internet referred to as a network of networks?
2. What is the origin of the Internet?
3. How does data travel on the Internet?
4. Differentiate between a static and dynamic IP address
5. What are my options for connecting to the Internet?
6. How do I choose an Internet service provider?
7. What is a Web browser?
8. What is a URL and what are its parts?
9. How can I use hyperlinks and other tools to get around the Web
10. Discuss internet crimes that are commonly committed by users over the internet and how they can be solved.