INTERNET & WEB DESIGNING
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Internet - Basics

Subhasree M.
Lecturer, Department of Computer Engineering,
R.E.C., Calicut.

Introduction

Information technology is the biggest achievement of 20th century. The internet which is the finest flower of Information Technology (IT) has reduced the world to a global information society, where information is the lifeblood, technology is the tool and quality is the objective. In this society information is treated as a strategic global resource and is attributed with many terms.

The world changed by the arrival of Internet. It started quietly and has grown to involve much of the world. On an average day, the following events occur.

- A group of company executives hold a meeting. One executive in New York, another in Florida, and a third is on vacation in Colorado. Each sits in front of a computer that has both a camera and a microphone attached. They see pictures of one another on the screen and hear each others' voice.

- A college student in India uses a computer to see and hear a tour of the campus at the University of Hawaii.

- A Professor puts his class schedule and class assignments in his website and students visits the site frequently and answers through e-mail.

The Internet probably has already affected you. Some statistics:
- The Internet currently reaches millions of people in over 134 countries.

- Scientists have been using Internet since 1980.

- The U.S. military has been using the Internet technology for over 16 years; it played a role in military actions such as Operation Desert in the early 1990s.

What is Internet?

Internet is a network of networks. Internet is a rapidly growing global digital library built on a remarkably flexible communication technology. Internet is a platform where millions of people communicate electronically on a one-to one basis or in groups and share ideas of information. Internet is a vast collection of information that can be searched and retrieved electronically.

There are four basic building blocks to the Internet, Hosts, Routers and Clients and Connections. In most cases your computer falls under the "Client" category. Data is sent from your computer in the form of a "packet". It is similar to an envelope; it surrounds

your data and contains both a return and destination address. Your computer handles the packets for you; it's all done in the background, without your knowledge.

How the Internet grew from its humble beginnings to the largest network in the world?

In the late 1960s and early 70s, new networking technologies LAN (Local Area Network) and WAN (Wide Area Network) emerged. Even if both are having its own advantages the disappointing news about these technologies is that both are incompatible with each other. So there was a necessity of a single network.

By the late 1960s, the U.S. Department of Defense became interested in using computer networks. Through the Advanced Research Project Agency (ARPA), the military funded research on networking. ARPA projects included a wide area network called the ARPANET. A key idea in the ARPA research was a new approach to interconnecting LANs and WANs that became known as an internetwork, usually abbreviated as Internet.

Computer software forms an important part of technology that makes it possible to interconnect networks. Two pieces of Internet protocols standout as innovative- the Internet Protocol (IP) and Transmission Control Protocol (TCP). By 1982 a prototype Internet was in place and the TCP/IP technology was used widely .In the beginning of 1983 ARPA expanded the Internet to include all the military sites that connected to the ARPANET.

The group responsible for guiding the research and development of the Internet formed, known as IAB (Internet Activities Board). The primary subgroup responsible for technical matters is known as the Internet Engineering Task Force (IETF). Internet Research Task Force (IRTF) looks into long-term problems, which may become critical in future. By the mid 1980s the National Science Foundation (NSF) took a leadership role and formed NSFNET. ANSNET and vBNS were another backbones formed. By early 1997, the Internet was growing so fast that on an average, a new computer was added to the Internet every 4 seconds. Furthermore the rate continues to increase.

Underlying technologies and basic capabilities of Internet

a) Packet switching

The fundamental technique that computer networks use to ensure fair access to shared network resources is known as packet switching. Before data can be transferred across a network it must be divided into packets. A sender divides a message into packets and transfers the packet across a network. Each packet contains a header that specifies the computer to which the packet should be delivered; the destination is specified by a number known as computer's address. A receiver reassembles the original message from the packets that arrive. Computers that share access to a network take turns sending packets. On each turn, a given computer sends one packet.

b) Routers

The Internet is not a conventional computer network. It consists of thousands computer networks interconnected by a dedicated special-purpose computers called routers.

Because a router can interconnect networks that use different hardware technologies, the router architecture permits the Internet to contain multiple types of networks. The least expensive way to connect a new network to the Internet involves finding the closest Internet site and connecting a router between one of its networks and the new network.

Many people who can't afford a direct network connection use the telephone system to access Internet services. To do so, their computer must have a dial-up modem, which plugs into the phone system. In addition their computer must have software to use the modem. When the software runs, it uses the modem to place a telephone call to a modem that connects to a computer that attaches to the Internet. The remote computer answers the call and provides access to the Internet services.

c) Internet Protocol (IP)
The Internet Protocol, IP, specifies the basic rules that a computer must follow to communicate across the Internet. IP defines the format of Internet packets, which are called IP datagrams. IP also defines an address scheme that assigns each computer a unique number used in all communications. IP software makes an interconnected set of networks and routers operate like a single, large network.

Each computer on the Internet must have IP software that allows it to create and send IP datagrams. Each router also has IP software that knows how to forward datagrams to their destination. When a datagram arrives at a router, the IP software chooses the path that will lead to the datagram's destination.

d) Transmission Control Protocol (TCP)
To handle communication errors, a computer must also have TCP software. TCP eliminates duplicate data, ensures that data is resembled in exactly the order it was sent and resends data when a datagram is lost.

TCP uses acknowledgements and timeouts to handle the problem of data loss. The sender retransmits data unless an acknowledgement arrives before the timer expires. TCP's scheme of timeout works across the Internet because TCP changes the timeout automatically depending on whether the destination is close or far away from the source.

e) Client- Server networking
The Internet offers variety of services. Despite apparent differences among the services, all software on the computer uses the same general structure known as client-server computing. In a client –server environment each program must be classified as a client or as a server. A server program offers a service. Usually, computers offers services start automatically when the computer is powered on. The server remains running, ready to accept an incoming request anytime. Users usually run client software when they access a service. A client program contacts a server, sends a request, and displays the server's response.

f) IP address & Domain Name Systems (DNS)
The unique number assigned to a computer is called its Internet Address (IP address). Each computer, including router needs to be assigned an IP address before the computer can communicate on the Internet. Internally, a computer stores an IP address in four binary bits called bytes (e.g.: 202.41.105.25).

Because humans prefer using names instead of numbers, the Internet allows people to assign a name called Domain names to each computer, and provides an automated system (Domain Name System) that can translate a name into an equivalent IP address. Domain name consists of multiple alphabetic strings separated by periods (e.g. vishak.reccal.ernet.in). Although both the domain names and their IP addresses are written in same formats they are unrelated just as a person's name & his telephone number.

Internet Access
In the late 1980s and early 1990s, about the only option for Internet access was some kind of dedicated or leased line connection. However, individual dial-up accounts became available from a number of commercial Internet access providers as early as 1992. Usually access to Internet is available in two forms: Dial-up access and dedicated access.

Dialup access
In this case a user modem dials a host computer to access the Internet. This access is of two types-terminal dial-up and TCP/IP based. Terminal dial-up access doesn't permit graphics and thus restricts the range of available services. However it allows E-mail, FTP, and other non-graphic applications. Dial-up connections based on several line Internet Protocol (SLIP) and point-to-point protocol (PPP) can connect one's computer directly to Internet and one can run networking applications.

Dedicated access
Dial up users must wait for their modems to dial and connect while users with dedicated access have Internet connectivity all the time. In case of dedicated access in LAN, at least one computer on the LAN is configured with TCP/IP software the programme that instructs the computer how to communicate with the Internet, however dedicated access is not right for every one, besides being expensive it take time to set it up and requires specialized manpower for operations and maintenance.

World Wide Web (WWW)
WWW has become the most widely used information service on the Internet. WWW is a large set of hypermedia documents stored on computers throughout the Internet. A given WWW

Document can contain embedded menu items that refer to WWW documents stored on other computers, a user can follow a link from a document on one computer to a document on a another computer as easily as a user can follow a link between documents on the same computer.

A browser is a computer program used to access the WWW. To make it possible to record the location of a particular piece of information, each WWW document is assigned a unique name known as a Uniform Resource Locator (URL) that contain the information a browser needs to obtain the document.

Web pages are written in a computer language known as Hyper Text Markup Language (HTML). There are advanced web technologies like forms, frames, CGI programs and Java.

Website

Website is an addressed location, which consists of a web server and a set of web pages. It is a combination of textual, graphics, movie, clips and sound files. The resources in a website are usually located on one server, but they don't need to be in all cases. A Web page has links, so that user can move easily between pages in a website, or jump to another related site.

URL

Internet addresses are URLs (Uniform Resource Locations) and understanding them can help the user navigate the Internet better. Most URLs consist of four basic parts: 1. The protocol, 2. The server of domain name, 3. The directory path, and 4. The file name. Each part of a URL helps direct browser through the internet to the file, the user wants to retrieve.

URLs begin by designating the protocol to be used. The WWW protocol is hypertext transport protocol (HTTP), which enables hypertext transmissions across the network. Most Web clients can also connect to resources using other protocols such as gopher, FTP and Telnet.

Gopher

Gopher is menu-based programme that enables us to take for information without having to know where material is specifically located. It was developed at the University of Minnesota. In this programme the information is organized in such a hierarchy that the intermediate nodes are directories or indexes, and lead nodes are documents.

A gopher server can link to local text files, FTP sites, and telnet connections. USENET newsgroups, graphic files, sound files, and moving picture files. A client with compliant graphic viewers and sound players can make gopher multimedia-capable. Gopher clients are even more widely available than gopher servers. Different clients offer slightly different features, with some having very powerful capabilities. One of the most useful client features is the capability for establishing a list of "bookmark". The gopher bookmark greatly enables resource discovery by providing quick access to specific resources.

File Transfer Protocol (FTP)

FTP permits a user to transfer a copy of a data file across the Internet from one computer to another. When using FTP, a user establishes communication with a remote computer and obtains authorization by sending a login and password. The user can list the files on the remote computer, request a copy of a particular file, or send a copy of a local file.

On the Internet, most computers that offer files for access via FTP support anonymous FTP. Anonymous FTP allows any user on an arbitrary computer to access public files; the user does not need a valid login to retrieve a public file.

Remote Login (TELNET)

A remote login facility permits a user who is using one computer to interact with a program on another computer. The Internet's remote login service is called TELNET. To use this service, one must invoke a local application program and specify a remote machine. The local program becomes a client, which forms a connection to a server on the remote computer. The client passes keystrokes and mouse movements to the remote machine, and displays output from the remote machine on the user's display screen.

BROWSERS

Most internet services operate according to a scheme called client/server. A server on one computer starts a programme that contacts another remote computer system, the client is the programme the user is running, and server is running on a remote system. The user gives command to the client, which passes them on to the server. The server interprets those commands and returns information to client, which passes information to the user.

Browser allows the user to view Web sites. There are many types of browsers available today. Depending on the type of content a browser can handle, they are divided into two types.

- Graphic-based
- Text-based

Among graphical browsers, Netscape Communicator and Internet Explorer are the most popular. In the US some people use the America Online (AOL) browser while several others use Mosaic, HotJava and other browsers. Text-based browsers do not allow much to be seen on the web page other than the plain text. Hence they are not so popular, though some people use these browsers, as they are the cheapest. Among other text-based browsers, Lynx is by far the most popular.

Lynx
Lynx is one of the Web browsers, which can only display the textual data. The graphical or multimedia elements cannot be delivered through this shareware web browser. Lynx was developed at the University of Kansas for their own campus, then was released to the Internet community. Lynx uses full-screen capabilities, and it can easily move back and forth through hypertext links.

Mosaic
Mosaic is the first popularly used graphical Web browser designed and developed at the National Centre for Super Computing Application (NCSA). Mosaic provides a powerful user-friendly graphical interface where hyper textual links appear to connect other web pages, or highlighted words in the text. Colour is used to highlight text links and other elements.

Netscape Navigator

Netscape navigator is the most widely used graphical web browser and popularly known as Netscape. The salient features of Netscape are:

1. It combines text, pictures, graphics, and animation in lots of attractive ways.
2. It runs reasonably well even on inexpensive dialup connections.
3. Consecutive version are being updated to add new internet services and
4. its authors give it away for free.

Netscape is the best organized, best performing and most efficient web tool. Netscape recognizes the advanced HTML tags. Netscape Navigator supports a host at widely used enhancements to HTML. A clear interface, easy-to-use controls and a straightforward set-up also add to this browser's appeal. The latest version is named as Netscape Communicator, which has the facilities of both editing the HTML document and browsing it.

Internet Explorer

The Microsoft goes long way towards its goal to integrate all Internet tools with Windows 95 under the folder name Internet Explorer for browsing the web. It is distributed with Windows 95. This web browser provides all the features needed to explore the Internet thoroughly.

Automated web search (Search engines)

An automated search service allows an individual to find information that resides on remote computers. These use computer programs to find Web pages that contain information related to a given topic. Search engines automatically locate web pages associated with a product, a company, an individual or about a particular topic. The results of an automated search can be stored in a file on disk for use later.

Popular search engines

Yahoo

This is one of the most popularly used search engines, which has indexed about 25 million web pages. Yahoo database gives a hierarchical ordering of Web pages. It contains a small percentage of all of the Web pages. This engine is useful for beginners on the Net.

Website : http://www.yahoo.com

Infoseek

It is a very large database with a powerful SUB-SEARCHING feature for refining searches and extracting the documents one wants. For doing a quick search on the

Internet one can use Infoseek, a quick search engine. This is also good one for complex searcher.

Website : http://www.infoseek.com

AltaVista

With one of the largest databases of web pages (some 30 million). Alta Vista has a number of distinctions. It is very fast and takes only few seconds to perform a simple search. Most importantly it indexes, full-text of all retrieved documents. It offers two levels of searching Simple and Advanced. It searches the entire HTML file and also gives the option for searching USENET. It searches web documents or new groups by using keywords or phrases.

Website: http://altavista.digital.com

Lycos

Like Alta Vista, Lycos has a very large database. It claims to have indexed nearly 70 million web pages. It only indexes the title and then first 20 lines of the text and headings. Lycos can be used when one is looking for lots of good sources. LycosPro allows one to influence results ranking criteria. Lycos offers Boolean searching; phrase searching; subject directory access; city guides; Database of pictures, sounds, people, stocks, maps etc. It is the best engine for serious research.

Website: http//www.lycos.com

Hotbot

The latest entry into the web search sweepstakes is Hotbot, which is based on search technology developed by the University of California, Berkley. Hotbot claims to have the largest index of web pages, at the same it is one of the most accurate, lousing relevance scoring technology that is superior than anything else around. Hotbot permit geographical, media type and domain searching not available in the other good search tools. Hotbot can be the best choice when one wants to do a comprehensive search.

Conclusion

The most significant impact of the Internet is its impact on society. Once restricted to a few scientists, it has quickly become universal. It reaches governments, schools and homes worldwide.

OFFLINE OPERATIONS AND FILE DOWNLOADING

Subhasree M.
Lecturer, Department of Computer Engineering,
R.E.C., Calicut.

The Internet represents a vast storehouse of information and software. Some people are simply overwhelmed by the amount of data(information) contained on the Internet. Some ISPs do not provide unlimited time accounts, so people may tend to be 'stressed' when surfing because they know the clock is ticking. This chapter will explore ways to lessen the impact of on-line surfing by showing how it's possible to save something for viewing at a later point in time. This chapter will also discuss downloading, what is meant by downloading, and some of the guidelines in regard to downloading.

Saving information
You've found a site that contains information, which you find extremely useful, but do you have to return to the site everytime you need to refer the information? No! A little known feature of most browsers is the ability to load and view web pages off-line. While you can view a web page off-line, unless you specifically reconstruct the directory structure, saving all of the associated graphics, you won't see the images for the page. With that in mind, here are some the steps you would need to follow in order to save this page and view it off-line in either Navigator or Explorer.

    Click on File Menu.
    Select the option "Save as..." (Explorer users! Use "Save as File..." option.
    Save the file, but remember the file name!

This will allow you to save the file to your local hard drive in a place other than the cache directory. The cache directory is used by the browser to speed loading of the web sites if you make a return visit, but you are not assured that the files will be safe there as the browsers periodically clean out the cache directory to prevent it from growing too large. Normally the files are named using a four-character extension (.html). In the case of both browsers, the program will know, and use the file name under which it was stored on the remote system.

Viewing a Document Off-line
Once you are disconnected from the Internet, activate your browser.

Netscape
    Click on the "Open File..." menu option under the "File" menu and move to the appropriate directory where you saved the html file.
    Select the file that you wish to view from the list supplied and it will appear in the main display window.

Explorer
    Click on the "Open..." menu option under the "File" menu.
    Either type the filename, including the full path of where you saved it, or use the "Browse" feature in this dialog box to move around your harddrive until you locate the file.
    Select the file that you wish to view from the list supplied and it will appear in the main display window.

Viewing a file, which you have saved to your harddrive, as opposed to viewing it on-line poses a few unique problems. While you may have saved all the pages in a website, the odds are good that you did not save any pages from the offsite links. An offsite link is a link which takes you to another host computer, usually containing documents which the author of the saved document feels are worthy, but did not write himself/herself. Since you didn't save these offsite files any links to them will simply not work. Clicking on them in an off-line mode of operation will not harm your computer, nor damage any of the saved files in your computer.

Saving a Graphic
You've found a beautiful picture or just a photo and want to save that image on your computer, maybe even use it for a Windows background. It's not hard to save a graphic file (a picture) that loaded with a page when you accessed that page. It does help to understand a little about the process of loading a web page into your computer first.

Whenever you visit a webpage, your browser begins a special communications session with the server upon which the page resides (or is "Hosted"). The host computer (also called a server) gives your browser the requested file (this is usually an HTML file), which is usually all text and the browser loads it into your computer's memory. The HTML file is a text file containing text and "mark-up" commands which instruct the browser on how to display the file. Basically the browser reads the HTML file after loading it. Locates all the commands to load graphics, then retrieves the graphics from the server, again, storing it locally on your computer. Finally it assembles the web page by combining the graphics and the text contained in the HTML file. In essence, all these graphics and text you are seeing are loaded from your own computer, not from the remote site. This process is called "Caching", which is a technical term for local, temporary disk storage.

The real trick, and it's not really a trick, is moving the graphic image from one directory to another directory. In essence, moving the image from your cache directory to another, more permanent location. Navigator and Explorer users have it easy, the designers of these programs foresaw the desire to easily save graphics.

Navigator
    Position the cursor over the image and click on the right mouse button.
    Select "Save image as..."
    Enter an appropriate file name for the image.
    Click on the "OK" Button.

Explorer
   Position the cursor over the image and click on the right mouse button.
   Select "Save picture as..."
   Enter an appropriate file name for the image.
   Click on the "OK" Button.

Downloading Programs
Downloading is the term used to describe the process of moving software from someone else's computer into your own local computer. Generally there are four major types of software you can download from the Internet. These are Demoware, Freeware, Shareware and patches/upgrades.

Demoware - This is a crippled version of a retail copy of software. By crippled we mean that in some way the functionality of the program has been reduced enough to make the program marginally useful. The primary purpose of Demoware is to let you "test drive" software before making a decision to purchase it.

Freeware - Freeware is free, completely, no strings attached. Usually these types of programs have been written by government agencies or companies that want you to use their programs and perhaps be induced into buying something from their mainstream product line.

Shareware - Typically shareware products are a mix of freeware and demoware. In many cases today you can get a fully functional program which is shareware, but has a built-in self destruct mechanism causing it to become unusable after so many days of use. Many shareware authors rely on the honor system for people to pay them.

Patches/Upgrades - Patches and Upgrades are not usually complete programs. Basically a patch or upgrade requires that you already have a particular piece of software on your computer. The patch will alter the software, either correcting a mistake in the system, or adding additional functionality to the software.

Downloading software is going to consume a significant portion of your on-line time. Whether it's getting new software, or upgrades, or just obtaining demo copies of the latest programs, everyone needs to know how to download. It's a sound idea, before you begin, to create a directory or folder and call it "Download". This way you will never have to scramble to figure out where to put a file you want to get from the net. Additionally, if you always save the downloaded files in the same directory, then removing them will be easier since they are all in one location on your harddrive.

Download Identification
Downloading files is only one step in a series of steps usually required to make a file useable on your system.

Once you have downloaded a file (the easy part), the next problem is figuring out what to do with it. In many cases, the download will be an executable file, so simply running the file will install the software on your machine. In some cases you won't be so lucky.

The key thing to remember about the file is the extension. The extension is the part following the period ("."). For example, some files may have a ".zip" extension. This identifies the file as a particular type of archive file. File extensions viz. .zip, .z, .gz, .pak, .arc, .arj, .uue are generally used to identify archives. What is an archive? An archive is a single file in which one or more files have been stored. Usually compression is performed, during the process of storing the files. In order to deal with archives you need to obtain a special program which is capable of decompressing the archive. You do not need to own one program for each type of archive. There are several highly capable programs available today which handle multiple archive formats with considerable ease.

The biggest problem with downloading software is that often many people do not realize that once the file is loaded onto the computer, it almost always requires additional steps before you can use the software. The process of downloading and using a downloaded program follows these basic steps, regardless of the program doing the download.

E-MAIL: BASICS

Subhasree M.
Lecturer, Department of Computer Engineering,
R.E.C., Calicut.

During the 1980's email became one of the mainstream tools used by business for their internal networks. Now Internet email is quickly gaining ground as a business tool and as a person to person communications method. Electronic mail (e-mail) is the widely used service on the Internet. Each individual who participates in e-mail exchange has a mail box identified by a unique address. Any user can send a mail across the internet to another user's mailbox if they know the mailbox address; only the owner can extract the contents of a mailbox and extract messages.

A computer connected to the Internet needs application software before users can send or receive e-mail. E-mail software allows a user to compose and send a message or to read message that has arrived. A user can send a reply to any message.

Most commercial e-mail software permits each user to define a set of abbreviations for frequently used mailbox addresses. If the user types an abbreviation when specifying a recipient, e-mail software substitutes the full mailbox address in place of the abbreviation. Although e-mail was originally designed for communication between a pair of individuals, it has been extended to provide communication among a group and to provide communication with a computer program. As a result, e-mail has become one of the most widely used services on the Internet.

Email and your Browser
As discussed earlier, email is a means of sending messages from one person to another using the Internet as the transmission mechanism, much like using the postal service as your carrier.

How many times have you been surfing a web site and wanted to contact the author or webmaster and the only way to do so was via an email address? If you are like most people, your answer would be "Very often". So what do you do? You grab a piece of paper and write down the email address. Then you switch to your email program, enter the address, write your email and send it, then you return to your browser. Tedious to say the least.

This chapter will cover setting up Navigator and Explorer for email and newsgroups. In order to provide a clear distinction between the two browsers, we have separate sections for each of the browsers.
Email Addressing

Like real mail, sending email requires that you know the address of the individual or company you wish to send email to. Unlike real mail, an email address is fairly simple,

composed of only two parts. The first part of the email address is the user's account name that you are sending the email to. Some ISPs will allow the user to pick a user name, others will follow a set pattern, like the first name followed by the first letter of their last name, or perhaps even a number.

eg. ravi
      ravi001
      ravi_s

You also need to know the name of the server. In Ravi's case he logs into the Internet via a server called yahoo.com. Since we can't just merge the two pieces together, we need something to keep them apart, we use the "@" character to separate the user name from the server name. Hence Ravi's address now becomes one of these;

  ravi@yahoo.com
  ravi001@yahoo.com
ravi_s@yahoo.com

Server names can be longer and more complex but basically it's safe to say that anything to the right of the "at" sign is the server name and everything to the left is the user name.

Setting up your browser for email

Before you begin setting up your browser to handle email, there are certain questions which only you and your Internet Service Provider (ISP) must answer. You must have this information on hand before you begin, so talk to your ISP. The information you need is;

  Your Email Directory.*
  Your News Directory. *
  Your Email Address. *
  Your POP User name.**
  Your Outgoing Mail (SMTP) Server Name. **
  Your Incoming Mail (POP) Server Name. **
  Your News (NNTP) Server Name.**

  *You supply this information
  ** Your ISP must supply this information

Netscape

What many people don't know is that Netscape contains an excellent email program built right into itself. The trick is to configure this email subprogram properly. Once you have this information on hand, you are ready to configure your browser for running email. Start up your Navigator and select the "Communicator" menu and click "messenger". Then select "Edit" and choose "Preferences". One of the options under this menu will be "Mail and Newsgroups", select that one.
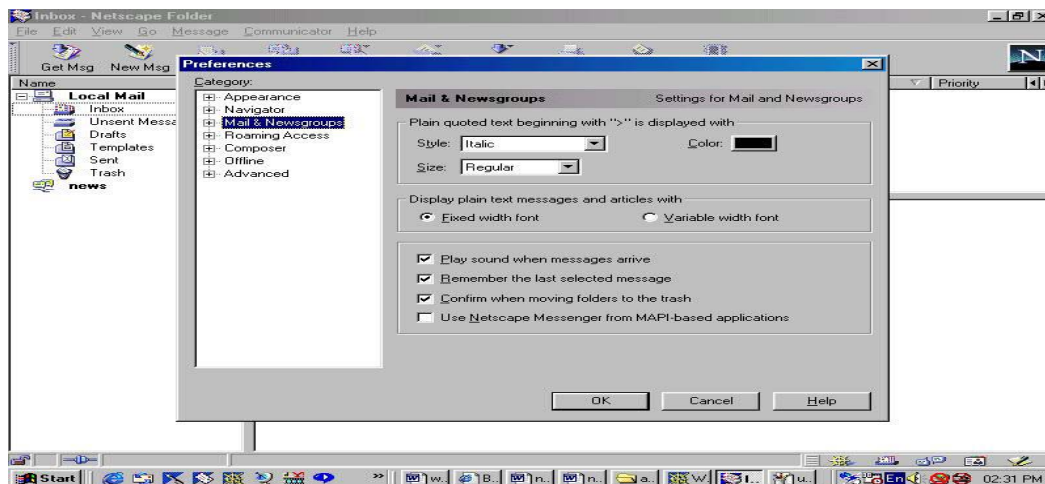
Click on the tab to select the "Identity" dialog and enter your real name, or a handle if you wish, and your email address in the appropriate position. This section is where the email program will look to find all the information it needs to build the email header, which always includes a name and email address. Clicking on the image to the left will bring up a sample representation of the "Identity" dialog box.
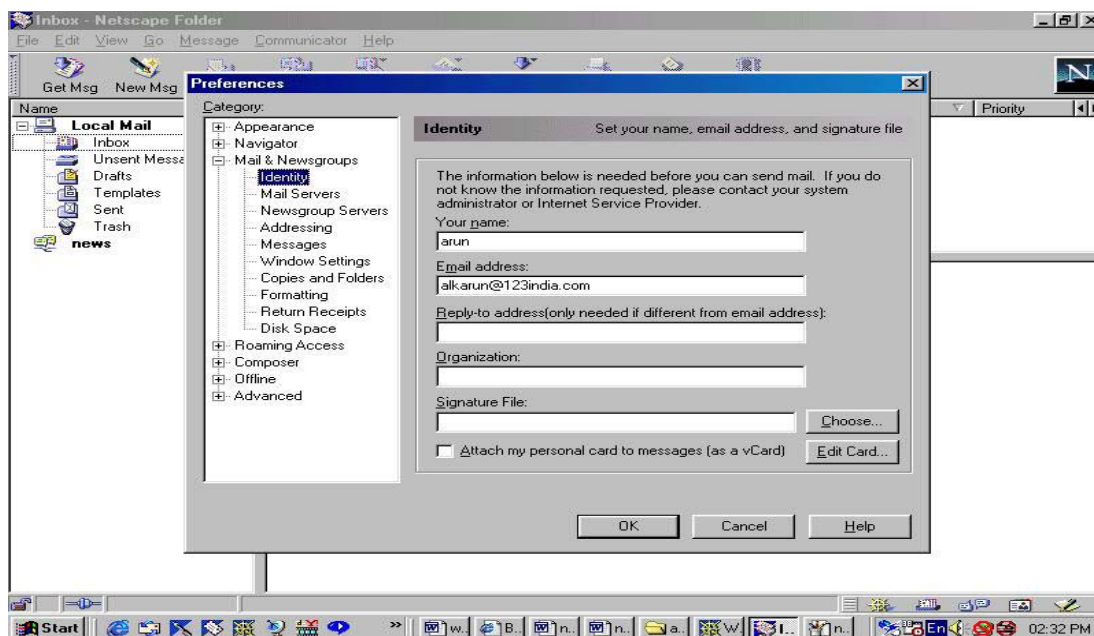
Now click on the "Servers" tab to bring up the dialog box for setting up the servers. This box is where you enter the information provided by your ISP. It informs the email program about facilities on the server which it needs in order to send or receive email. Clicking on the image to the right will bring up a sample representation of the "Servers" dialog box.
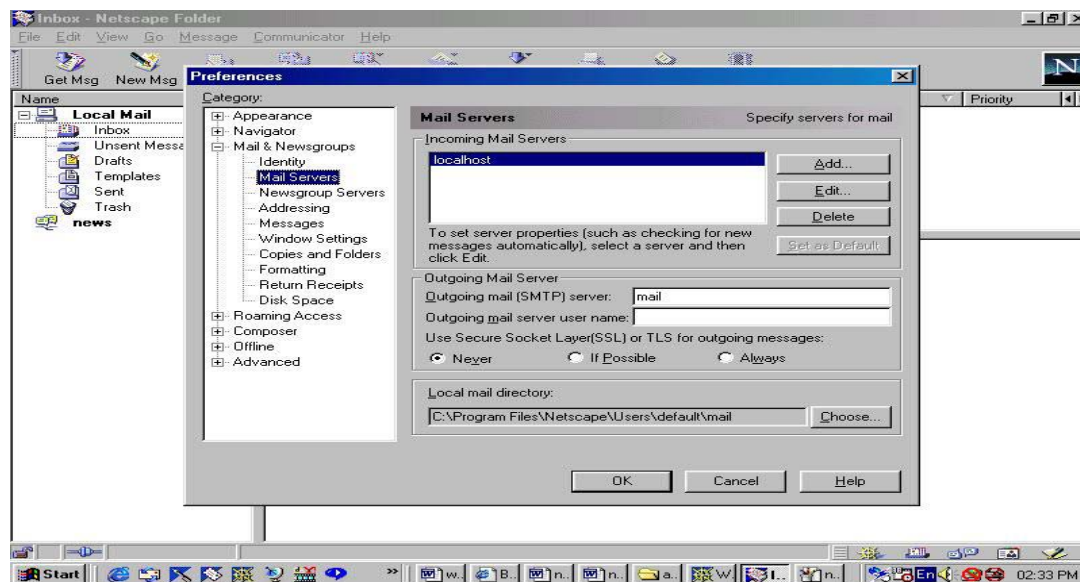
One important feature to note is in the Server's Dialog box. When the server name is entered you are prompted to enter more details of your POP server. Then click "POP" and check the option "Leave messages on server". These options are critically important. If Navigator is going to copy your email to the local disk, then delete them from the server, you run the risk of losing email if your connection gets severed during that transfer. For safety's sake, you would like to have the messages remain on the server, but depending upon the server, this might not always be possible. When in doubt, consult with your ISP.
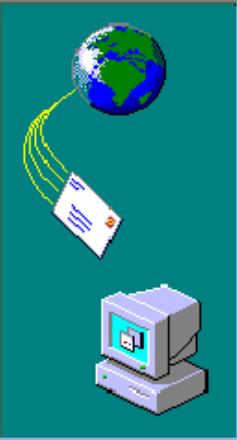
Explorer

Unlike Navigator, Explorer doesn't contain built in software. However if you downloaded the full package from Microsoft, you have not only downloaded mail, but a Newsgroup reader as well. Please note this applies to Windows95 users only. Setting up the email program in Explorer is very different than that of Navigator. In some ways it's easier, because Microsoft has included a setup wizard, but even the best wizard in the world cannot answer the questions you have to answer.

Upon running mail for the first time, either from the task bar, or by clicking on "Send Message" in the Explorer menu, you will be presented with a series of wizard windows which are designed to walk you through setting up email. We have included the important screens here. The others which are not included contain only information and do not require user interaction.

The first screen you will be presented with is shown below. (It's actually the second screen, after one telling you that you need information from your ISP, but you already knew that!)

Internet Mail Configuration

When you send email, your name will appear in the From field of the outgoing message. Enter your name as you would like it to appear (e.g. John Smith).
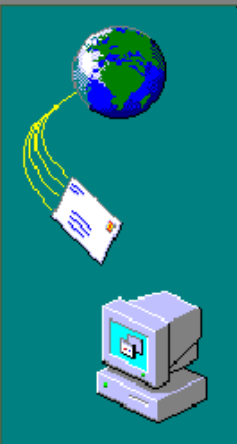
Na_m_e: `Bob Minnick`

Your email address is the address other people use to send you email messages. It may consist of your POP3 account name, an "@" sign, and the domain name of your server. Enter your email address (e.g. j-smith@isp.com).

Email Address: `bobmi@digital-cafe.com`

‹ _B_ack | _N_ext › | Cancel

This screen contains two fields you need to enter information into. The first field is your name, the second field is your full email address. Enter both in the window and press the "Next" button to advance to the next wizard screen.

Internet Mail Configuration

A POP3 server is the server that is used for your incoming mail. Enter the name of your POP3 server.

Incoming Mail (POP) Server:

`digital-cafe.com`

An SMTP server is the server that is used for your outgoing mail. Your SMTP server may have the same name as your POP3 server. Enter the name of your SMTP server.

_O_utgoing Mail (SMTP) Server:

`digital-cafe.com`

‹ _B_ack | _N_ext › | Cancel

This contains information which we said, you would need. If you don't have this information at the moment, then hit "Cancel" and contact your ISP to get the information you need. Otherwise fill in the appropriate information and hit the "Next" button to advance to the next wizard screen.

This is the third screen of the email wizard. Here you enter your account name, not your email address (just the portion to the left of the "@" sign). Then enter your password. If you don't know your password, contact your ISP for it. Pressing "Next" will advance you to the final wizard screen.

Internet Mail Configuration

When connecting to your POP3 and SMTP servers, you can connect in several different ways. Please specify the type of connection that you will use.

○ I use a LAN connection

○ I connect manually

◉ I use a modem to access my email

Use the following Dial-Up Networking connection:

[Cafe Connection ▼]

[Properties] [Add...]

[< Back] [Next >] [Cancel]
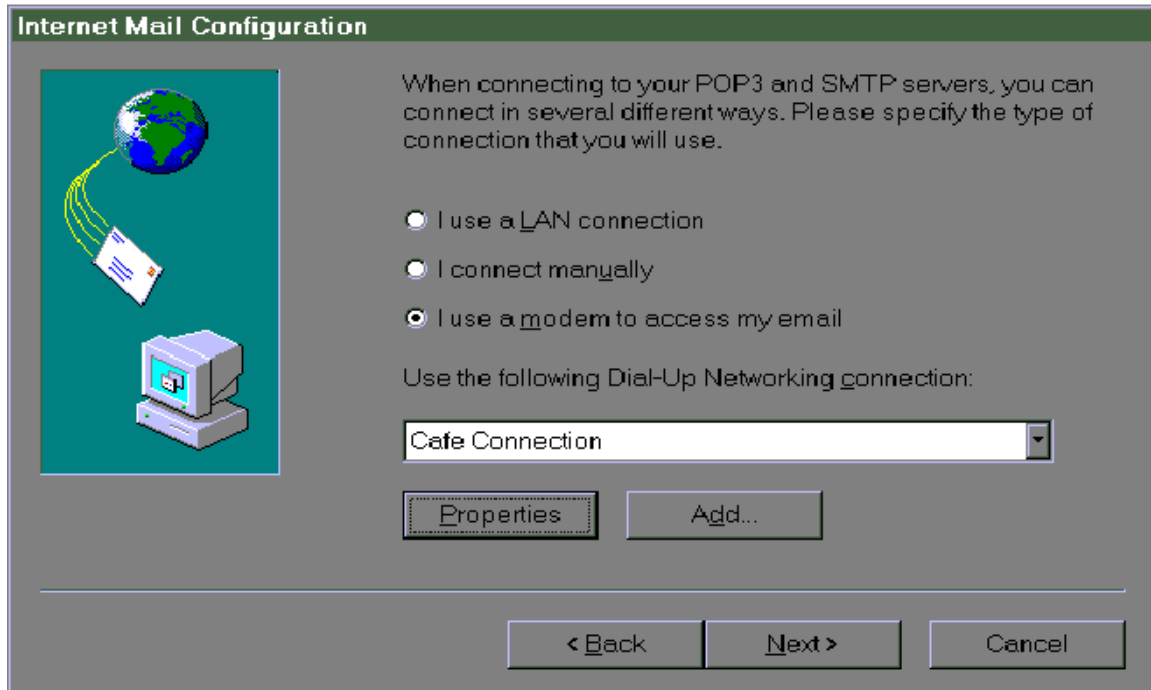
In this screen you will need to select your method of connection. In most cases this is "I use a modem to access my email". The Dial-Up networking connection is the name of the connection you double click on to start your Internet connection. If you do not know this information, or your ISP setup the connection on your computer, then contact your ISP. They will be able to walk you through finding out this data. Completing this screen will complete the setup for the Explorer Email. Press "Next" to advance to the last wizard screen.

Email, the basics

Email Revisited

Shortly after connecting to your ISP, you are informed that you have email waiting. What to do? Basically your ISP has provided you with a means of sending and receiving email. Now it's up to you to learn how to do it. Before we begin let's look at some of the issues involved in email at a general level.

Receiving Email - General

Can I send email to just anyone? No. In order to send email to someone, you must know their email address. Just like you need to know a street address in order to send a letter to someone, email functions in much the same way. Additionally, you cannot send email to someone who does not have an email account somewhere. A majority of the people who are using email started off using it for business or schooling purposes, but this is rapidly changing also. Email is quickly becoming as valuable a tool as the telephone, or the normal mail system. In order to be useful, your typical email program needs to be capable of;

Receiving Email.

Sending Email.

Working with attached files.

Managing an address book.

Receiving Email - Navigator Email Program

Assuming you have properly configured your email program, you can run your Navigator and it will periodically check to see if you have new mail. Unlike Explorer, the mail program for Navigator is tightly integrated into the browser. They even set it up in such a way as to have your browser inform you when new email comes in. by flashing a small icon of an envelope in the lower right hand corner of the browser window.

You can get to the Navigator email reader by using the Window | Communicator – Messenger menu or by clicking once on the Inbox icon in the lower right hand corner of the browser window. No matter which method you choose, selecting the Navigator email program will bring up a program which looks like the image given below.
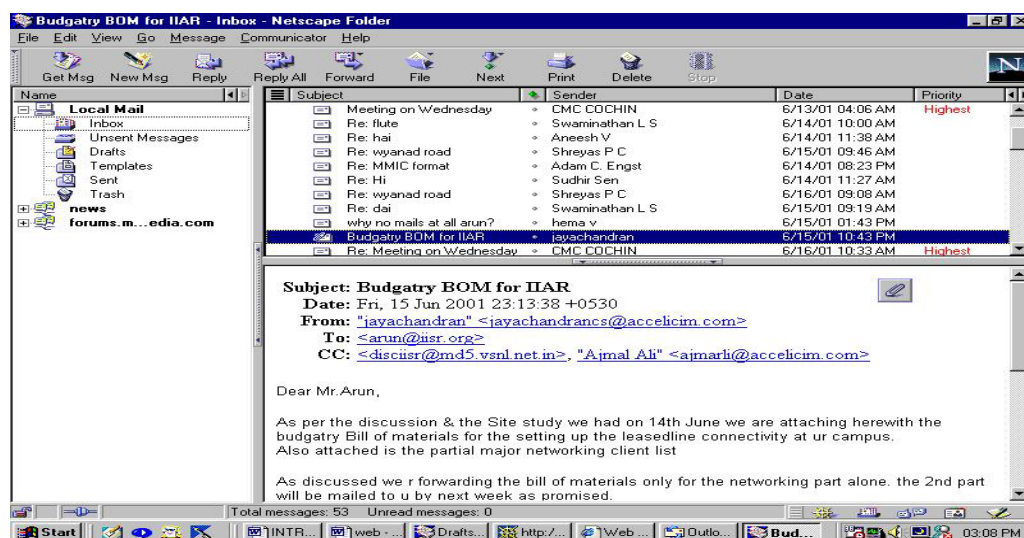
This program contains several major components. These are the button bar, the folder window (top left window), the message title window (top right window) and the message window (bottom window).

Get Msg - Pressing this button will tell the email reader to open a connection to your server and check to see if you have any new email. If so, it will download the emails into the program for you to view.

New Msg - Takes you to Navigator's Email Authoring program for a new email message.

Reply - Reply to the person that sent you email.

Reply All - Reply to all of the recipients of an address list. Sometime you will get an email where you are merely one of a list of people. Use this option to reply to all of the people on that list.

Forward - Copy the text of an email you received into another email and send it to a totally unrelated individual.

Next - Pressing this button will advance to the next message in your message window. (The one below it)

Print - This will print the currently selected message to your printer.

Delete - Delete the currently selected email(s) from the currently selected folder. You can also use this to delete folders.

Stop - By pressing the STOP button you can interrupt the communications link between your email reader and the mail server. This is useful if your program becomes stuck trying to get mail from a server that might have gone off-line.

The Folder Window. The left window is called the folder window. It contains all of the folders in which you can store your email.

The purpose behind folders is simple. Folders allow you to maintain a minimal amount of order in sorting your mails. For example, you could have a folder for email from friends and another folder for email from family. Most people end up working with a couple of folders in order to maintain some control of how they save their email.

You can create a new folder by right clicking the 'Local Mail". You can use the DELETE key or the DELETE button to remove the selected folder and all it's contents.

A single click on any folder icon will open that folder. Thus causing all of the messages in that folder to be displayed in the Message Title Window.

The Message Title Window: The upper right window is the Message Title Window. It contains the titles and authors of the messages in the currently selected folder.

Reading a message is a just simple click. Click on a message title to view the contents of the message in the message window. Previously read messages are displayed in normal text, while new, unread messages are displayed with their Titles and Authors in bold text.

You may move a message from one folder to another by selecting the appropriate message in the message folder window. Then, drag and drop the message onto the desired folder in the folder window.

The Message Window: The window which fills the lower most portion of the screen is the message window. Here the contents of the currently selected message are displayed.

Click on a hyper link and within a few seconds the browser will be running on your screen and you will be off to that location.

Receiving Email - Explorer Email Program

Like Navigator users, Explorer users have a variety of ways to get to their email reader program. From Explorer itself you can click on the MAIL icon on the button bar. Windows95/98 users can also use the start button on the task bar.Using any of these methods will invoke the screen shown below
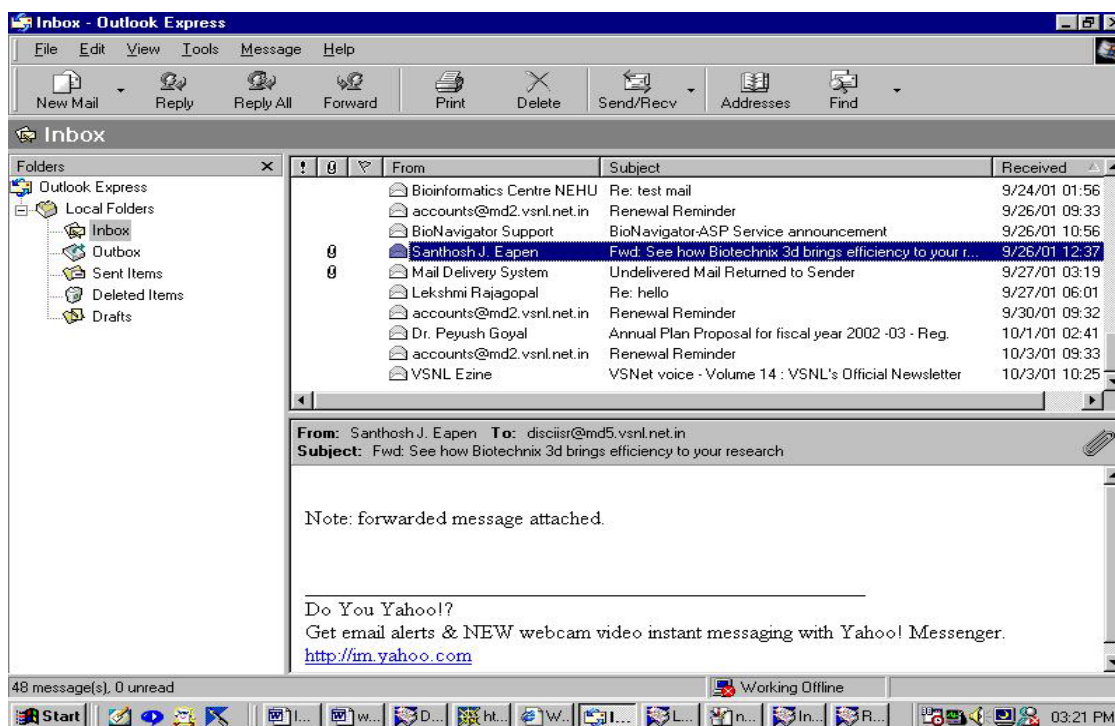
Again, your screen has been subdivided into sections, four of them in this case. The button bar, a folder selector, the message title window and the message window.

The Button Bar: The button bar basically contains shortcuts to certain menu functions.

New Mail - Pressing this button allows you to write a new email for someone by invoking the email authoring program.

Reply - This button will allow you to send a reply to someone that sent you email.

Reply All - Sometimes you will receive an email in which you are not the only recipient. Pressing this button allows you to reply to all of the email addresses from that email.

Forward - This button will help you to send a message you received to someone else.

Print – Prints the message selected.

Delete - Allows you to delete the currently selected message.

Send and Receive - Pressing this button will serve two functions. It will query your mail server and get any new email that might be waiting for you, and it will send any pending messages, that you have authored, to your email server.

Addresses – Opens the address book that contauls a list of addresses entered by you.

Find – A search option for your messages.

The Folder Selector: Like other email programs, the Explorer email reader is capable of handling folders. This control allows you to switch folders with ease. Simply click on the down arrow and then select the folder you desire.

The purpose behind folders is simple. Folders allow you to maintain a minimal amount of order in sorting your emails. For example, you could have a folder for email from friends and another folder for email from family. Most people end up working with a couple of folders in order maintain some control of how they save their email.

You can create a new folder, or delete an old one using the FILE|FOLDER menu options. To create a folder, use FILE|FOLDER|CREATE, to delete use FILE|FOLDER|DELETE or directly by right clicking the "Local Folder" button.
In order to move a message from one folder to another you can use the EDIT|MOVE TO or EDIT|COPY TO menu options. This will enable you to relocate the currently selected email from one folder to another.

The Message Title Window: The message title window contains all of the titles of email in the currently selected folder. To view any one message, click on the message and it will be displayed in the lower message window.

The Message Window: The message window will display the contents of the currently selected message. Like the Navigator Email reader, this area is capable of displaying graphics and is HTML capable. This means that clicking on a link in the message window will invoke your web browser and take you to that location.

Sending Email - Navigator Email Program

Having the ability to read email without the ability to send/reply to email would be like owning a bicycle with only one wheel. There are several ways of reaching the Email Authoring Program. You can access it from the Navigator FILE|NEW MESSAGE menu or press NEW MSG button or from the email reader by pressing the TO:Mail, REPLY:MAIL, REPLY:ALL or FORWARD buttons on the button bar.

Using any of these methods will bring up the Email Authoring program. Shown below is a typical screen for the Navigator email authoring program.
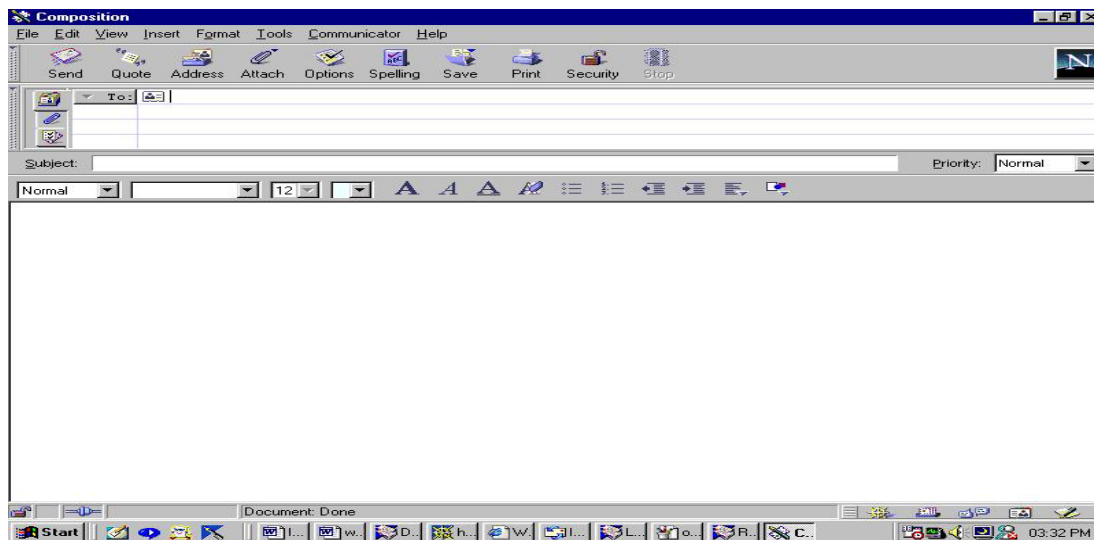
There are three basic components to the Navigator email program, the button bar, the envelope and the message area.

The Button Bar: The button bar contains several one-shot functions. By one shot we mean that you should press these buttons only once. Pressing any button more than once would be pretty meaningless.

The button bar contains the following buttons;

SEND - The SEND button is exactly what it says. Pressing this button will cause the email program to connect to your server and attempt to transmit your email program.

QUOTE - The process of QUOTING is simple. In reply to someone else's email, you decide you wish to either quote something, or perhaps rebut what has been said. Pressing QUOTE will transfer the entire contents of their email, into the edit window for you to use.

ADDRESS - Pressing this button will call up the address book for the authoring program.

ATTACH - This button allows you to attach a file to a email/newsgroup posting.

OPTIONS – Gives options for the format of your mail.

SPELLING – Checks the spelling of your message.

SAVE – Saves the message.

PRINT – Prints the message you've typed.

SECURITY – Shows security information.

STOP - Halts the communications between the authoring program and the mail/news server.

The Envelope: Like real mail, email has an envelope. This envelope is, however, unlike any other mail envelope you have ever encountered. We know that in order to send email to someone, we need to know their address. Assuming I want to send email to my Aunt Mary, I might put "AuntMary@nyc.com" in the "To:" field of the email envelope. The

"To:" field is where you place the email address for the person or persons you want this message to go to. If you want the email to be received by more than one person you can also include additional email addresses here. Just separate them by commas. Like this;

    addr1@anyserver.com, addr2@myserver.com, etc.

The "CC:" field is the carbon copy field. It's major use is to send a duplicate copy of the mail to one or more secondary individuals. For example lets say you wanted to send an email to your boss, reminding him about your vacation. Your envelope might look like this;

    To: BigBoss@mycorp.com

    CC: payroll@mycorp.com, departmentX@mycorp.com

The subject field is very important. The authoring program will complain if you do not fill in this field. Basically, it's a good idea to have a subject field. It's the title that others will see in their Message Title Window. So lets add a line to our email to the boss.

    To: BigBoss@mycorp.com

    CC: payroll@mycorp.com, departmentX@mycorp.com

    Subject: Reminder: Scheduled Vacation begins Monday.

Notice that the subject clearly informs the recipient as to the content of the message. The lesson here is simple. Try to be concise and informative with your subject line.

    The "attach" button allows you to attach a file or web page to your message.

Sending Email - ExplorerEmail Program
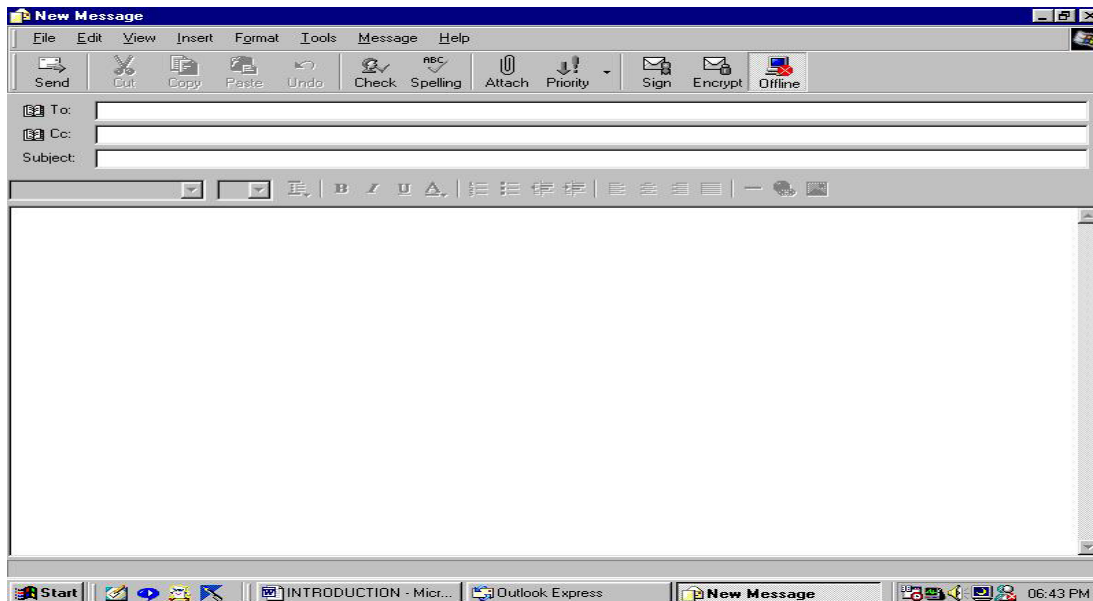
In each of these programs, there is considerable similarities. So if something isn't explained for one program, it will be explained for the other. The basic layout of these

screens comprise three major sections, a button bar, the envelope and the message entry area.

The primary difference lie in the button bars and the envelope areas. We shall address the email authoring program first. The button bar for the Explorer Email program is more extensive. Looking from left to right we have the following buttons.

Send - Send the current message to your email server for transmission out on the net.

The next four buttons Undo, Cut, Copy, Paste are windows functions taking advantage of your windows clipboard. For more information on using these functions, we suggest you look them up in your windows manual or your windows help files.

Address Book - Pressing this button calls up the address book for the Explorer email program.

Check Names - This button is somewhat misleading. The purpose behind the button is simple. It provides a means of checking that the addresses you have entered are in the correct format. It does not check to see if the address is a valid one.

Attach - Click on this button if you want to send this email with a file attached to it.

Priority – Options for priority of your message

Sign - Pressing this button will insert your signature file into the email message.

Encrypt – For encrypting the message.

Explorer Email Envelope Area

The envelope region of the screen (below the button bar) contains three basic fields. These are;

To:
CC:
Subject:

We know that in order to send email to someone, we need to know their address. Assuming I want to send email to my Aunt Mary, I might put "AuntMary@nyc.com" in the "To:" field of the email envelope.

The "To:" field is where you place the email address for the person or persons you want this message to go to. If you want the email to be received by more than one person you can also include additional email addresses here. Just separate them by commas. Like this;

addr1@anyserver.com, addr2@myserver.com, etc.

The "CC:" field is the carbon copy field. It's major use is to send a duplicate copy of the mail to one or more secondary individuals. For example, let's say you wanted to send an email to your boss, reminding him about your vacation. Your envelope might look like this;

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CC: payroll@mycorp.com, departmentX@mycorp.com

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To: BigBoss@mycorp.com

CC: payroll@mycorp.com, departmentX@mycorp.com

Subject: Reminder: Scheduled Vacation begins Monday.

Notice that the subject clearly informs the recipient as to the content of the message. The lesson here is simple. Try to be concise and informative with your subject line.

The Message Area: By far the largest region in this program, the message area is where you type your message in. We suggest learning the keystrokes for an application like Notepad, since windows uses the same keystroke set across the board for navigating in large text entry areas.

LISTSERV

One of early mailing list program that was widely used is LISTSERV. It is a most popular on computers on the BITNET network because many of those computers are IBM mainframes, and LISTSERV generally only runs on IBM mainframes. Most Internet users interact with LISTSERV programs by sending mail to them.

In addition to the basic funciton of taking a single message and sending it to all subscribers, the basic functions of subscribing, unsubscribing, checking to see who else is subscribed, and retrieving information about the conference are all automated. Of even greater importance to librarians and historians is the ability of LISTSERV to automatically archive past postings and to permit searching and retrieval of past message. Programs such Unix List processor (or Listproc), Mailbase, Mailserv, and Majordomo are now being used to manage a growing number of lists. And while the commands vary slightly, each program can handle the basic of list management.

NEWSGROUPS

Newsgroups or Discussion Groups, as they are sometimes called are part of Usenet. A newsgroup is really nothing but a collection of messages dealing with a particular subject. Like LISTSERV, it is also an asynchronous one-to-many model, but it does not use E-mail as the transport mechanism. Instead of E-mail, a site will receive a certain number of the thousands of newsgroups available. A user at the site can choose which groups to read.

To read a newsgroup, a newsreader client program is required. Programs such as rn, trn, or tin for UNIX; ANU-News for VMS; Newswatcher for the Macintosh, and Win VN and News Xpress for Windows are used to read messages within groups, organize the order of newsgroups, and post or reply to messages. While the newsgroups can be

disseminated on the Internet using the network news transfer protocol (NNTP), it can be disseminated by other non-internet means, such as UNIX to UNIX copy (UUCP).

There are two major classes of newsgroups:Moderated and unmoderated.

Moderated Groups

Almost exclusively, are plain texts and are more formal than the far more numerous unmoderated newsgroups. In Moderated Newsgroups, one or more persons act as the moderator and control which articles become available to the public. This tends to make the group more orderly since posters know they need to get past the moderator before anyone else sees their article, so people tend to be more careful to stay within the group's guidelines.

Unmoderated Groups

Unmoderated newsgroups are much more open. Anyone can post pretty much whatever they want and anyone who has access to the group can read the articles or see the pictures if they know how to decode them. This openness can cause flames or attacks from others in the group if they think someone posted inappropriate material, which is not always apparent from the Newsgroup's name or made clear in the group's FAQ (Frequently Asked Questions), assuming new posters bother to read it, which most don't.

In this chapter we explored beyond the basic setup of email and the newsgroups. By now you should be capable of operating email, replying to messages, posting on the newsgroups and replying to posts you find there.

MYTHS OF THE INTERNET

Some of the darker sides of the Internet are included to warn you, and help you to avoid falling into these traps. Remember, the items found in this section are HOAXES. None of this stuff is real so don't fall victim to it.

Email Viruses

This is an old one, but here is the story as we know it. A couple of years ago an email surfaced among the users on AOL. The email told a tale about a strange virus which would heavily damage your computer. The email would be sent from one person to another. Each person sending the message did so in good faith, but what was really happening was that the email was preying on the ignorance of the recipient to perpetuate the hoax. This doesn't mean one should download software from just any website. If you are truly concerned about viruses, we suggest the best source for virus information is CIAC, the Computer Incident Advisory Capability, a working group of the United States Department of Energy. The CIAC Website can be found at (http://www.ciac.org/ciac/ciac_virus_info.html).

Finally, one last note on this topic. IT IS IMPOSSIBLE FOR A VIRUS OF ANY SORT TO BE SENT IN THE BODY OF A MESSAGE. YOU CAN CONTACT A COMPUTER VIRUS BY RUNNING AN ATTACHED EXECUTABLE FILE, BUT YOU CANNOT GET ONE BY READING THE TEXT EMAIL.

A Dying Child

This scam is actually a variation of one that has been around for a long long time. The idea goes something like this. You get an email detailing a child who is dying. Before the child dies, he/she would like to receive email from as many people as possible. The email goes on to ask you to forward this email to as many people as possible.

Originally, the story was the same, but the child wanted postcards so that he could get himself into the Guinness book of records for the most mail received. In fact it got so bad at one point Guinness announced that they would not carry that category any longer. With the Internet becoming more publicly accessible, the scam was updated to be emails instead of postcards.

Occasionally this same tactic is used as a means of revenge for some slight, real or imagined. The point here is simple. Delete the email, do not forward it to your friends and do not respond to the email address provided.

Make Money Fast

The Internet is the great equalizer. You are likely to find friends on the Internet from all walks of life, but occasionally you may run into someone offering you the "deal of the century".

Unfortunately there are people who try to rip you off on the Internet as there are people in the real world. Remember the old adage, "If the deal sounds too good to be true, it probably isn't true!".

You will get offers like this via your email. Not many, but enough to be annoying at times. Our suggestion is simple. Forward the email back to the administrator of the system from which it came.

For example lets say you get unsolicited email from account "hotdeal@anysite.com". The best approach would be to respond to the email in this manner.

"TO: hotdeal@anysite.com

CC: admin@anysite.com,   postmaster@anysite.com,   root@anysite.com, sysop@anysite.com

Subject: Spamming

Sirs,

I do not appreciate receiving unsolicited emails of this nature. Please remove me from your list immediately!"

Note the "CC:" field. In that field include some of the most commonly used names by the system owner from which the email originated. Most system administrators are adamantly against people abusing their system and they regard sending unsolicited email as an abuse. The idea here is simple. By sending a reply you are asking to be removed from their list, and alerting the owners of the system to a probable violation of their own rules.

This problem has gotten so bad that on some of the larger ISP's they have built a complaint department for handling such complaints, and violators are thrown off the system.

Web Page Promotions

This is addressed to the folks that have or plan to have web pages for business purposes. Very often you will receive email from a company claiming to be able to help boost your site traffic. Below is a typical email like this.

"Hi There!

I just finished visiting your website, very well done!

I couldn't help but notice that your hit counter seemed a little low, which is why I am writing to you now. Would you like to have over 1000 visitors to your site a day? We can help you!....."

Now, lets be realistic here. You may have a great site, but the fact is NO ONE CAN GUARANTEE how many hits you are going to get.

Your web designer is the best person to speak to about increasing your traffic. If she/he is unable to assist you in that area, then you need to find one that can but do not fall prey to the scam of promised traffic. It just doesn't work that way.

FTP (File Transfer Protocol) and Telnet

FTP - An Introduction

Computers work with data and programs. The ability to transfer data and programs is an integral part of the standard suite of Internet functions. One of the basic abilities provided by most ISP's is UPLOADING/DOWNLOADING of files. There are many different ways of uploading/downloading of files, but in this chapter we are going to review the single most popular method available on the Internet. Simply put, uploading is the process of moving a file from your computer to some remote computer. Downloading is the exact opposite, that is, moving a file from some remote computer to your computer.

One of the oldest Internet methods for moving files from one computer to another is called FTP. FTP stands for File Transfer Protocol. The name "FTP" can represent both a file transfer program, and the underlying protocol used to send information. It's perfectly natural to hear a person say "I used FTP to send a program," or, "Just FTP the files I need." It's a generic catch-all phrase for both the program being used and for how the information is transmitted from one computer to another.

Navigator/Explorer users know about FTP. A partial version of FTP is built right into their program, but using it as such is cumbersome and difficult. Unlike email and network newsgroups, there is no distinct interface for FTP within Navigator or Explorer browsers. One way of using FTP from within your browser is from a web page. Often you will find a link which says "Download Now!" or something similar. Clicking on that link will automatically tell the browser to take the next data being sent to your computer and save it as a file on your local harddrive. This is by no means complete FTP. For example the direction of the link is all one way. Your browser doesn't have an easy way of sending files, only receiving them.

Given the fact that the browsers do not have a decent capability to send files, what other options are open to us? There are several extremely powerful programs available on the Internet right now that can perform the task of FTP in both directions. All we need to do is go get one of these programs. Most of the programs available on the Internet are the result of many hours of hard labor by one or more individuals. These programs are usually called shareware, which means you can download a fully working copy of the program and if you like it enough to keep it, the authors would like you to pay for it. Most shareware programs are extremely inexpensive and worth the money the author is asking for. Show your appreciation for the author and his effort and preserve your honor by paying the requested amount to the author!

Now for the list of locations from which you can download files. These locations include a lot more information and programs than just FTP programs (This is a more expanded list than the one given in chapter II).

Queue ftp (http://www.eesoft.com/qftp)

Cuteftp (http://www.cuteftp.com)

ftppro (http://www.ftppro.com)

turboftp (http://www.turboftp.com)

FTP Basics

If you have got a good FTP program you will have quite a lot of capability, most of which you will never use. There are six basic commands/functions common to all FTP programs which you will use, over and over again. These are;

OPEN
CLOSE
CD
DIR
GET
PUT

OPEN - FTP is both a communications protocol and a file transferring program. Therefore the first thing you need to do is OPEN a communications channel from your computer to the designated FTP server.

This is the same as logging into a server or bbs. Typically a command to open a FTP server could look like anyone of these samples.

open ftp.blah.com

open moreblah.com

open 87.123.56.92

open 87.123.56.92 5000

If you are lucky enough to have downloaded a windowing version of ftp (for Macs or Windows), then you would have a dialog box to enter the name, or address, of the server. Like the URL used in your browser, this name is an important piece of information as it is the only item needed to locate the server on the Internet.

CLOSE - Perhaps the easiest of the FTP commands. This command simply tells the remote computer that you are finished and wish to close the communications channel.

CD - This is the Change Directory command. Like most computers, FTP servers and their contents are stored in directories. The CD command gives you a means of navigating these directories.

DIR - DIR works just like the MSDOS version. It performs a directory listing of the currently selected directory.

GET - Now for the heart of FTP. GET is the command used to retrieve a file from the remote computer and store it on your computer. Some windowing FTP programs allow an implied "GET" by letting the user click and drag a file from one window to another. Other FTP programs require you to type the command out directly. Some typical typed "GET" commands could be;

get stuff.txt

get /pub/b/stuff.txt

get /pub/c/programs.obsolete/stuff.txt

It's important to note that the file is going to be stored in whatever YOUR current directory is. For this reason it's a good idea to start your FTP program from a download directory. Alternatively, if you have a windowing version of FTP, you can navigate your local directories much like you can with file manager.

PUT - The reverse of "GET", this command allows you to send one or more files from your computer to a remote computer. There is a note of caution that should be aired now. Make sure that you have prior permission from the system owner before placing anything into a /pub directory. And remember, IT IS ILLEGAL TO USE THESE PROGRAMS TO TRANSFER COPYRIGHTED SOFTWARE TO UNAUTHORIZED INDIVIDUALS.

Telnet

In this section we will explore using Telnet as a means of connecting to various services on the Internet. Telnet is a character based terminal application and is one of the granddaddy services available on the Internet for what seems like eons. Before we begin, lets backtrack a little and talk about the Internet first.

The Internet is basically a network of thousands of computer systems. There are two basic types of computers connected to the Internet, Hosts and Clients. Clients are machines which access the Internet on a part time basis. They have no permanent connection to the Internet, but instead are capable of hooking to the Internet via a dial up modem, or some similar method. The odds are very good that you are reading this tutorial right now using a Internet client computer.

It's the HOST computers which we are going to be concerned about. Host computers are always connected to the Internet, and in most cases rarely are disconnected from the network. Host computers are where web pages reside, where your email is stored until you retrieve it, where chats and mud's are played. When the Internet was first designed, Telnet was just about the only means of people accessing information on another computer from their own. In effect, Telnet turns your computer into a dumb terminal. What's a dumb terminal? Well in the early days of home computers (back in the mid 70's), a dumb terminal was a common way of talking to your computer. It was a video display and keyboard, nothing more. It had the ability of displaying the information your computer put out and allowing you to enter new information into your computer via the keyboard. Very limited or no graphics, extremely limited functionality. Obviously, we have come a long way since then, but some things haven't changed all that much.

Once you are connected to the Internet, you can start a Telnet session. If you don't have a Telnet program, you can obtain one from any of the ftp site archives. Windows95/98 users should also note that there is a Telnet application on your distribution CD for windows95/98. This program is full featured and contains a built-in ftp program which is especially nice to use. Despite the enormity of the web & the richness of the ftp sites, there is still some things which you can only get to via Telnet.

IRC
MUDS/MOOS
Public Access Servers. (i.e. libraries, stores etc..)

The above list is only a partial listing of things you can do with Telnet.

IRC - IRC stands for Internet Relay Chat. It's a system which allows you to talk "live" with other people around the world. Even such applications as mIRC, a very popular windows based client for IRC's, is nothing more than a fancy, dedicated Telnet front end with IRC extensions built right in. Warning!!! IRC can have an addictive effect on both your working and social life! The ability to talk real time with people from anywhere in the world has proven to have a strong effect on people, and yet, IRC can be a wonderful resource for people looking for information.

MUDS - MUDS, or Multi-User Dungeons, are on-line games with a fantasy role playing theme.

Public Access Servers - There are a considerable number of public access servers available from the Internet.

Nearly every Internet service provider has the ability to accept Telnet sessions. First of all in order to Telnet into a system you will either need to have an existing account or the system will need to be a public access system. Attempting to gain entry to a system which you do not have an account on is called "Hacking" and is against the law. If you have a legitimate need to access something on a system, an email to the root/sysop/sysadmin may get you an account, or at least the data you require. Never, ever, attempt to access a system to which you do not have an account.

Lab Exercises for Internet & E-mail session

1   Create your own email accounts if you don't have. (If it is possible in IISR's local area network, the authority can already create one for the participants for the time being.)
2   Create new address books and folders in your email id. & try aliases.
3   Practice to use a search engine.
4   Using WWW visit a website and try to get into the connected links.
5   Try FTP facility; try *get, put & ls* commands.
6   Try *finger, ping,* and *talk* facilities.
7   Try the Netnews facility.

HYPERTEXT MARKUP LANGUAGE
Subhasini R.
Lecturer, Department of Computer Science and Engineering,
R.E.C., Calicut

Exercise 1
Document Format, Headings, and Paragraphs

This exercise includes use of the basic HTML document format, plus heading and paragraph elements.

- HTML uses formatting codes called "tags" to mark text with formatting instructions. The tags are identified by angle brackets around some text. HTML tags are NOT case sensitive; **<HTML>** will work the same way as **<html>**.

  Note: Some HTML authors prefer to use uppercase within HTML tags because it's easier to locate tags when scanning the document.

- It only takes four elements to create a basic HTML document. It'll be a very boring document--without images and links--but these four eleents will provide a foundation in HTML on which to build.
-
- Note that most (but not all) HTML tags are paired, e.g. **<TITLE>** goes in front of your title and **</TITLE>** goes behind it.

Creating a Basic HTML Document Format:
<HTML>
<HEAD>
<TITLE>
</TITLE>
</HEAD>
<BODY>

   ..
   ..

</BODY>
</HTML>
       <HTML>...</HTML> (HTML document identifier)

The **<HTML>** and **</HTML>** tags identify the beginning and end of an HTML document. Although some versions of some browsers do not require the HTML tag, on other browsers your document may not load correctly if the **<HTML>** tag is absent.

<HEAD>...</HEAD> (document head)

Web browsers and search engines use the information between the **<HEAD>** and **</HEAD>** tags to gather information about the document. For the scope of these exercises, the only tag used between the **<HEAD>** and **</HEAD>** tags is the **<TITLE>** tag.

<TITLE>...</TITLE> (document title)

The **<TITLE>** element should only appear once in the head of an HTML document (between the **<HEAD>** and **</HEAD>** tags). The text that appears between the **<TITLE>** and **</TITLE>** tags is used as the title of the document, and is:

- o displayed by most Web browsers in the browser window's title bar,
- o used as the label for the page when someone creates a bookmark for it, and
- o a feature of your page used by web search tools to index your document.

<BODY>...</BODY> (document body)

This is where all the action happens in an HTML document. With the exception of the above HTML elements, nearly every other tag must appear between the **<BODY>** and **</BODY>** tags.

Creating HTML Headings:

<Hx>...</Hx> (Heading)

Headings are used to identify sections of a document. HTML provides six levels of headings, numbered 1 through 6. For the largest heading, you would use **<H1>** and **</H1>** tags. For the smallest, you would use **<H6>** and **</H6>** tags. Note that most browsers will assume that white space should appear before and after a heading element, so you don't generally need to put a <P> or <BR> before or after a heading.

HTML headings work like this:

<H1>...</H1> produces

A heading like this

<H2>...</H2> produces
A heading like this

<H3>...</H3> produces

A heading like this

<H4>...</H4> produces
A heading like this

<H5>...</H5> produces
A heading like this

<H6>...</H6> produces
A heading like this

Paragraph Tags
<P>...</P> (paragraph)

In general, a Web browser starts a new paragraph only when it encounters a **<P>** tag. Without **<P>** tags, the text in your HTML document will appear as one large, continuous paragraph. Alas, life is always more complex that it seems, and this is the case with paragraphs in HTML. Various versions of HTML have defined paragraphs differently. The only thing these versions agree on is that you indicate a plain text paragraph (not necessarily it's beginning or ending) by using the **<P>** tag.

Early versions of HTML specified the **<P>** as a **non-paired** tag. There was no corresponding **</P>**, and the **<P>** tag was used to indicate the **end** of a paragraph (a paragraph break), not the beginning. So paragraphs in the early versions of HTML looked like this:

The Civil War was the first conflict that was dominated by firearms. Muskets employed in earlier wars were one-shot smoothbores, which were inaccurate and extremely limited in range.
<P>
Reloading was a difficulty job; and the primitive flintlocks would not work when wet, and only 80 percent of the time under ideal conditions.
<P>
Percussion caps for ignition soon replaced the unreliable flintlocks,
and experients with rifled muskets were initiated. A revolution in infantry warfare was sparked by Frenchman, Claude E. Minie, who in 1849 designed a bullet (not a "ball" as most Civil War participants referred to it) that was smaller then the diameter of the gun barrel and could be inserted easily.
<P>
When fired, the base of the projectile expanded to fit the rifling, giving the bullet a stabilizing spin for greater accuracy and range.
<P>

Most browsers that were created early on in the history of the Web--and many current browsers--still assume that paragraphs will be formatted this way. When they come across a **<P>** tag, they start a new line an add some extra vertical space between the line they just ended and the one that they just began. In more recent versions of HTML, the paragraph tag has been revised. In these versions, the paragraph tag is **paired (<P>...</P>)**. So the "minie ball" story would look like this in the newer versions of HTML:

<P>The Civil War was the first conflict that was dominated by firearms. Muskets employed in earlier wars were one-shot smoothbores, which were inaccurate and extremely limited in range.
</P>
<P>Reloading was a difficulty job; and the primitive flintlocks would not work when wet, and only 80 percent of the time under ideal conditions.
</P>
<P>Percussion caps for ignition soon replaced the unreliable flintlocks, and experients with rifled muskets were initiated. A revolution in infantry warfare was sparked by Frenchman, Claude E. Minie, who in 1849 designed a bullet.

Exercise 2:
Unordered Lists

This exercise includes use of headings and an unordered list..

Creating Unordered Lists:

- HTML provides a variety of list formats to use in your HTML documents.

- Unordered lists are also referred to as "bulleted" lists. To make an unordered list:

    1. Start with a **<UL>** tag.

    2. For each item on your list, enter an **<LI>** tag followed by the item. (No closing tag **</LI>** is needed, but you may include one if you wish.)

    3. End with a closing tag: **</UL>**.

    4. <UL>

        <LI>item

        <LI>another item

        <LI>yet another item

        </UL>

- List items can contain more than one paragraph.

- You may specify the bullet type by adding an attribute such as **TYPE=DISC**, **TYPE=CIRCLE**, or **TYPE=SQUARE** within the **<UL>** tag, e.g. **<UL TYPE=SQUARE>**.

- If you put a heading *within* an unordered list, it will line up with the other list items. By ending the unordered list, a subsequent heading returns to the left margin.

- **Tip:** Lists are considered special types of paragraphs. Therefore, there is no need to precede or follow them with **<P>...</P>** tags.

Write HTML required to produce:

Three Colours are Found on the U.S. Flag

- red
- white
- blue

The First Family Includes

- Bill
- Hillary
- Chelsea
- Socks
- Buddy

Tip: **For this and all subsequent exercises, consider creating a template page in your editor. In this template, include all the required HTML elements of** <HTML>...</HTML>**,** <HEAD>...</HEAD>**,** <TITLE>...</TITLE>**, and** <BODY>...</BODY> **so that you don't need Ordered Lists**

This exercise includes use of a heading and an ordered list.

Creating Ordered Lists:

- Ordered lists are used for information that needs to be presented with a preceding numeral. To make an ordered list:

  1. Start with an **<OL>** tag.
  2. For each item on your list, enter an **<LI>** tag followed by the item. (No closing tag **</LI>** is needed, but you may include one if you wish.)
  3. End with a closing tag: **</OL>**.

4. `<OL>`
   `<LI>`1st item
   `<LI>`2nd item
   `<LI>`3rd item
   `</OL>`

- List items can contain more than one paragraph.

- With this type of list, you can **reorder** (i.e., change the sequence of the items in your list) without having to **renumber** them all. The power of the **<OL>** tag does this for you automatically.

- You may specify whether you want your list items marked with:

  o capital letters **TYPE=A**

  o small letters **TYPE=a**

  o large Roman numerals **TYPE=I**

  o small Roman numerals **TYPE=i**

  o or Arabic numerals **TYPE=1**

  These **TYPE** attributes are used within the **<OL>** tag, e.g. **<OL TYPE=a>**.

- You may use a **VALUE=x** attribute in the **<LI>** tag to change the count for that list item and all subsequent items, e.g. **<LI VALUE=7>**.

Write HTML required to produce :

Five State Capitals Which Begin with the Letter "A" - in Alphabetical Order

1. Albany
2. Annapolis
3. Atlanta
4. Augusta
5. Austin

Tip: After copying and pasting this text into your editor to complete the exercise, delete all numbers and periods before adding your HTML tags. The power of the **<OL>** tag will insert the ordinal numbers into the list for you automatically

Definition Lists

This exercise includes use of a heading and a definition list.

Creating a Definition List:

- A definition list allows you to list items as indented paragraphs. A typical application of this feature is a glossary or set of "definitions." Instead of using the **<LI>** tag to denote items in the list, the definition list uses two tags to define each list item. Each term to be defined begins with the **<DT>** tag. Each definition for the term begins with the **<DD>** tag.

- To make a definition list:

    1. Start with a **<DL>** tag.

    2. For each term to be defined on your list, enter a **<DT>** tag followed by the term. (No closing tag **</DT>** is needed, but you may include one if you wish.)

    3. For each definition on your list, enter a **<DD>** tag followed by the definition. (No closing tag **</DD>** is needed, but you may include one if you wish.)

    4. End with a closing tag: **</DL>**.

    5. <DL>

       <DT>term

       <DD>definition

       <DT>another term

       <DD>another definition

       <DT>yet another term

       <DD>yet another definition

       </DL>

       Legislative Branch
The House of Representatives and the Senate draft the laws.
       Executive Branch
The President and agencies carry out the laws.
       Judicial Branch
The Supreme Court and other courts interpret the laws.

- **<DT>** and **<DD>** entries can contain multiple paragraphs, lists, or other information.

Write HTML required to produce:

Some Internet Terms

<u>**PROTOCOL**</u>

A specific rule, or set of rules, defining how computers will act when talking to each other. Protocol definitions range from how bits are placed on a wire to the format of an e-mail message.

<u>**TCP/IP**</u>

(Transmission Control Protocol/Internet Protocol) One of the protocols on which the Internet is based.

PPP (Point to Point Protocol) A protocol that allows a computer to use the Internet with a standard telephone line and a high-speed modem.

SLIP
(Serial Line Internet Protocol) Another protocol that allows a computer to use the Internet with a standard telephone line and a high-speed modem.

Nested Lists

This exercise includes use of a heading and a nested list

Creating Nested Lists:

- "Nested lists" simply means lists **within** lists. It's possible to have:
- lists within
    - lists within
        - lists within
            - lists within
                - lists within
                    - lists, etc.

Write HTML required to produce:

U.S. Senators for Five Upper Midwestern States

1. North Dakota
    - Kent Conrad (D)
    - Byron L. Dorgan (D)
2. South Dakota
    - Thomas A. Daschle (D)
    - Timothy Johnson (D)
3. Iowa

      o   Charles E. Grassley (R)

      o   Tom Harkin (D)

4. Wisconsin

      o   Russell D. Feingold (D)

      o   Herb Kohl (D)

5. Minnesota

      o   Rod Grams (R)

      o   Paul D. Wellstone (DFL)

Tip: Consider accomplishing this assignment by creating an ordered list with five list items, each representing a state. After creating this single ordered list, continue by inserting five separate unordered lists after each of the list items from the ordered list (i.e., after each state). Each of these five unordered lists must contain two list items, one for each senator's name. Don't forget to close all of your five unordered lists with ending tags!

Another Tip: Consider indenting the appearance of nested lists when authoring your HTML documents. It's easier to avoid mistakes and to correct errors. You can see an example of this method when you examine the answer page for this assignment.

Extended Quotes and Preformatted Text

This exercise includes use of extended quotations and preformatted text.

Creating Extended Quotations:

- If you're including a lengthy quote and want it to be separated from the surrounding text, use these tags: **<BLOCKQUOTE>** and **</BLOCKQUOTE>**. This element will add space immediately before and after the passage, as well as indent the left and right margins.
- **Tip:** Enclose all the text in the **<BODY>** of a Web page within **<BLOCKQUOTE>...</BLOCKQUOTE>** tags to create left and right margins around text. (Web browser normally don't do this automatically.) This makes it easier to read your document, just as it's easier to read paper correspondence with margins than without them.

Creating Preformatted Text:

- For text that needs to have line breaks, fonts, or tabs exactly as they appear in some other document, use these tags: **<PRE>** and **</PRE>**.

- The **<PRE>** tag instructs Web browsers to display the text between the starting and ending tags with the same spacing and line breaks as the source document. Therefore, you could turn nearly any word-processed document into a simple HTML document by placing the **<PRE>** tag at the beginning of the document and the **</PRE>** tag at the end of the document.

- If you don't put any tags in the body of your document, the Web browser will simply wrap all of the text as a single paragraph. The **<PRE>** tag allows you to use existing carriage returns and spaces as the formatting for your document. Most browsers use a font with a mono-space width (such as Courier) to display the text between the **<PRE>** tags.

Write HTML required to produce:

According to Captain James T. Kirk:

"Space, the final frontier. These are the voyages of the starship Enterprise, its five year mission, to explore strange new worlds, to seek out new life and new civilizations, to boldly go where no man has gone before."

Here's an example of some preformatted ASCII text:

```
\++===============================|           =
 \                /         /==+++==\
     """\                                              \"""
|====================================/
     \   \       / .. . /--===+    +===--""
      \   \     /. .. /        `+'
       \ \   /   /              \ /
        -\ \-'---==+   |           ---==O=-
        --+". . .      "==             / \
       /  |. .  ..    -------- | \
        "===,    .  . -------- | /
          ""\     . ..      =="
```

"""""--=--""

Exercise 7:
Physical and Logical Text Styles

This exercise includes examples of physical and logical text styles. (Note: there'll be more than one "right answer" to this exercise because different tags result in identical output on many browsers.)

HTML provides definitions for bold (**<B>...</B>**) and italic (**<I>...</I>**) text, but there is no guarantee that a particular browser will be able to display bold or italic text. These formatting tags that are dependent on the browser's display capabilities are called **physical styles**.

For this reason, HTML provides emphasis (**<EM>...</EM>**) and strong (**<STRONG>...</STRONG>**) tags that are **logical styles**.

It's safest to use logical rather than physical styles whenever possible. If a browser has access to italics and bold, it will usually display the **<EM>** tag as italic and the **<STRONG>** tag as bold. But if bold and italics are unavailable, the browser will provide another representation for these tags.

To recap:

- physical styles affect text *appearance*
- logical styles affect text *meaning* (preferred)

Creating Physical Text Styles:

- Physical styles specify how text is to **appear**; physical styles are **paired** tags.

        <B>...</B>

Bold text

        <I>...</I>

Italic text

        <TT>...</TT>

Typewriter text

Creating Logical Text Styles:

- Logical styles tag text according to its **meaning**; as with physical styles, these are all **paired** tags. Logical styles include:

<DFN>...</DFN>

Definition. Typically displayed like *this*.

<EM>...</EM>

Emphasize. Typically displayed like *this*.

<STRONG>...</STRONG>

Strong. Typically displayed like **this**.

<CITE>...</CITE>

Citation. Typically displayed like *this*.

<CODE>...</CODE>

Computer code. Typically displayed like this.

<KBD>...</KBD>

User keyboard entry. Typically displayed like this.

<SAMP>...</SAMP>

Computer status message. Typically displayed like this.

Write HTML required to produce:

The use of styles in HTML documents is important. How else will readers of your documents be able to tell when you're **SHOUTING**?

In more refined circles (where people *whisper*) styles enable one to look academically-inclined, like this:

> In her work, *HTML for Snobs*, Professor Karen Mateer points out the *importance* of using **logical**, rather than **physical** styles. *Logical* styles are, as their name implies, *stylish*, whereas *physical* styles are a matter of brute force and ignorance.

Exercise 8:
Horizontal Rules, Line Breaks, and Character Entities

This exercise uses tags from Exercises 1 through 7 and adds use of horizontal rules, line breaks and character entities.

Creating Horizontal Rules:

- The horizontal rule tag puts a line across the display, adjusted to the width of the browser window. This tag is useful for visually dividing sections of text on a page.
- the tag is: **<HR>**. This is **not** a paired tag.
- **<HR ALIGN="CENTER" WIDTH=x%>** creates a centered line x percent of the window width. You can also specify left or right alignment.

- **<HR SIZE=x>**, where **"x"** is a number makes a thicker line.

Creating Line Breaks:

- The **<P>** tag adds a blank line to indicate the beginning of a paragraph. To force a line break with no extra space, use the **
** tag. The **
** tag instructs the browser to begin the text on the next line.

  Consider the following postal address:

  > Lawrence McKinley Gould Library
  > Carleton College
  > One North College Street
  > Northfield, MN 55057-9404
  >
  > Lawrence McKinley Gould Library
  > Carleton College
  > One North College Street
  > Northfield, MN 55057-4097

  Since the address should be displayed on succeeding lines, the **
** tag lets us avoid separating the lines with paragraph spaces.

Creating Character Entities:

- Some characters, such as **<**, **>**, **&**, and **"** have special meaning in HTML. To display them, you need to use a feature known as HTML **character entities**.

  Each character is assigned an abbreviation, such as **amp** for the ampersand (**&**). To place the character in an HTML document, you place an ampersand (**&**) before the abbreviation and a semicolon (**;**) after the abbreviation. These combinations are referred to as character entities collectively.

  Note: Most browsers interpret the quotation mark (**"**) and thus do not require the **"** entity.

- HTML also provides multinational character entities, such as **ü** for **ü**, **È** for **È**, etc. Note that unlike the rest of HTML, character entity names **are case sensitive**.

Write HTML required to produce:

Wow, in seven short exercises, I've learned how to make an effective page of text on the World Wide Web. I know how to:

1. Use basic HTML format.

- o <HTML>...</HTML>
- o <HEAD>...</HEAD>
- o <TITLE>...</TITLE>

2. Make several kinds of lists.
    - o unnumbered
    - o ordered
    - o definition
    - o nested

3. Use different levels of headings, from
    - o **Large**
    - o **to small**

4. Include extended quotations (like this one):

    > The Americans have need of the telephone, but we
    > do not.
    > We have plenty of messenger boys.
    > --*Sir William Preece, chief engineer of the British
    > Post Office, in 1876.*

5. Use logical and physical styles to make text appear:
    - o **bold**
    - o *italic*
    - o `fixed-width font`

6. Use paragraph tags, characters entities, and horizontal rules.

In addition to all **that**, I've learned several definitions. I know that:

The *Internet* is a collection of connected networks all over the world.
The *World Wide Web* was started by CERN (the European Laboratory for Particle Physics) and seeks to build a distributed hypermedia system.
HTML stands for Hypertext Markup Language and is a tool for creating multi-layered and linked documents published on the Web.

Exercise 9:
Image Links

This exercise gives you practice using URL's in image tags.

URLs

- URL is an acronym for **Uniform Resource Locator**. URLs specify the location of files on servers. A URL includes three things:

1. the type of resource being accessed (e.g., http, ftp, gopher)
2. the address of the server
3. the location of the file

Image Tags

- The **<IMG>** tag is used to integrate graphics with text. The majority of browsers can use two types of graphics formats: GIF or JPEG format. The filenames for these images almost always end with **.gif** and **.jpg** (or **.jpeg**).

  To include an image next to the text of your document (called "inline images"), use:

  <IMG SRC="URL">

  where URL is the URL of the image file. By default, the bottom of the image is aligned with the baseline of the current line.

  You can also specify the alignment of your image in relation to the text, for example:

  <IMG   ALIGN=TOP   SRC="URL">   or   **<IMG ALIGN=MIDDLE SRC="URL">**

  For more examples, see:

  Http://www.library.carleton.edu/staff/terry/learnhtml/imgalign.html

- Because some users do not have graphical browsers or because some users turn their browsers' image capabilities off to improve performance speed, you need to specify text to be displayed (if your image relays information). Use a tag like this one:

  <IMG SRC="URL" ALT="text to be displayed">

- Because it will improve the speed at which your pages load in the user's browser, it is highly recommended that you also include the **<IMG HEIGHT=x WIDTH=x >** attributes for every image you use (where **x** is measured in pixels):

  <IMG SRC="URL" HEIGHT=x WIDTH=x ALT="text to be displayed">

You can easily determine the height and width of an image by clicking once and holding, and then selecting **Open this Image**. Most browsers will display the image in another window with the image's dimensions appearing in the title bar of the window.

- You may use other attributes with the image tag, such as:
  - **<IMG BORDER=x>** lets you control the thickness of the border.
  - **<IMG VSPACE=x HSPACE=x>** allows you to control vertical and horizontal space around an image.

Write HTML required to produce:

1. a graphic of a red star on your screen. Here is the URL: **http://www.library.carleton.edu/images/red_star.gif**

   the same image with a different alignment of your choice.

2. a graphic of an "under construction" image on your screen. Here is the URL: **http://www.library.carleton.edu/images/at_work.gif**

   the same image with a different alignment of your choice.

3. a graphic of a cd-rom image on your screen. Here is the URL: **http://www.library.carleton.edu/images/cdrom.gif**

   the same image with a different alignment of your choice.

4. a graphic of a muse goddess image on your screen. Here is the URL: **http://www.library.carleton.edu/images/muse.jpeg**

   the same image with a different alignment of your choice.

5. a graphic of a sailing ship and line image on your screen. Here is the URL: **http://www.library.carleton.edu/images/line.ship.left.gif**

   the same image with a different alignment of your choice.

6. a graphic of the Carleton College Library logo image on your screen. Here   is   the   URL: **http://www.library.carleton.edu/images/mainlibe_hdr.gif**

the same image with a different alignment of your choice.

Courtesy Tip: Remember to add alternative text in all of your image tags for readers without graphical interfaces or who have turned their images off!

Exercise 10:
Hyper Links

This exercise gives you practice linking documents.

Text Links

- The tags used to link text together are called **anchors**. An anchor looks like this:

    <A HREF="file.html">HIGHLIGHTED TEXT</A>

    When the above example is encountered by a Web browser, the words *HIGHLIGHTED TEXT* will appear as a link (often colored blue and underlined). Clicking on the link instructs the browser to retrieve the document located at the specified URL.

Relative and Absolute File Paths

- An *absolute path* points to a file based on its *absolute* location on the Web server. Another way of describing this concept is that an absolute path is the entire address of a file, from the **http://** (or equivalent) down to the file name.

- A *relative path* points to a file based on its location *relative* to the current file.

- Use absolute paths if the linked documents are not on the same Web site.

Use relative paths whenever possible.

Image Links

- An image link enables you to click on an image in order to move to a different HTML document. (Images of buttons are often used this way.) To do this, insert the image link inside the anchor tag, like this:

    <A   HREF="file.html"><IMG   SRC="file.gif"   ALT="alternate text"></A>

E-mail Links

- Some browsers support a "mail to" command. To make it easier for most viewers of your page to send you e-mail, use a command like this:

  <A HREF="mailto:name@address.net">darkname@address.net</A>

Links to Specific Places within Documents

- Sometimes you want to use links to move back and forth inside one document or to move to a specific section of a different document. To do this:

  1. Specify the place you want to link *to* by defining an anchor:

     <A NAME="PLACE">(Location You Want to Link To)</A>

  2. Specify a link at your origin point (the place you're linking *from*) by using a pound sign (#) in front of the anchor name you specified in step 1:

     <A HREF="#PLACE">HIGHLIGHTED TEXT</A>

  3. To link from a different document, the tag looks like this:

     <A HREF="file2.html#PLACE">HIGHLIGHTED TEXT</A>

Hypermedia Links

- To include animations and sounds, you use the anchor tag:

  <A HREF="URL">HIGHLIGHTED TEXT</A>

  where URL is the URL of the media file. The only difference will be the file extension of the linked file.

Write HTML required to produce:

1. a link tag that references a file called **another.html** in the same directory as your HTML document. Have the text on the screen say **Another Page**. Note: You will need to create an html file and save it as **another.html** in order to complete this step.

2. a link tag for the same file if it is in a different subdirectory named **HTMLdocs**. Note: You will need to create a folder called **HTMLdocs** and move **another.html** into it in order to complete this step.

3. A link tag to take people to the URL Primer
   http://www.ncsa.uiuc.edu/demoweb/url-primer.html. Decide for
   yourself what the text on the screen will say.

4. the pair of link tags that will take a viewer back to the table of contents
   in a document. (Assume the table of contents is near the top of the
   Web page.)

5. A link tag to use the image
   http://www.library.carleton.edu/images/red_star.gif to link to the
   file **another.html**.

Exercise 11

FORMS

All the HTML elements we've discussed have been display-oriented, in that they affect
they way a page appears within a browser. Now we'll look at the HTML form, an
element that not only affects the display but also allows the reader to send information
back to the server.

Those two issues display and send, are the primary pieces of a Web-based form:

➢ The form controls that you create on a Web page are displayed in a browser and
   can be used by the visitor to enter data, select checkboxes or radio buttons, select
   items from a list, and so on.
➢ Once the visitor enters data into the form, he or she must have a mechanism for
   sending the data back to the server. Once the server receives the data, it must
   have another mechanism for storing or manipulating that data.

Designing a Form

Designing a form for a Web page isn't especially difficult if, as with tables, you do the
job in an HTML editor such as FrontPage Express. The forms you create for the Web
look and behave much like any other computer-generated forms you may have come
across. For example, an HTML form can have a one-line data-entry field (sometimes
called an edit field) in which the reader can type an e-mail address, as shown here:

E-mail address :   myname@xyz.com

You use the <FORM> tag to begin the form definition. As part of that definition, you specify where the data should be returned (a URL) using the ACTION attribute. The destination might be the server for the form's Web page, or it could be some other server that will accept the data. You also specify how the data should be returned, using the METHOD attribute. The POST method is a common way to handle the job.

Within the opening and closing <FORM> tags, you lay out the controls of the form. You can include any other HTML elements as well, which will appear in the page along with the form controls. Some of the more common form-control tags are shown in the table.

TAG	FORM CONTROL	DESCRIPTION
<INPUT TYPE = "TEXT">	Data-entry field	A one-line data-entry field
<INPUT TYPE = "PASSWORD">	Password field	A one-line data-entry field in which the characters you type are displayed as asterisks to hide them
<TEXTAREA>	Multiple-line data-entry field	Enter a paragraph or more of text
<INPUT TYPE = "CHECKBOX">	Checkbox	Select an item by clicking its checkbox
<INPUT TYPE = "RADIO">	Radio button	Select one of a group of radio buttons
<SELECT>	List	Select one or more items from a list
<INPUT TYPE = "SUBMIT">	Button	When clicked, sends the form's data to the server
<INPUT TYPE = "RESET">	Button	When clicked, resets all form controls to their defaults.

The definition for each control (other than the Submit and Reset buttons) must include a name for the control, which is sent to and used by the server to identify the data that was returned from that control. Each control can have several other attributes that define how it behaves. For example, the single-line data-entry field has the following attributes:

Size : The displayed width of the field in the form.

Maxlength : The maximum number of characters that can be entered into the field.

Value : The characters that appear within the field when its page is first opened or when the Rese button is clicked. You might use (none) as tis default value so that when the data is returned to the server, this entry indicates that the visitor has entered no data in this field.

Here is an example of the code for a data-entry field:
<INPUT TYPE = "TEXT" NAME = "COMPANY" SIZE = "25" MAXLENGTH = "100" VALUE = "(none)">

As the visitor enters information into a form, that data is still on the visitor's local computer – it has ot reached the server yet.

Getting the data back to you

The visitor clicks on the Submit button to send the data back to the server. The browser collects at least two pieces of information about each control in the form:

➢ The name of the control
➢ Its current value

By naming each datum, the server can identify each piece of information it receives. Radio buttons are organized into named groups so that a visitor can select only one button in a group. It is the value of the selected button that is returned for the named group.

When the server receives the data, the possibilities are wide open. Web servers usually have built-in form-handling tools that let you choose how incoming data should be implemented:

➢ Format the data into a standard HTML page and display it to the visitor for confirmation of what he or she has entered.
➢ Write the data to a database file in any of several file formats.
➢ Send the data to an e-mail address.
➢ Let the data trigger the display of another Web page, such as the home page of a company catalog that the visitor selected in the form.

Beyond using a server's built-in tools to handle the incoming data, programming work will be needed to create the necessary script or program to manipulate the data.

Splitting a page into frames

With the HTML features called frames, you can create and display multiple Web pages within a single page. In the traditional way of browsing a Web, if you click a link in one page, a new page opens and replaces the first page in the browser.

For example, when you click a link in a page that serves as a table of contents of other pages, the target page opens, but the table of contents page is removed from the browser. By splitting a page into two frames, the table of contents page can be displayed in a frame on the left, for example, while the target of the selected link is displayed in the other frame on the right side of the browser's window. In this way, the table of contents is always available so that the reader can make another selection.

The concept of frames is neat and simple:

> ➢ Create a single Web page as a frameset, which contains no content other than the frameset definition.
> ➢ Specify how the frameset should be divided into frames.
> ➢ Assign a Web page to each frame

You use the <FRAMESET> tage instead of the usual <BODY> tag to begin the frameset definition in the page. For example, this tag

    <FRAMESET COLS = "33%, 67%>

creates a frameset page that consists of two frames arranged as columns. The first frame will be in a column on the left side of the browser's window; that frame's width will be one-third of the browser's window. The second frame will be a column to the right of the first one and will take up two-thirds of the browser's window.

You specify the source Web page to be opened in each frame with the <FRAME> TAG, as in

<FRAME SRC = "CONTENTS.HTM">
<FRAME SRC = "INSTRUCT.HTM">

In this case, when the frameset is opened in a browser, the frame on the left displays the page CONTENTS.HTM, and the frame on the right displays INSTRUCT.HTM. You now have two Web pages sharing the same browser window.

If the frame on the left contains an index of links, you can have each of those links display its target in the frame on the right. You do so by including the TARGET attribute in the anchor tag for the link and specifying the name of the frame.

To specify a target frame, you must first name the frame. You do so with the NAME attribute in the <FRAME> tag. In the previous example, you could name the tags in this way

<FRAME SRC = "CONTENTS.HTM">
<FRAME SRC = "INSTRUCT.HTM" NAME = "RIGHT">

which gives the name RIGHT to the frame on the right. With that frame named, you can define each link in the index page so that its target resource appears in the named frame, such as:

<A HREF = "SOMEFILE.HTM" TARGET = "RIGHT">

In this way, your index remains in the frame on the left, while the target of each link is displayed in the frame on the right.

Finally since frames are relatively new features of HTML, not all browsers yet support them. You can include the <NOFRAMES> tag within the frameset to provide a message to a browser that cannot display frames.

Example:

<NOFRAMES><BODY>
<P> Sorry, but this page uses frames, which your browser does not support.</P>
</BODY></NOFRAMES>

The <NOFRAMES> tag includes the <BODY> tag, which is not used in defining a frameset but would be recognized by a frames-unaware broser. Anything within the <BODY> tags would then be displayed in the browser.

Exercise 12
"The Final Exam" - Create Your Own Home Page

Now it's time for you to design your own page providing information about your department, business, agency, or self.

Web Authoring with HTML: Advanced Topics

Subhasini R.
Lecturer, Department of Computer Science and Engineering,
R.E.C., Calicut.

- Cascading Style Sheets (CSS)

- Controlling Spacing with CSS

- Creating Custom Classes and Styles

- Fonts, Colors, and Text Properties

- Shading and Boxes

- Positioning Objects and Text

- Controlling How Your Links Look

- Linking to an External Stylesheet

- Cascading Style Sheet (CSS) References

This handout will focus on some of the "higher-end" HTML tools available in the latest generation of hyper text mark-up language, version 4.0. Topics to be covered include Cascading Style Sheets, a very powerful formatting tool that not only allows you to create your own styles but also allows you to control many different HTML files with one set of styles. We will also discuss some of the newer HTML tags, some less used HTML tags, and a even little JavaScript.

Cascading Style Sheets (CSS)

After working with HTML for awhile it's not unusual to become frustrated with the limitations placed upon you by the code: links must be underlined; font types on text can only be controlled with long font tags; all lines must be horizontal; and maybe most significantly, spacing options are severely limited, so much so that tables are the only way to organize material horizontally on the web. Cascading Style Sheets address all of these problems in ways so convenient that you'll never go back to some of your previous methods.

How to Implement CSS

In this document we will cover three ways to implement CSS in your web files:

1. Inline: inserted directly into an HTML tag in your file

2. Embedding the style sheet: inserted between <head></head> tags in your file

3. Linking to an external style sheet

Inline Style Sheets

In HTML you know what the <p> tag does: it forces a paragraph break between two bodies of text. With Cascading Style Sheets (CSS) any HTML tag, such as <p>, can become a CSS selector. In this example, we're going use CSS to modify a <p> tag so that the text that follows will be red. To effect this inline, you would simply add the "style" attribute to an existing <p> tag in your document, as follows:

```
<p style="color: red">This sentence should be red.</p>
```

This color attribute will only affect this particular instance of the <p> tag.

Embedded Style Sheets

In the above example, you used a style sheet method to change one instance of the <p> tag. With an embedded Style Sheet, you could force **all** <p> tags to act the same way in your HTML document. You implement an embedded style in the <head> tag of your HTML file. To make red the text that follows every instance of the <p> tag, you would do the following:

```
<HTML>
<head>
<title>CSS Practice</title>
<style type="text/css">
P {color: red}
</style>
</head>
<body>
First line of text
<p>
Next line of text in new paragraph – this will be red.
</body>
</HTML>
```

An Explanation of the Embedded Style Sheet Example

1. The <style type="text/css"> statement within the <head> tags tells the browser that your page will be using cascading style sheets.

2. The selector statement always starts with the selector, in our example **P**, followed by a series of attributes stored in curly brackets, separated by colons, and delineated by semicolons:

```
{attribute: detail; attribute: detail}
```

3. Every time the selector (P) appears as a tag, it invokes the attributes specified in the selector statement (makes the text red) as well as performs its own function (makes a paragraph break).

Linked Style Sheets

Linked Style Sheets allow you to control the layout and design of several HTML documents with one style sheet. The benefits of this are obvious, allowing you to control the look of multiple web pages through one CSS file. Because Linked

Style Sheets are significantly different than embedded and inline style sheets, they will be discussed separately later in this document.

Controlling Spacing with CSS

With CSS you have much greater control over spacing than you do in standard HTML. Among the spacing options you can control are indents, line height, and letter spacing. **In all the examples below we will be using embedded style sheets.** Remember that you could implement these inline just as easily by using the **style** attribute in the HTML tag.

A Note About Units of Measurement in Cascading Style Sheets

In CSS you can use relative units or absolute units. You are always safer using relative units which will space themselves based on the browser window size. On the other hand, absolute units won't change regardless of the browser window size.

Relative Units	Absolute Units
em (ems, the width of the element's font) **ex** (x-height, the height of the letter "x") **px** (pixels, relative to the canvas resolution)	**in** (inches; 1in=2.54cm) **cm** (centimeters; 1cm=10mm) **mm** (millimeters) **pt** (points; 1pt=1/72in) **pc** (picas; 1pc=12pt)

Indenting

Text indenting can applied to block-level elements like heading tags (H1, H2, etc.), paragraph tags, center tags and more. We can add an indent attribute to our paragraph selector as follows:

```
P {color: red; text-indent: 10px}
```

This will indent the text 10 pixels to the right. Add this to your page and reload it to see how it looks. You could just as easily mandate that all <H2> tags have a 10 pixel indentation, with the following line:

```
H2 {text-indent: 10px}
```

Line Height

The line-height property controls the spacing between lines of text. For instance, you could make your document double-spaced with the following addition (single spaced line height, the default, is 100%):

```
P {line-height: 200%}
```

Letter Spacing (Internet Explorer Only)

The letter-spacing property defines an additional amount of space between characters. In this example we will use the **em** length attribute to increase the letter space a little bit.

```
H1 {letter-spacing: 0.3em}
```

Creating Custom Classes and Styles

In our examples thus far we've either added CSS selectors and attributes directly to the tag or modified the tag's "natural" attributes by embedding them in the <head> tag. This could be limiting, however, if, for instance, you wanted one paragraph tag to have a different effect than another. You couldn't do this by adding attributes to the <p> tag. Instead, you can create your own **custom classes** that you can invoke at any point in your HTML document within any HTML tag. For instance, if I wanted to use the double-spacing we learned about above, not in all <P> tags, just in some, we could create a custom class called "double-space" in the <head> tag as follows.

```
<head>
<style type="text/css">
.double-space {line-height: 200%}
</style>
```

Notice that the custom class is always preceded by a "."; this tells the browser that you are creating a custom class. (Note that you could also create this custom class in a Linked Style Sheet; see below.)

Invoking Custom Classes in Your HTML Document

Once you have created the custom class in the embedded style statement (or in a Linked Style Sheet), you can invoke it within an HTML tag with the "class" attribute, as in the following example:

```
<p class="double-space">This line of text should be double-
spaced. If it isn't, you may have a typo in either your
custom class statement or your tag insertion statement.</p>
```

Fonts, Colors, and Text Properties

Up until now you have probably been using the <font> tag to control your font face, type, and size. Thankfully, CSS affords much great flexibility and control over your text than the <font> tag.

Changing the Font Type

To the change the font, or font face to be more specific, you add the **font-family** attribute to either a selector or an HTML tag, as in the following example:

```
<p style="font-family: helvetica">This text will be in
helvetica.</p>
```

Or you could establish a custom class:

```
.newfont {font-family: courier}
```

and invoke it in the text somewhere:

```
<p class="newfont">This text will be in courier.</p>
```

Changing the Color

You could also change the color by adding a color attribute to either the HTML tag:

```
<p style="font-family: helvetica; color: orange">This text should be
helvetica and orange.</p>
```

or the custom class:

```
.newfont {font-family: courier; color: purple}
<p class="newfont">This text should be courier and
purple.</p>
```

A Note about HTML Colors

Colors in HTML are expressed as hexadecimal numbers. For instance, green is #009900; this is obviously hard to remember. A good html/web design book or web design site will list the hexadecimal colors, including **http://www.lynda.com/hexh.html**.

The good news is that for several basic colors you can simply type in the name of color. So rather than typing #009900, you could instead use "green." The colors you can specify **without** using the hexadecimal number are Red, Magenta, Green, Yellow, Blue, Aqua, Dark Blue, Orange, Light Blue, Gray, Maroon, Navy, Lime, Purple, Fuschia, Teal, Silver, and Pink.

Change Text Properties

If you want to make your text bold, you would add the following statement to your style statement in the HTML tag, or the selector statement at the start of your document:

```
Font-weight: bold
```

Other font-weight options include **normal**, **bolder**, and **lighter**.

To make your text italic:

```
Font-style: italic
```

To underline your text:

```
Text-decoration: underline
```

Other text-decoration options include **line-through** and **blink**.

Shading and Boxes

Bordered Boxes

Cascading style sheets allow you to put borders and add shading to pieces of text by adding a style statement to a regular HTML tag. For instance, in the example below, the word "bordered" will appear with a thick green border around it on your web browser:

```
<p    style="color:    red;   border-width:   thick;   border-color:
green">bordered</p>
```

In this example, we've inserted the CSS information directly into an HTML tag, <p>. By inserting the "style" attribute into the paragraph we can control how the text looks within the confines of that tag (ending with the </p> tag). In that style

attribute tag we specify a color with "color: red," a border and its width with "border-width: thick," and a border color with "border-color: green."

Shaded Boxes

You can also shade areas of text by adding the background color the style attribute. In the example below the text will be red with a yellow background:

```
<p style="color: red; background: yellow">This is the <br> shaded text</p>
```

Positioning Objects and Text

Simple Alignment

CSS allows you to align text using the "text-align" attribute. For instance, to center align a paragraph inline, you could type the following:

```
<p style="text-align: center">
```

Or to embed a custom class tag that will justify all text:

```
.center {text-align: justify}
```

Available text-align options include **center**, **justify**, **left**, and **right**.

More Complex Alignment (Layering)

One of the major breakthroughs of CSS is the ability to control the position of objects with absolute specificity. In regular HTML you could align text and images to the left, right, or middle. If you wanted greater control, you could create tables. Now, however, with CSS you can tell a piece of text or an image exactly where to be on the page.

Included in this expanded control is the ability to layer text and images. In other words, you could lay a line of text over an image with both the text and image still visible on the browser, like the following example:

Layering like this can done without manipulating the image in a graphics application like Photoshop.

Okay, How Do I Do Positioning and Layering?

In order for CSS positioning to work in both Internet Explorer and Netscape Navigator you will need to use the **<div>** tag to position your HTML elements. Within that <div> tag you will then need to use the style attribute to insert the necessary CSS positioning commands.

Positioning Examples

In the example below, the sentence, "This is some text placed on your page," will be 124 pixels from the top of the page, and 167 pixels from the left edge:

```
<div   style="position:   absolute;   top:   100px;   left:
175px">This is some text placed on your page.</div>
```

If you wanted to place another line of text that will lay over the top of the previous line of text, you would add the following <div> tag, changing the orientation just enough to layer the sentences so each is still visible:

```
<div style="position: absolute; top: 105px; left: 150px; z-
index: 2; color: magenta">This line should lay over the top
of the previous line of text</div>
```

In this second example the sentence will be 105 pixels from the top, when the first sentence was 100 pixels from the top. This second sentence will be 150 pixels from the left edge of the browser window, where the other sentence was 175 pixels from the left edge; thus, they will be layered, but slightly offset. **Note**: we added the color attribute "magenta" so that we could see the two lines of text more clearly.

Sequencing Layers – Z-Index

The one functional difference in the second example above is the addition of the of the **z-index** attribute. Z-index is what CSS uses to sequence, or order, layered objects. We specified z-index: 2 in the second <div> statement so that that line of text would be on top. The higher number is always on top. If no z-index is specified it will default to 1. So, if we wanted to add an image to this layering scenario that would lie under the two lines of text, we would have to assign it a z-index value of 1, or leave it undefined, and assign higher values to the two lines of text, as in the following example:

```
<div style="position: absolute; top: 100px; left: 175px; z-
index: 2">This is some text placed on your page.</div>

<div style="position: absolute; top: 105px; left: 150px; z-
index: 3; color: magenta">This line should lay over <br>the
top of the previous line of text</div>

<div style="position: absolute; top: 75px; left: 140px; z-
index: 1<img src="/documentation/html/ image.gif"></div>
```

The Death of Tables?

These position tools can be used to replace the more familiar HTML tables--and this is the official recommendation of the governing body of the World Wide Web, the World Web Consortium, primarily because it makes your pages more accessible. Technically you should use HTML tables **only** to present data (numbers, etc.) and the CSS position properties to arrange items on your web page. For more info on what the W3C thinks about CSS replacing tables see the World Wide Consortium's recommendations on using CSS for layout: **http://www.w3.org/TR/WAI-WEBCONTENT-TECHS/#style-alignment**.

Controlling How Your Links Look

Up until Cascading Style Sheets you were forced to have your links underlined. Now, however, you have a great deal more control over how your links will look. For instance, if I add the following code to my initial CSS statement in <head> tag, my unvisited links will be orange, without underline, and my visited links will turn green:

```
<style type='text/css'>
. . .
A:link {color: orange; text-decoration: none}
A:visited {color: lime; text-decoration: none}
A:active {color: red; text-decoration: none}
. . .
</style>
```

Linking to an External Stylesheet

Perhaps the most valuable option offered by CSS is the ability to link several HTML documents to one style sheet. What this means is that you could control the look and feel of a group pages by changing just one file, the external style sheet.

What Does the External Stylesheet Look Like?

The external stylesheet is simply a list of styles. **It should have no HTML formatting tags**. If you add tags to your external style sheet, you risk damaging their effectiveness. The example below is what a very simple external style sheet would look like:

```
A:link {color: blue; text-decoration: none}
A:visited {color: gray; text-decoration: none}
A:active {color: red; text-decoration: none}
H1 {text-align: center; color: #cc0000; font-weight: bold;
text-decoration: italic}
b {color: red; font-size: 16pt}
```

Remember there would be no other text or markings on this page.

Naming the External Stylesheet

Your external stylesheet should always be named with a css suffix. For instance, you could name your stylesheet, if you weren't feeling creative, **stylesheet.css**.

Linking to your External Stylesheet

To link an HTML file to your external stylesheet, you only need to add a link statement in your <head> tag, as in the following example (substituting the name of your stylesheet for *stylesheet.css*):

```
<HEAD> <TITLE>CSS Test</TITLE> <LINK REL=StyleSheet HREF="
stylesheetname.css" TYPE="text/css"> </HEAD>
```

That's it. Your HTML file will now appear as directed by the stylesheet. You can link as many HTML documents as you like to that style sheet, and when you want to make a design or layout change, you will only need to make a change to the stylesheet, not to each file that is linked to it.

Cascading Style Sheet (CSS) References

Web Design Group Guide to Cascading Style Sheets -
http://www.HTMLhelp.com/reference/css/
W3C Style Sheet Guide - **http://www.w3.org/Style/css/**

CREATING WEB PAGES WITH MICROSOFT FRONT PAGE
Subhasini R.
Lecturer, Department of Computer Science and Engineering,
R.E.C., Calicut.

Introduction

A homepage is the "top" of your set of Web pages. It is where most people start exploring your Web Presentation, and it is the URL of that homepage you will give to people when you tell them to check out your Web site.

The homepage generally contains an overview of the content available from that starting point, much like a table of contents. The links in your homepage are like bookmarks, marking your favorite or most used page(s) within the Web. If your content is small enough it may simply fit on one page.

Things to think about before creating your own Web Presentation:

- What type of information or content do you want to put on the Web?
- What are your goals for your presentation?
- Organize your content into main topics
- Come up with a general structure for pages and topics by 'storyboarding' your homepage
- How will readers get from one page to another?
- Avoid having too many layers. Users want to get to the information quickly and having too many menu pages will annoy users.

Layout

Layout of a web page often determines whether a user will come back to your site. Consider the following as you design the layout of your site:

- The menu choices should be clear enough so the user does not have to hunt and peck his/her way through the choices.
- Navigation should be apparent and consistent. (ie: know where to click to go somewhere else, use same buttons for navigation throughout, design the page so users do not need to return to the root level to get to another area within your page)

Design

Color can ruin some web sites. You want to be sure to use color but don't over do it. Background images are nice but often make the text hard to read. Be sure that any background image compliments your text and graphics.

Be sure to regularly check your page in the Internet browser that you will be using.

To do this click on the display in browser button.

This will launch the browser and show your page in the browser on your computer.

Microsoft FrontPage does a great job creating web pages but it isn't exactly WYSIWYG (What you see is what you get).

Getting Started

1. Create a folder on your desktop (or if you have the option create the folder on your developmental server--talk to your webmaster). It can later be moved to the appropriate place on your server with help from your web master.

2. Create folders within the folders based on your menu items. Example: If I were to develop a homepage for my school I would use the schools name to name the main (or root) folder. Within that folder I would place folders called curriculum, teachers, student projects, etc.

3. You also want to create a folder called graphics on the root level and maybe even in each of the sub folders depending on how many graphics you will have.

4. Decide on some document/folder naming conventions or standards. I would suggest using all lowercase letters and no spaces. Spaces do not always work on different computers and servers.

Opening FrontPage

1. Open the application FrontPage
2. From the file menu choose 'New,' and select 'Normal Page.'
3. You will use the following three things to create you page, the Menu Bar, the Tool Bar and the Text Editors

Ready to Begin?????

Click on one of the areas to find out how to create/use the item.

- Text
- Tables
- Images
- Linking
- Color

Adding Text to your Web Page

Using text in FrontPage seems much like using text in any word processor. However, there are a few differences that can confuse beginners.

1. You cannot create indented paragaphs
2. The program allows you to select from a series of fonts, however, they may not always display correctly on another computer that does not have that font.
3. Wrapping text around graphics will take some practice and formatting.

Below you will see a description of the various text editor buttons, to change the text using the buttons you must first select the text.
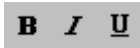
Heading 2 ▼

Pull down menu that allows you to select from several items. Click on the arrow to see all of your choices.

Times New Roman ▼

Pull down menu that allows you to select various fonts. Be sure to check these out through your browser.

Clicking on the large A, will increase your font size, clicking on the smaller A will decrease your font size.
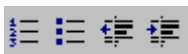
B=**Bold**, I=*Italics*, U=<u>Underline</u>

This button allows you to select a color for your font. After clicking on this button you will have the choice of several colors, and by clicking 'Define Colors' you will have even more colors!

These tools allow you to select alignment for your text. (left, center, right)

These tools let you select a numbered list, bulleted list, push the text to the left, or push the text to the right.

Creating Tables with FrontPage

Tables are most commonly used to arrange text and graphics on your screen. HTML does not allow having columns. But by inserting the text into a 2 column table it will appear as if you have columns.

1. To insert a table click on the insert table icon

2. A pop up window with little squares will appear. Click and drag over the number of squares you want in your table.

3. You can add rows and columns to your table by highlighting your table and then using the menu items in the 'Table' menu.

Table	
Insert Table...	Insert Table: Acts like the insert table tool button
Insert Rows or Columns...	Insert Rows/Columns: Allows you to insert Rows and Columns to your table
Insert Cell	Insert Cell: Allows you to insert a cell
Insert Caption	Insert Caption: Write in a caption for your table. It will be above your table.
Merge Cells	Merge Cells: Will bring two selected cells together
Split Cells...	Split Cells: Will split a selected cell into either rows or columns
Select Cell	Select Cell: Will select a given cell. Simply place the cursor in the cell you want to select.
Select Row	Select Row: Allows you to select an entire row
Select Column	Select Column: Allows you to select an entire column
Select Table	Select Table: Allows you to select an entire table
Caption Properties...	Caption Properties: After selecting the caption this will allow you to place the caption either at the top of the table or below the table.
Cell Properties...	Cell Properties: Allows you to select the alignment within your cell, the color of your cell, or the color of the border around your cell.
Table Properties...	Table Properties: Allows you to change the formating if your table (alignment, color, border). A border size of 0 (zero) will make the line 'invisible.'

Inserting images with FrontPage

Before inserting images you must first have graphics. There are many 'free' graphic sites on the Internet. Be sure to read the fine print on any page regarding their graphics use policy. Saving graphics from the web is easy! But, when you save it be sure you save it in your graphics folder within the folder that your web page resides.

To insert an image:

1. Click on the insert image icon
2. Click 'from file' then click on browse. You will be prompted to navigate to the image you want to insert.

Making your image transparent:

3. Double click on your image, this will bring up the graphic tools. Click on the pencil eraser button

4. Your cursor will change to a pencil eraser icon. Position the cursor over the color within the graphic that you would like to be transparent. Once your cursor is placed, click your mouse button. The selected color will disappear.

Creating Links in FrontPage

Creating a Link to another file that you have created:

1. Open the file to wish you want to link.

2. Highlight the text or image that you want to make 'hot.' (ie: what do you want to click on to go somewhere else)
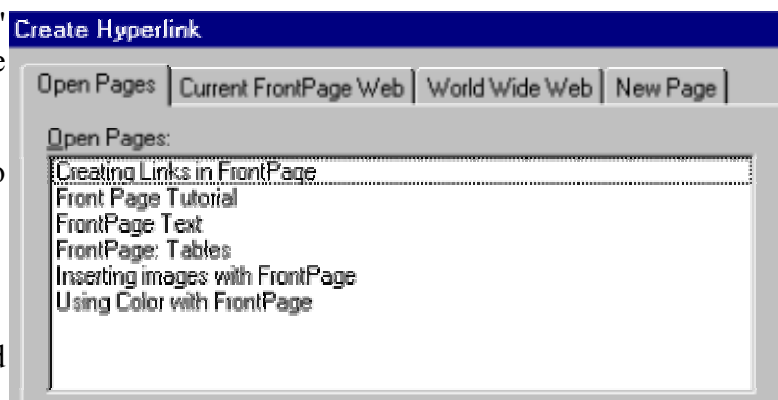
3. Click on the Insert link icon in the toolbar

4. Click on 'Open Pages,' this will display all the pages you have open.

5. Choose the file to which you want to link

6. Click 'Okay'

7. Your words should turn blue!

Create Hyperlink

Open Pages | Current FrontPage Web | World Wide Web | New Page |

Open Pages:

Creating Links in FrontPage
Front Page Tutorial
FrontPage Text
FrontPage: Tables
Inserting images with FrontPage
Using Color with FrontPage

Creating Links to other pages on the web:

1. Highlight the text or image that you want to make 'hot.' (ie: what do you want to click on to go somewhere else)

2. Click on the Insert link icon in the toolbar
3. Click on 'World Wide Web'
4. Click 'Browse'
5. This will launch your browser, navigate to the web page that you want to link. OR type in the web address (URL)
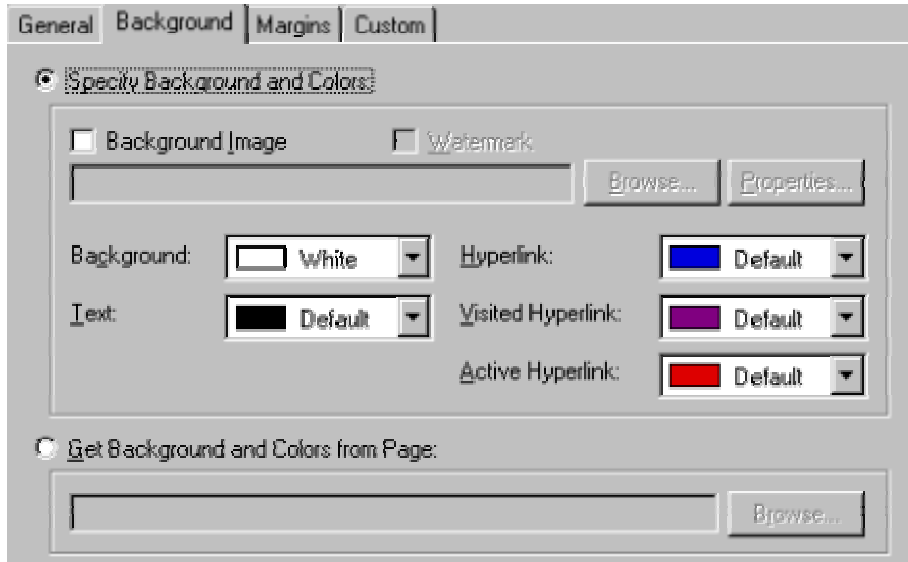
Open Pages | Current FrontPage Web | World Wide Web | New Page |

Hyperlink Type: http:

Browse...

URL: //www.learningspace.org/tech/how_to/web_graph.html

6. Your words should
turn blue!

Changing the background in FrontPage

Background color:

1. Select 'background' from the **Format** menu. The color options box will appear on your screen

2. Click on the arrow within the background selector box.
3. Select a color from the list OR select 'custom' at the bottom.

Background Image:

1. Select 'background' from the **Format** menu. The color options box will appear on your screen.
2. Click in the box labeled 'Background Image,' and then click on browse.
3. Navigate to the graphic that you want to be the background image and click 'okay.'
(Watermark will make the graphic look like it is embossed.)

Multimedia Resources

**When using media sources that you did not create it is important to site the source to give the author/artist proper credit.

Graphics

> *School Clip Art* - A great site for school related graphics
>
> **Graphic Maps** - an excellent site for finding images of maps! Categorized by areas, they also offer the same map in different sizes :)
>
> **Cool Graphics on the web** - links to over 500,000 free images (or links to them)
>
> **Bimsan's web Graphics** - great graphics for building web pages or HyperStudio stacks.   Includes   buttons,   bars   and   coordinated   sets!
>
> **Billy Bear Clip Art** - Clip Art for the young at heart
>
> *Jim's Cool Icons* - A nice collection of original graphics.
>
> *Icons for HTML Development* - Large collection of small icons.
>
> Washington D.C graphics and clip art
>
> CyberWright's Free Web Icons, Clip Art and Backgrounds
>
> Civil War Clip Art

Animation

> **The Animation Factory** - All the animations here were created by Eclipse Digital Imaging and are FREE* for your use. There are currently 7,000 animated gifs in the Animation Factory with more added every month.

Quick Time Clips

> *CNN Video Vault* - Many quick time clips to download of current events.
>
> *Walt Disney* - Looking for a clip of your favorite animated classic? This site lists all your favorites. Click on one and look for 'downloads.'
>
> *NASA Space Shuttle MIR* - Quick time clips from the MIR space station. Updated daily.

Sound

> **Sound America** - Looking for a T.V. theme song or your favorite actor saying his favorite line? This is the place to find it!

Terry's Theme Song Page - Many space related theme songs (Star Trek, Star Wars)