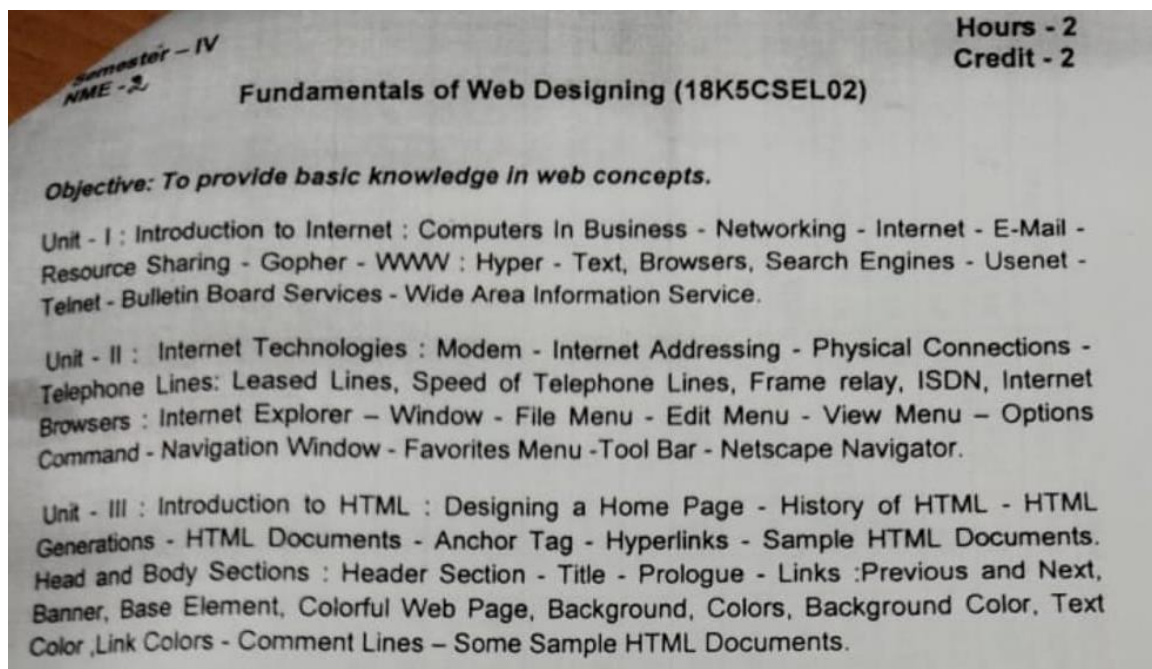


# DEPARTMENT OF COMPUTER SCIENCE

**SUBJECT NAME: FUNDAMENTALS OF WEB DESIGNING -NME**

**SUBJECT CODE: 18K5CSEL02**



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## **INTRODUCTION TO THE INTERNET**

A computer is an electronic device that manipulates information, or data. It has the ability to store, retrieve, and process data.

When the computer was invented, it was considered a fast calculating device.

When people thought that a computer could be used for business applications, an immediate need was of a programming language, which would be suitable for such applications. Since FORTRAN, which was very popular at that time, was not flexible enough for business applications, a new language COBOL (Common Business Oriented Language) was developed.

## **COMPUTERS IN BUSINESS**

Computer-based business applications were called Business Data Processing Systems (BDPS) and COBOL was largely used to design them.

In COBOL, programs have very lengthy codes.

Software that supports creation and management of data files easily and simple queries from the data files and also gives reports in an attractive format is called a Data Base Management System (DBMS).

Dbase was the first popular DBMS, version III of which became very popular.

Dbase III Plus and Dbase IV were also in use for some time. Foxbase was a similar DBMS.

The same company updated the features of Foxbase and introduced Foxpro. Now Foxpro is used in several small companies.

At this stage a new technology called Graphical User Interface (GUI) was introduced.

A GUI divides a program into two parts. One part is for managing the data files, and the other to design pictures and icons to get input from the user. The first part is called the back end, and the second part is called the front end.

The database management system which supports relational databases and relational features is called a Relational Database Management System (RDBMS).

Oracle 2000 being a popular one. Oracle is given in several modules, which include:

- ❖ Oracle Workgroup 2000 (for the back end)
- ❖ Oracle Developer 2000 (for the front end)
- ❖ Oracle Designer 2000 (also for the front end)
- ❖ Oracle Power Object 2000 (also for the front end)

There are some softwares which can be used only for the front end; such as applications software is called a front-end tool. Visual Basic, Visual C++ and Power Builder are some front-end tools. Visual Basic is normally used with the back-end tool called Access.

It can also be used with Oracle. Power Builder is popularly used with the RDBMS Sybase. Ingres, Informix, and Unify are some other RDBMS.

Mainframe computers still use COBOL for business applications. Another system for business applications on mainframe computers is called DB/2.

## NETWORKING

A network is a number of computers connected to each other.

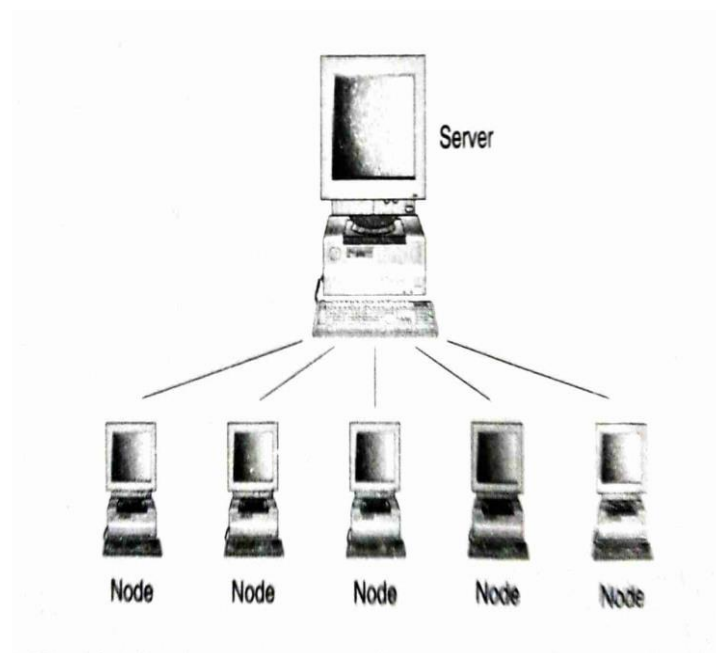
A centralized network is a network having a central computer (called a server) and other computers called nodes.

In client server architecture, two types of software are needed for the system.

The software needed to do the work of the node is called client software.

The software needed to run the central system is called the server.

Clients always ask for resources (software and data files) from the server.



## INTERNET

The Internet is the world's largest network of computer networks.

There are more than 100 million users on the Internet, and they are growing rapidly by the day.

### History of Internet

In 1969, the American defense department wanted to connect all the computers in the Department of Defense (DOD) offices and military research contractors including a large number of universities doing military funded research.

That network was called Advanced Research Projects Agency Network (ARPANET), was also called DARPANET, the D for defense.

At one stage the military officials wanted to preserve the unity of the DOD, and so divided the network into two parts:

- ARPANET
- MILNET (Military Network)

These two parts remained connected with a technical scheme called Internet Protocol (IP)

The word protocol means “rules for meeting a person/king”. On the Internet, if we want to contact a person on another network, we need a protocol.

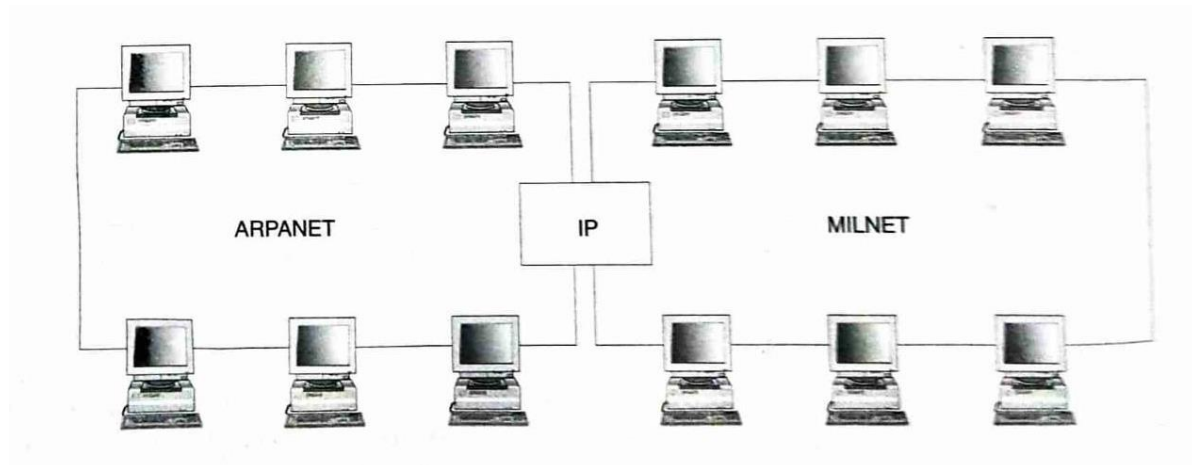
### **Some other protocols:**

Simple Mail Transfer Protocol (SMTP)

Point-to-Point Protocol (PPP)

Hyper-Text Transfer Protocol (HTTP)

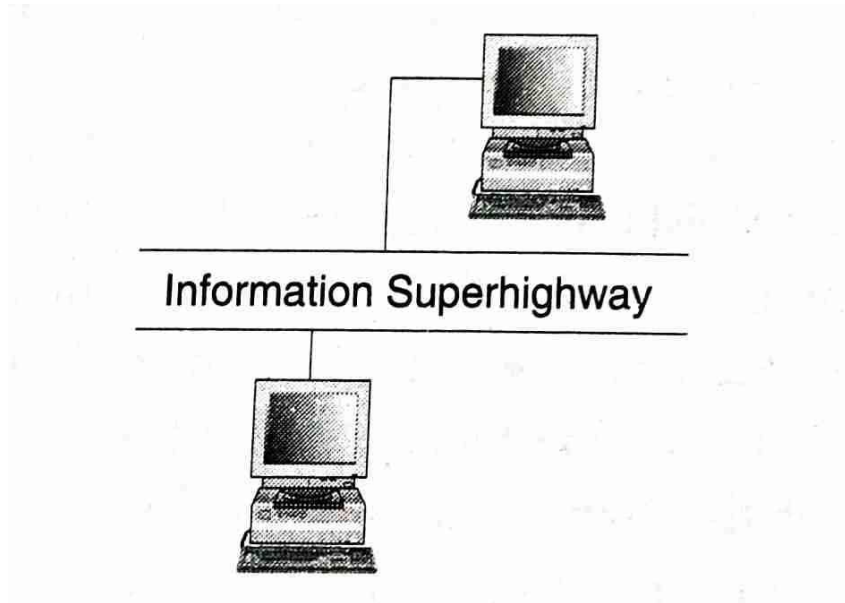
Transfer Control Protocol/Internet Protocol (TCP/IP)



### **Internet Applications**

- Sending and receiving email.
- Searching and browsing information archives.
- Copying files between computers.
- Conducting financial transactions.
- Navigating (in your car, smart scooter, smart bike, or other)
- Playing interactive games.
- Video and music streaming.
- Chat or voice communication (direct messaging, video conferencing)

Information Superhighway-Anyone can communicate with any person.



### **ELECTRONIC MAIL (E-MAIL)**

Electronic mail is the facility of sending text-based messages and letters to any Internet user.

From the Internet, we can send mail (letters) to our friend who is also on the Internet.

Everybody on the Internet has his/her own unique e-mail address.

Using which one can communicate with other e-mail users and that too very quickly.

We can also attach picture, sound, video or document files to the e-mail.

### **Signatures**

Signature facility has been included in electronic mail also. The software we use for sending e-mail has the facility to create and modify our signature electronically.

The electronic signature is a text-based collection of one or two lines.

This signature is appended automatically to all e-mails and sent.

It is also possible to set the e-mail signature as a small diagram using text-based symbols.

### **Voice E-mail**

Some companies have introduced software systems which support voice e-mail. Such software is given as an enhancement to their usual software.

This voice e-mail travels just like the text e-mail and reaches its destination.

So voice e-mail is approximately eight times faster.

In voice e-mail technology, editing, spell checks, grammar and punctuation checks become redundant. Pictures and photographs can also be sent along with voice e-mail messages.

## **RESOURCE SHARING**

Every Internet system has some files open for anybody on the Internet.

Software companies offer the beta version of their new products available on the net.

We can download these files using File Transfer Protocols (FTP).

There are two types of FTP resources available on the Internet.

They are:

- **Anonymous FTP**

The anonymous FTP service is open to everybody on the net. The user can log on to an FTP server without opening an account on the server.

The anonymous FTP facility is available for PhD theses, research reports, news, etc.

- **Non-anonymous FTP**

In the case of non-anonymous FTP, one can download a file only if one creates an account with the FTP server. The user must already have an account, user ID and a password to download a file.

## **GOPHER**

The first technology that people adopted was FTP. The FTP service was found to be efficient for sharing and downloading files.

Browsing of information is not possible in FTP. So it was very difficult for users to locate a file. Then came a service called Archie. Archie was developed as a searching system for the files available on FTP.

The files available on ftp were called FTP space. Archie helped users to search the FTP space using keywords. One can first search for a file in FTP space using Archie and then download it using FTP.

The University of Minnesota invented a new service in 1991 and named it Gopher, after the name of its mascot. The Gopher service was first used in the campus-wide Information System of the University of Minnesota. It became very popular during 1991-93.

Gopher is easy-to-use and user-friendly as compared to FTP. Gopher facilitates simple menu selection features and also provides browsing of large files.

The resources (files) available on Gopher are called Gopher space. Later, a search facility called Veronica was made available to search in Gopher.

Using Veronica, we can search for a file in Gopher using keywords and titles. Gopher and Veronica are not two different services-Veronica can be got from the Gopher menu itself; they are coupled together. Later, another search facility called Jughead was also developed.

Most of the resources that can be linked through FTP or Gopher can also be linked through WWW.

## WORLD WIDE WEB

The World Wide Web (WWW) is a collection of pages maintained on the Internet using a technique that is called hyper-text.

### Hyper-Text

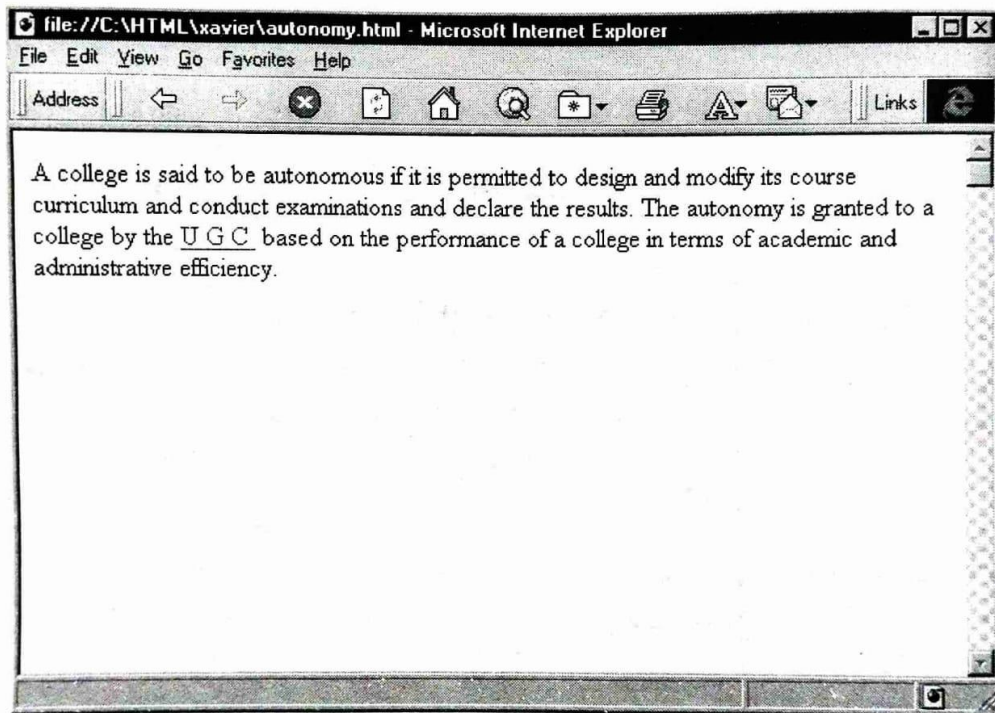
Hyper-text is a text of more than two dimensions. Consider any text that is typed from left to right.

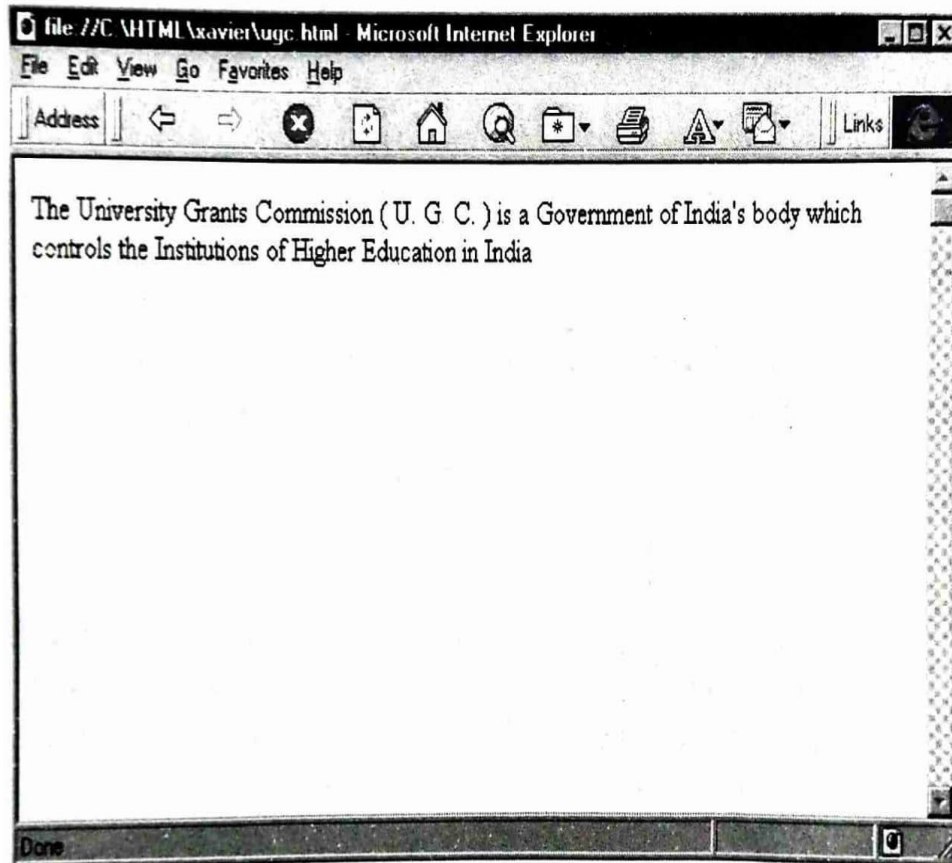
It has only two dimensions:

- left to right
- top to bottom

Left to right is normally considered as the x-axis and top to bottom is considered the y-axis. In hyper-text, one 2-D text is shown on the screen. Certain words are highlighted. If we click one of those highlighted words, more details about that word appear in another window. We say that these details form the third dimension, the z-axis, that goes deeper into the text. This can be done further on the smaller window also.

For example, consider the window shown in Fig.





The word Autonomous is appearing in a different color. If we click on it further details on the autonomous status are shown in another window, as shown in Fig.

The acronym for HyperText Transfer Protocol is http, and www for the World Wide Web. Pointers connect the web pages in multiple ways in the form of multiple linked lists.

For example, Nowadays companies give a complete profile in text, picture and sound on their websites. Text, picture, sound or animation kept on a website can be seen by anybody who browses the web.

Browsing the web means looking at various web pages one after the other, also called surfing the web.

## **Browsers**

The software used for browsing web pages is called a browser.

The following are some popular browsers:

- Netscape Navigator
- Mosaic
- Hot Java
- Microsoft Internet Explorer



## **Search Engines**

The universally accepted computer language to create hyper-text is called Hyper-Text Mark-up Language (HTML).

Websites on the Internet are connected in such a way that one site has a pointer to the next website. Each website has an address.

In the web, if you want to search you can begin from a search site or an index site. These websites are also called search engines.

The following are some popular search engines.

[http:// www.yahoo.com](http://www.yahoo.com) is a search site.

[http:// www.lycos.com](http://www.lycos.com) is an index site.

[http:// www.AskJeeves.com](http://www.AskJeeves.com)

## **USENET**

Usenet is an application which enables an Internet user to join a user group and discuss any interesting topic. The groups are called Usenet News Groups.

There are more than 5000 Usenet news groups, each with special interest on a topic. The topics range from art to zoology, and science fiction to South Africa.

Usenet groups meet and discuss electronically. Though people are geographically located in different parts of the world, they share their ideas, discuss the day's events and chat on their topic of interest.

An Internet Relay Chat (IRC) is a party line over which you can have interesting conversations with other Internet users. There are hundreds of commercial services available on the Internet for which we are charged heavily.

Usenet was started in 1979 in North Carolina. Initially, there were only two sites, University of North Carolina, and Duke University.

Each Usenet site is run by a server system called a news server.

The one managing the system is called the news administrator.

Any client can send a news article to the news administrator. Articles are kept from two days to two weeks. The news server regularly checks the articles and deletes those that are older than the specified time interval. To read Usenet articles, we use a program called NewsReader.

Usenet news groups range from the topic of jokes of biology and sex to philosophy.

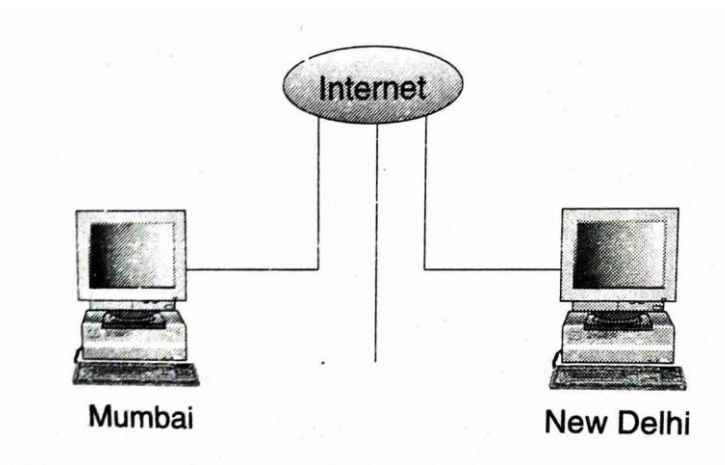
There are more than 13 000 different topics. The groups are arranged according to an hierarchy. The FAQ contains answers for several questions, and is posted to the group regularly.

## TELNET

Telnet is a utility which enables an Internet user to login and work on another system which is geographically located in another place of the world. This is also called a remote login facility.

For example, a person has a computer in his office at New Delhi. He has to visit Mumbai on a family trip. But when he is free at Mumbai, he can log in his system at Delhi from Mumbai and use all the databases and files, and work on the system.

Telnet can access almost all the libraries in any part of the world and their books. We can log in to research laboratory computers and access some useful software. When we want to log in to a system using Telnet, we must know the password of the system, which is a very important security feature.



Telnet (Remote log in)

## BULLETIN BOARD SERVICE

A Bulletin Board Service (BBS) is a service provided by private parties on the Internet. The parties providing this service collect enormous amounts of information and keep it on their system for the use of their subscribers.

The BBS is available in most cities. If we want to join any one, BBS, we must apply and get permission. Then members can log in to that BBS and access a wide variety of data.

Depending upon the interest, can get information on anything: cinema, science, education, games, sports, etc.

## WIDE AREA INFORMATION SERVICE

Three companies, Apple, Thinking Machines and Dow Jones, came out with a project of maintaining a large resource database in the form of files. They called this service Wide Area Information Service (WAIS).

They suggested that all the knowledge must be stored in the WAIS database in the form of essays, bits, pictures, etc. A user must have a facility to search and get any desired

resource by paying for it The WAIS is not used much, but its resources are still available on the Internet.

The search for WAIS information on the Internet is done simply by typing the word or words which describe the information that we are looking for.

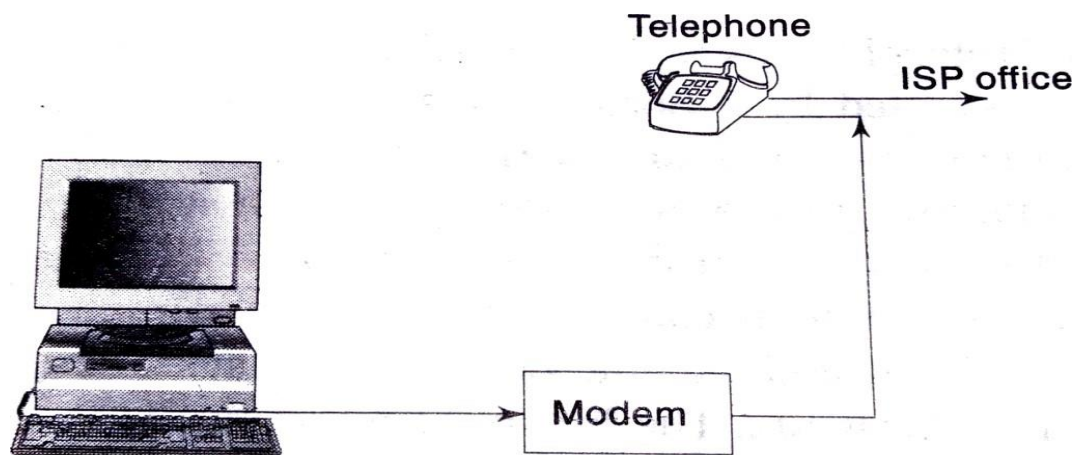
WAIS will quickly search the database and send back a list of articles, ranked according to relevancy.

## Internet Technologies

### Introduction

To connect our computer to the internet we can do so only through an internet server. There are companies which have internet service and provide internet connectivity called Internet Service Providers (ISP). They have a satellite connection with the Internet we must apply to the ISP and ask for the Internet connection. They give a web page and email box and other facilities we must have a telephone connection to communicate with the ISP's office and device called modem our computer gets connected to the internet we connect our computer to the modem and modem is connected to the telephone line.

### Internet Connectivity



There are various types of Internet connections the following are some of them

1. Shell account (text only)
2. TCP IP account (text, graphics, and animation)

Shell accounts enable us to browse through text items only. The graphics and multimedia elements cannot be viewed. So the shell account does not permit full use of internet capability. Using a shell account, we can make use of the email facility.

Transfer control Protocol/Internet Protocol (TCP/IP) is very powerful and most popular with a TCP/ IP connection.

### Modem

Conversion of digital signals into signals transmittable through a telephone is called modulation. Converting telephone signals into digital signals is called demodulation. A modem is a device used for modulation and demodulation. Modems are classified according to their rate of transfer of data measured in terms of bytes per second. If the data transfer

capacity of the modem is 14.4 kilobytes. It means that the rate of transfer of data through the modem is 14.4 kilobytes per second.

## **Internet Addressing**

Millions of computers have been connected to the Internet. When we want to communicate with a computer through the Internet, we need to specify the address of that computer every computer connected to the internet is given an address called the IP address. [Internet Protocol Address]. The IP address of computer consists of four groups of numbers separated by periods or dots. For example 18.1 80 1.0.24 is an IP address. However these numerical addresses are of no interest to users. Computer are also given another address, which is text-based. For example skp . mit .edu is a valid Internet address. All users have text-based addresses. Which an Internet service called DNS (Domain Name System) converts into the actual numerical address. This address is also called the Uniform Resource Locator (URL). The internet address has two parts. They are

- Name of the user(user ID)
- Name of the server(server ID)

The @ symbol is given in between the above two names. For example, our address is stxavier@md2.vsnl.net.in

My user ID is Stxavier and my ISP's server ID is md2.vsnl.net.in. The server ID contains several parts separated by dots. The extreme right part of the address is above example refers to India. This part of the address is usually called the top-level domain to which the computer is connected. All addresses on the Internet are classified into several top-level domains. The classification may be either be geographical or organizational. Some examples of the codes used for geographical classification

## **Geographical Domains**

<b>Domain</b>	<b>country</b>
at	Austria
au	Australia
ca	Canada
ch	(confederation Helvetica)
de	Germany
dk	Denmark
es	Spain
fr	France
gr	Greece
ie	Republic of Ireland
in	India
jp	Japan

Another top level domain classification is based for nature of organisation. For example, all universities and educational institution or given "edu" as the top- level domain name. Other top-level domain names for organisations are given below

<b>Domain</b>	<b>organization</b>
com	commercial organization
edu	Educational institution
gov	Government
int	International organization
mil	Military
net	Networking organization
org	No-profit organization

The first part of URL specifies the protocol used.

Some URLs

Resource	Sample URL
Hyper Text Transfer Protocol (HTTP)	<a href="http://www.lsu.edu">http://www.lsu.edu</a>
Simple Mail Transfer Protocol SMTP)	<a href="mailto:smith@sweetness.com">mailto:smith@sweetness.com</a>
File Transfer Protocol (FTP)	<a href="ftp://crpc.edu/fortran.doc">ftp://crpc.edu/fortran.doc</a>
Local File (file)	<a href="file://c:/xavier/info.doc">file://c:/xavier/info.doc</a>

### Physical connections

Internet connectivity is done through a modem and telephone line the path of the data is as follows

1. The user's node sends the data digital data
2. The mode of the user converts the digital data into analogue signals
3. The telephone line transmit the data to the mode of ISP
4. The modern ISP converts analog signal received into digital data
5. The ISP node receives the message in digital form

In this communication, process two important devices work together.

- Modem
- Telephone line

The quantity of data transferred by a device is called its throughput or data transfer rate. The throughput is measured in terms of KBPS (Kilo Bytes Per Second) For example, the speed of two popular types of modem are

Modem	Speed
V.32 bits modem	14.4KBPS
V.32 bits modem	28.KBPS

Most of the V.34 modems can compress the data in the ratio 4 :1. So they can achieve a throughput of  $28.8 \times 4 = 115.2$  kbps in an ideal situation.

### Telephone lines

An ordinary Internet account holder gets only a dial- up connection. This means that several users share one port of ISP server and at one time, only one user can work. The port is connected to a particular telephone number. when one user dial the telephone number to get physical connection to the server, If the port is already in use by another user, an engaged tone will be heard, When the port is free the user gets connected to the ISP and can work on the Internet.

## Leased Lines

Instead of a dial-up connection, can get a leased line connection which is very expensive. In this case, the user is given full freedom on the port of ISP server. One port is for his exclusive use. So he can use it around the clock without any interruption. Whenever the user dial, he gets a connection and can work on the internet.

## Speed of Telephone lines

One can achieve a speed of 56 KBPS only in case of a leased line. In the case of dial-up connections, the telephone connection is so designed that three or four users can simultaneously use the same port. This is possible by getting four connections on the same number. In such a case, each user will share the line. So, any user can get a speed of only  $56/4 = 14$  KBPS. If a company to access the Internet simultaneously. It is possible to have several types of media in telephone connection.

Type	Speed
Ordinary	56 KBPS
Full T1 Type	1.544 KBPS
Fractional T1 type	256 to 1280 KBPS
T3 type	44 736 KBPS
ISDN(1 channel)	56 to 64 KBPS
ISDN(2 channel)	128 to 132 KBPS
ISDN(full)	1 544 KBPS

Ordinary lines have a capacity of 56 KBPS speed. The T1 type medium has four conductor-wise, two standard phone lines wrapped around each other in a single sheath. The connector at the end of the wire is a modular RJ-45 jack which is a similar to a standard modular phone plug but slightly larger. A T1 connection can support a speed of 1544 KBPS. A T3 type connection is a very high capacity one and very expensive to it too. It has of 44 736 KBPS only very large communication companies in America use T3 type wires.

## Frame Relay

The Frame relay type of the connection is cheaper compared to leased line connections. In a frame relay type connection, we connect our network to the telephone company's frame relay switch. The frame relay switch then routes the data traffic to the ISP.

## ISDN

At present, different telecommunications services such as telephone, telex and facsimile fax use separate networks for each service. These non-integrated services require separate switching systems, special customer access networks, individual trunk networks and separate operation staff. Therefore these services are costly. An effort to integrate all these services into a single network is ISDN

Integrated services digital network (ISDN) is a communication network which is used for transmitting all types of integrated data, which includes voice, video, facsimile and computer signals.

The following are the advantages of ISDN network

- increase user productivity
- hire transmission Rate
- all types of services are integrated into a single network
- lower cost
- higher accuracy level

There are two types of ISDN services. They are

- Basic Rate Interface(BRI)
- Primary Rate interface(PRI)

Basic Rate Interface is economically cheaper and is used to connect home or small business establishments. In a BRI type connection there are two B-type channels and one D-type channel. Each B- type channel has 64 KBPS bandwidth and the D channel has 16 KBPS bandwidth.

The two B-channels are used to send bulk data. The D- channel is used to control the data flow in the B-channels. Since the data flow in two B- channels, each of 64 KBPS bandwidth, the theoretical bandwidth of BRI line is 128 KBPS. Practically, it may be a little less than 128 KBPS due to several factors affecting the data transfer.

### **Interfaces for ISDN**

To connect our Communications device to an ISDN line, we need to use two items of the interface equipment. They are

- Network Terminator for Layer 1
- Terminal adaptor

The ISDN terminal is usually called an ISDN wall jack. A device called the network terminator for Layer 1 is connected to the ISDN wall jack. The NT-1 act as interface between the devices and outside ISDN line. Another device called that terminal adaptor is connected between the devices and NT-1. The function of the terminal adaptor is to convert the signals of equipment to ISDN-acceptable signals. Recently such computers have become available which are ready for connecting to ISDN. These computers have in-built terminal adaptor cards so they can be directly plugged into NT1

### **Internet Browser**

Internet is working on the client server architecture. The web server runs a server program and an Internet code runs at client program. The client program used to see website is called a browser. The popular Browsers are

- Netscape navigator
- Internet Explorer
- Mosaic
- Hot Java

Internet Explorer and Netscape Navigator are used commonly to browse the Internet

## **Internet Explorer**

Internet Explorer is graphical user interface software for browsing the internet. This graphical environment basically contains for primary objects. They are

- window
- icon
- menu
- dialogue box

## **Window**

A portion of computer screen that is enclosed in a border is called window. The size of the window can be small or big. A window contains the following

- title bar
- Toolbar
- control box
- menu bar
- minimise maximize and close button
- horizontal scrollbar
- left and right arrows
- vertical scrollbar
- up and down arrows
- status bar

The title bar is the horizontal bar at the top of the window showing the title of the window. The control box is at the top of the left corner of the window. When we click the control box, we get a menu.

It contains the some or following commands

- Restore: returns window to the size it was before
- Move: Move the entire window
- size : resizes the entire window
- minimize: shrinks the window into an icon
- maximize: enlarges the window into full size
- close : closes the window
- toolbar: a toggle key to show or hide the toolbar
- status bar: toggle key to show or hide the status bar

In the menu bar, there are five menus they are the:

- File menu
- Edit menu
- View menu
- Go min
- Favourites menu
- Help menu

They appear as a horizontal bar at the top of the window. When we click one of them, a pull down menu appears, For example, when we click File menu as shown



- Open: opens a selected website
- Save : save the document savers document in a different filename
- Page setup: for setting up your page format
- Print : for printing the document
- New: to create a new window message post or contact
- Send Link: to link with other URL.
- Create shortcut: to create a shortcut for the website ;on selecting the command the shortcut is automatically made available using an icon.
- Properties: to find the properties of the website
- Browse offline: to browse offline
- Close :closes Internet Explorer

### **Opening a site**

When we want to open a website document, we must select open on the file menu. if you know the URL of the website, we can type the name in the window and click the OK button . if you don't know the URL we can browse and find it. In order to browse the must to click he browse button. We must select the URL and then click open to go to the open window then click the OK button of the window to open the website.

### **Edit menu**

Edit menu is used to edit the current document. It is got by clicking Edit on the menu bar. This menu contains the editing commands such as cutting, copying and pasting. It also contains a command Find, which can be used for searching within the document. When we click find on the edit menu we get a window. When we type the word to be searched and click the button find next the word is searched on the cursor goes to the location.

### **View menu**

The view menu is used to customize the view in our screen. The view menu as shown the following commands

- Toolbar: a toggle key to show or hide the toolbar
- Status bar: a toggle key to show or hide the status bar
- Fonts: this comment is discussed in detail below
- Stop
- Refresh: This command refresh the page recent updates can be she seen when we refresh the page
- Source: this command is used to view the HTML source code of the webpage
- Option: this command is discussed in detail

### **Fonts**

This command is used to select the font on our screen. We can select any one of the following sizes

- Largest
- large
- Medium
- Small
- Smallest

## **Option command**

This command is used to select aesthetic Colors for text, background and hyperlinks. when we choose the options command, we get a multiple window. This is a combination of six window namely

- general
- connection
- navigation
- Program
- secure
- advanced

The window is the general window. This has three tick boxes at the top portion of the window, namely

- show pictures
- play sounds
- play videos

These tick boxes can be tick by just clicking on the box. The tick can be removed by another click on the box. if the show pictures box ticked, the web page will show the pictures .if the tick Box is not ticked, the picture will be shown on the webpage. Similarly the tick boxes play sounds and play videos can be used for sound and video. In the middle part of the left there is the panel called colors with tick box called use window colors, and two boxes for selecting colors of the text and background color. We tick on the tick box, the original Windows colors are chosen for the background and the text. If we tick by another click, we can choose the background and text color.

In a webpage hot text will appear in different color. This can be designed using right hand side panel in the middle of the window called links. This panel has a tick box underline links using which we can set the display to underline all hot text . They can also be displayed in a different color. When you open a webpage, several link me appear in a page. By clicking the hot text, we visit the linked document. In order to distinguish between the link which have been visited already and those which have not yet been visited, we can assign two different colors for the hot text. These colors can be assigned using the two keys visited and unvisited. On selection of either of these keys we get a color palette. We can now select any color from the pallet. if we are not able to choose from this palette, we can define a new custom color by clicking the button define custom colour. When we click this button, we can create a color using the basic color red, green and blue and add it to the custom colors. The general window also has a button, languages to choose a language for the web as a websites are created in several languages this option help select the language and then open the website on clicking the languages button we get a window as shown if we want to add a new language we click the add button we get the window as shown we can select a language and add it to you now.

we can choose the font of our display by clicking the font setting in the general window. On clicking this button, we get a window. we can select the font and click the ok button.

## **Navigation window**

The connection window is setup connections. Using this window, we can set the starting page URL and can preserve a history of website we visit. The number of days up to which the history must be preserved can also be set.

When we want to view the history of websites visited, we click the button view history .we get the history as shown you can select an address from this history and open it by just clicking it.

## **Favourite Menu**

The history option keep the history of the entire site visitor Internet Explorer also has a provision to store the addresses of favourite sites. This is done in a folder called Favourites. This favourite folder can be used in a very convenient form by creating sub folder within this favourite folder. When we click the favourite option in the menu bar, the favourite menu is displayed . If you want to add this current web page in your favourite, we can just click the add to favourite command of the favourite menu. On clicking add to favourites, to get the window. if we click ok, the current website others will be stored in the favourites folder. Suppose you want to store it in a subfolder. we must click the create in button of this window . On clicking it, the window. This displays all the folders, in the favourite's folder. We can now select the folder in the in which the address has to be stored and then click the ok button. if you want to create a new folder, we must select the parent folder and then click the button new folder. For example, if we want to create a new folder within the internet folders select the internet folder and then click the new folder.

## **Opening a favourite site**

If you want to open a favourite site which has already stored in the favourite folder, we must first click the favourite menu in the menu bar. All the subfolders appear at the bottom of the pull-down menu . Select the desired folder and the desired address. The site is opened. for example, suppose this site with the name "Xavier" is already in a subfolder Research in the favorite folder. when we click the favourite menu and select the sub folder research, the site name appears

## **Organizing the favorites folder**

If you want to rearrange the favourite folder, we must click the organised favourite come and in the favourite menu. we can rearrange them by clicking and dragging Mouse operation . we can delete any supported by just pressing the delete key after selecting the subfolder. The window has five buttons namely

- delete
- Rename
- Move
- open
- close

## **Tool bar**

The toolbar contains some icons as keys for important functions. By just clicking on the icon in the toolbar, a job can be done. the following or some important keys on the toolbar

- forward and backward
- Stop

- Refresh
- Home
- Search
- Favorites

### **Netscape navigator**

Netscape navigator was the most popular web browsers before Microsoft launched its Internet Explorer. The Netscape navigator window has a format similar to that of Internet Explorer. The window has a menu bar with the following menu options

- File
- Edit
- View
- Go
- Communicator
- Help

### **File menu**

File menu is used to customize the page setup to preview to print the document for opening a saving a page, closing a page or exiting Netscape navigator. The file menu is shown it has the following options

- New
- Open Page
- Save as
- Save Frame as
- Send Page
- Edit Page
- Edit Frame
- Upload File
- Go Offline
- Page Setup
- Print
- Close
- Exit

The new option is chosen to have a new navigator window, a new message, a new Blank Page, a new page from Template or a new page from Netscape wizard. When we click the new option of the file menu. we choose the option menu when we want to open a new website by typing the URL or by selecting a URL from the web. When we select the open option of the file menu, Navigator displays the dialogue box. This dialogue box has two Radio buttons, four buttons, and a text field. The text field is used to type the URL of the website to be opened .

The location of the URL may be from composer or from navigations. These are selected using the radio buttons. There are two options, composer and navigator, among the two radio buttons, we have to select one. Navigator selects the radio button called navigator by default, if you want to choose a file by default if you want to choose a file by viewing the directory and subdirectory. We can click the choose file button and proceed after choosing URL, we click the open button to open the website. the cancel button is used to cancel . This option

and return to open window this dialogue box as also help button to get the help of the browser.

File menu also provide the storage option to save as option is used to save the content of window in your file. When we select this option ,the save file Window appears on the screen famous to type the filename and store the content of the window. the save frame as option is used to save the same as it is on the screen. the same page edit page and edit frame option are used for our editing purposes . upload file option is very useful one using this option we can modify our web page and send the modified source code to the web server this is called uploading uploading can be done only if we the owner of the website

### **Edit menu**

Edit menu is used to edit the content of a frame. It is possible to select a portion of the whole, cut it, copy it, move it or paste it at any desired location. The edit menu is similar to the edit menu of any word processor

### **View menu**

The view menu is used to customise the view screen of navigator. It has option to change the font size, change the font, for page resizing, etc. the options of this menu are

- Show
- Increase font
- Decrease font
- Reload
- Show Images
- Refresh
- Stop Page Loading
- Stop Animation
- Page Source
- Page Info
- Character Set

When we click the increase font option, the page appears in the bigger font size. Similarly, the Decrease font option causes the page to appear in the smaller on size. the reload option causes reloading of the program and images . The refresh option refreshes the screen and displays it again. If you want to see the source code of a web page, we can chose the page source option. When we select this option, the HTML code appears in the text editor

### **Communicator Menu**

This menu is very important in choosing the communicator and choosing bookmarks, etc. It has four parts. In the first part of the menu, the list of communication are shown, which are

- Navigator
- Messenger
- Composer
- Calendar
- AOL Instant Messenger service

we can select any of them for our use .The communicator menu

## **Bookmark**

Bookmarks option of the communicator menu is used to make bookmarks for our favourite websites. This is similar to the Favorites option to Internet Explorer. when we want to select the bookmarks option, the screen appears if you want to add a new book work on the current web page, we can select add bookmark option and file this more bookmark use. for example one can have a bookmark folder called “search” which contain different search engines that we employ. I have such folder. The folder contain the following search engines

- Netscape search
- Exicite
- Infoseek
- Lycos
- Yahoo
- AOL NetFind
- HotBot
- LookSmart

## **History**

The history of the website visited so far can be preserved for easy reference. This is done using the history option of the tools menu in communicator menu.

The history window itself has a menu that the following menu

- File
- Edit
- View
- Communicator
- Help

The file menu is used to store the content of the history window and retrieve it. The edit menu can be used for doing editing on the list of files in the history window . The view menu is very useful for the user. the view menu has the following options

- Show
- by Title
- by Location
- by First Visited
- by Last Visited
- by Expiration
- by Visit Count
- Sort Ascending
- Sort Descending

When we select that by Title option, the list of file appears in the order of the titles. When we select by First Visited option, the list appears in the chronological order of the dates of visit. When we select by Last visited option.

## **Security**

Netscape Navigator has the set of security option to make you feel secure. Since the Internet connects your system to other system across the globe, you have to be very careful and Secure less your valuable data is copied or damaged by anybody. We must click the security tool on the toolbar to go into security window. There are several security provisions. It is possible to set a password for communicator. For creating the password, we must select the password option in the left frame . Now the dialogue box appears this is used to set the password. it is possible to protect our Java/JavaScript . Some more security provisions

- Navigator
- Messenger
- Certificates
- Yours
- Signers
- Web Sites
- Cryptographic

## **INTRODUCTION TO HTML**

HTML is the tool for designing a web page.

## **DESIGNING A HOME PAGE**

The first page of a website is called the home page. The home page is like the drawing room of our house or the reception area of an office.

The acronym for Hyper-Text Mark-up Language is HTML. It is a documentation language to mark the headings, title, tables, etc.

It is a universal language to design a static web page. It is machine independent, and all Internet browsers accept the HTML code.

## **HISTORY OF HTML**

The seed for HTML was sown by IBM in the early 1980s. They wanted to set a documentation system in which one could mark the title, headings, paragraphs and font type selections. They called it General Mark-up Language (GML).

In 1986, the International Standardising Organization (ISO) took up this concept and standardized it as Standard Generalised Mark-up Language (SGML). In 1989, Tim Berners Lee and his team in the European Laboratory for Particle Physics (CERN) designed the present form of the documentation language and called it HTML

## **HTML GENERATIONS**

The oldest version of HTML is called HTML 0. This is read either as HTML Version 0 or HTML level 0. HTML 1 is an upgradation of HTML 0. It has new tags for highlighting a text and displaying images.

In HTML 2, edit boxes, list boxes, and buttons were introduced. In HTML 3, flexible figure handling procedures were included. It also supports mathematical equations, formulas, a banner area and has several other interesting features. It also makes table formulation easy:

The present version in use is HTML 4.0.

## **HTML DOCUMENTS**

Using HTML we can create static web pages. Every HTML document has the following two sections:

- Head
- Body

The head begins with the <HEAD> tag and ends with the </HEAD> tag. In the head section, the Title is the most important item.

The Title begins with <TITLE> and ends with </TITLE>. The body begins with <BODY> and ends with </BODY>. Headings can be created with tags H1, H2, H3, H4, H5, H6. H1 will make a big heading H2 will make it smaller and H3 will make it still smaller, and so on.



For example

`<h1> WELCOME TO HTML </h1>`

`<h2> WELCOME TO HTML </h2>`

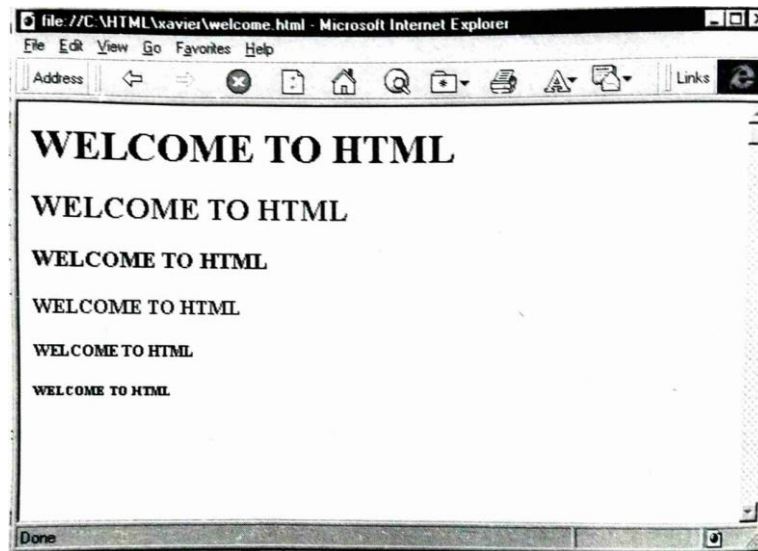
`<h3> WELCOME TO HTML </h3>`

`<h4> WELCOME TO HTML </h4>`

`<h5> WELCOME TO HTML </h5>`

`<h6> WELCOME TO HTML </h6>`

One should note that HTML accepts both upper (i.e. capital and lower (i.e. small) case letters. In other words, HTML program codes are not case sensitive, eg one may type `<HEAD>` or `<head>` or `<head>`.



## Heading Sizes

The following are some more tags.

<code>&lt;!.....</code>		Comments
<code>&lt;br&gt;</code>		Line break
<code>&lt;p&gt;</code>		Starts a new paragraph.
<code>&lt;pre&gt;</code>	<code>&lt;/pre&gt;</code>	Preformatted text
<code>&lt;b&gt;</code>	<code>&lt;/b&gt;</code>	Bold face
<code>&lt;u&gt;</code>	<code>&lt;/u&gt;</code>	Underline
<code>&lt;I&gt;</code>	<code>&lt;/I&gt;</code>	Italics
<code>&lt;tt&gt;</code>	<code>&lt;/tt&gt;</code>	Typewriter font
<code>&lt;ol&gt;</code>	<code>&lt;/ol&gt;</code>	Ordered list
<code>&lt;ul&gt;</code>	<code>&lt;/ul&gt;</code>	Unordered list
<code>&lt;li&gt;</code>	<code>&lt;/li&gt;</code>	A list item

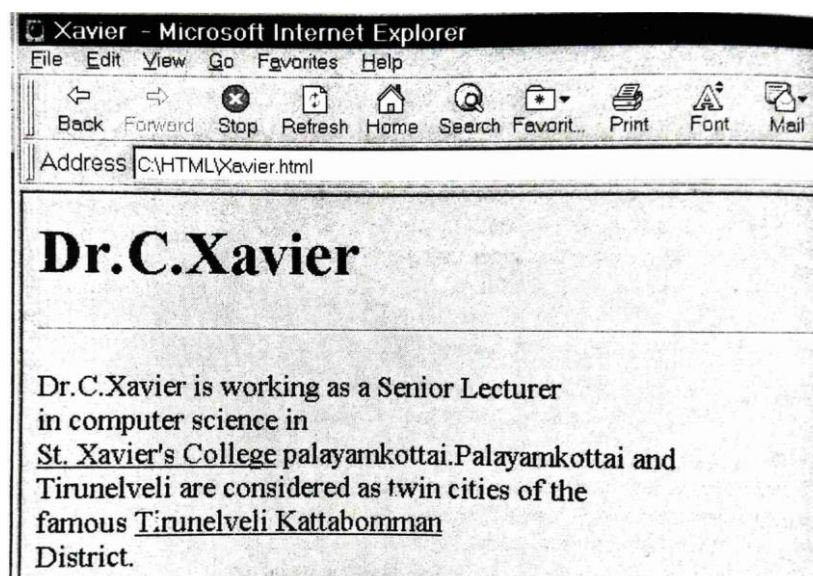
## ANCHOR TAG

When a page is shown, some of its words may need further explanation. Such words are called hot text and they appear in a different color.

When the cursor is moved to the hot text, a hand symbol appears. When we click it, another HTML file will be opened and that will have the required explanation. A hot text is created with an anchor tag, `<a>`.

For example, if a hot text "St Xavier's College" is to be created with an HTML document, college, html we must type `<a href="college.html">St Xavier's College</a>`.

For example, an HTML file, Xavier.Html, is shown below. It contains details about Dr C. Xavier



# St.Xavier's College

---

St.Xavier's College is a famous College .  
This was started in 1923 by the Society of Jesus.  
It is in Palayamkottai. Palayamkottai and Tirunelveli  
are considered as twin cities of the famous  
Tirunelveli Kattabomman  
District.

It is also possible to bring image files, audio files and tables into an HTML file. The web page background can be designed colorfully. Tables and frames can be designed to make the web page precise and simple.

## HEAD AND BODY SECTIONS

### HEADER SECTION

Every HTML document must have a head section which begins with the tag <HEAD> and ends with </HEAD>.

The following are some important components of the head section.

- ✓ Title
- ✓ Prologue
- ✓ Links

### TITLE

The title is the heading that appears as the title of the window. It is enclosed between tags <title> and </title>

Example Consider the following HTML document:

### PROLOGUE

A prologue is only a comment which can tell about the HTML version that is adopted for preparing the document.

A prologue is shown as follows.

```
<! Doctype HTML 3.0 >
```

## LINKS

The link tag can be used for the following purposes.

- To inform the browser of the previous document
- To inform the browser of the next document
- To link the banner To inform the location of the base document location.

### Previous and Next

The HTML document can be placed in between two old HTML documents using a link tag. Suppose we want to assign an HTML document "dept, html as the previous document and "family.html" as the next document.

We define it as follows.

```
<HEAD>  
<TITLE> DR C. XAVIER </TITLE>  
<LINK REL previous HREF ="dept.html">  
<LINK REL next HREF="family.html">  
</HEAD>
```

Also, we can assign an HTML document for the home key using the statement.

```
<LINK REL Home HREF="college.html">
```

The above statement assigns college.html for the home button of the tool bar.

### Banner

A banner is a fixed part of the page that will stay on the screen when we scroll the text of the page. The emblem of a college, logo of a company or the name of a company can be a banner.

The banner must be prepared as a separate HTML document and it must be linked as a banner to the document.

### Base Element

The base element in the head section informs the browser the location where base documents are available. This is similar to defining the path in a DOS system.

Suppose we define the following in the head section

```
< BASE href="http://www.xavier.edu">
```

Hereafter, whenever we define an anchor, we can simply give the document file and the system will search only in the location

<http://www.xavier.edu>

## COLORFUL WEB PAGE

A web can also be made colorful by using three attributes in the <body> tag.

They are:

- background design
- background color
- text color

### Background

The background of the web page can be designed using any picture available in format, gif format or jpeg format.

For example, suppose Arcade . bmp is a file which is available in bmp format Suppose we specify a body of the page using a <body> : shown as follows.

```
<body src "Arcade.bmp">
```

### Colors

Any color is a combination of three basic colors, namely:

- ❖ red
- ❖ green
- ❖ blue

In HTML, each of the above colors has a degree from 00 to FF in hexadecimal form So it permits 256 degrees for each basic color (because FF in hexadecimal form is 255 in decimal form and 0 to 255 gives 256 degrees).

If we assign the colors as:

Red=FF (full),

Green = 00 (empty),

Blue = 00 (empty),

then the resulting color is Red. So the color red has its color string “#FF0000”. A color string is got by the degrees of the colors Red, Green and Blue, preceded by the + symbol.

### Background Color

The background color of the web page can be selected by assigning the color string to the bgcolor attribute of the body tag.

Suppose we want our web page background color to be magenta.

The color string for magenta is "#FF00FF". So we write the <body> tag as

```
<body bgcolor "FF00FF">
```

## **Text Color**

The color of the text in the web page can be selected by assigning a color string to the text attribute of the web page. Suppose we want our text to appear in pink color.

The color string for pink color is "#BE8F8F", so we can assign for the text attribute in the <body> tag as follows.

```
<body text = " #BE8F8F">
```

 Example Suppose one wants the background color to be red and the text color to be green. The color strings for red and green are shown below.

## **COMMENT LINES**

HTML programming language has the facility to include comment lines for the reference of the programmer. The comment will not appear in the web page.

We include comments using the <! > tag .

The general format is:

```
<! Comment.....>
```

Example

```
<! this file was created by Mr. Prakash himself on his on multimedia Pentium computer>
```

```
<! This part illustrates the product profile of the cospany>
```

## **SOME SAMPLE HTML DOCUMENTS**

In this section, some sample HTML documents are presented for the reference of the reader. The outputs are also shown for immediate understanding of the HTML codes

Sample 1 : Consider the following HTML document.

```
<HTML>
```

```
<head>
```

```
<title>Prakash</title>
```

```
<!this file was created by Mr Prakash himself on his multimedia pentium computer>
```

```
</head> <body bgcolor=#00ffee text=#ff0000>
```

```
<h1>K.P. Rathina Prakasam </h1>
```

```
<hr>
```

```
<br>
```

K. P. Rathina Prakasam is a businessman. He is the manag partner of [M/S Natar: stores](Nataraja Stores.html), [Palayamkottai](#). His firm deals with hardwa and paints. The firm handles wholesale and retail sale quality building materials including [Berger Paints](Berger Paints.html) [at reaso able and competitive prices to customers.](#)

<br>

</body>

</HTML>

The output of the above HTML document on the web appears as shown in Fig.