CHAPTER-1

INTRODUCTION

Research is an important phase in library and information science regarding information-related behavior which consists information needs, web browsing and use of information resources. In the present scenario, information is used as one of the basic resources and plays a vital role in the life of man affecting both personal and professional life. Like other natural resources, information is so important aspect of today's society or human being that every decision requires the definite information. It is the process of information acquiring, using and implementing information that we know as web browsing behavior. If we talk about the academicians, researchers and students, right and update information is more important for their research.

Broadly speaking, web browsing behavior is a big word which includes a set of actions taken by individuals or groups in order to show their information need, seek information, check & select the information for the fulfillment of their required information needs. Web browsing is presented as an interface between the user and the inner working of the Internet, specifically the World Wide Web. Referred to as web clients or universal clients, the browser functions work as the client program.

A web browser is the software that helps us in accessing the WWW and surfing it. The two most popular browser software are Netscape Navigator and Microsoft Internet Explorer. Both hypertext transfer protocol (HTTP) and File Transfer Protocol (FTP) in corporation with the web browser permit us to download files from servers and help us in sending them. Basically we have two ways to access a browse. The most popular source of information is the library which literates the societies. It is the responsibility of librarians to make aware of the kind of information being sought and how it can be obtained. It is due to the rapidly escalating cost of purchasing and archiving print journals and electronic media that the library has to provide and maintain efficient services. Because of technological advancements and innovations, today libraries have fully transformed from store house to gateways of information and ICT
has completely changed the scenario of traditional libraries and meaning of storage, preservation and dissemination.

It is the revolutionary change of Information and communication technology (ICT) that the human society has advanced every walk of life. It is the Large-scale computerization, invention of Internet and influx of World Wide Web (or just the Web) that has made extensive and fast dissemination of information and turned the world in a global village. Basically at CERN (Geneva) Tim, Berners-Lee developed the Web which became almost a synonym for Internet itself (Poulter, 2003). Indeed these two terms are not synonymous; both are separate but related things. The Internet is a massive network of networks, while the Web is a way of accessing information over the medium of the Internet by using the HTTP protocol, only one of the languages spoken over the Internet. It interfaces other Internet services. Browsers work with the help of web such as Internet Explorer or Firefox, to access web documents called web pages that are linked to each other via hyperlinks. Actually this shows that the Web is just a portion of the Internet. This is approved by its short history of approximately 15 years that it has become a major area of interest as millions of people all around the world using the Web for their daily routines.

This software application retrieves, presents, and denies information resources on the World Wide Web. The Uniform Resource Identifier (URI) identifies an information resource which may include a web Features age, image, video, or other piece of content. It has Hyperlinks present in resources which enable users to easily navigate their browsers to related resources.

Basically, browsers are intended to access the World Wide Web and this is also a way to access information provided by Web servers in private networks or files in file systems. There are some browsers which can save information resources to file systems. The use of information and communication technologies (ICTs) particularly computers and the Internet has become an integral part of today's educational system. Several educational functions like research and scholarship, teaching and learning as well as management and administration largely depend upon ICTs. This happens because information and communication are the back-bone to any educational system. When we use Internet in education, it enhances sharing of information; increases collaboration among students, academicians and institutions;
improves provision of distance education; and has resulted in new forms of pedagogy, with a lot of benefits. Having hypermedia links, and being the big part the Internet, World Wide Web (Web) has become a different source of information and it is now common to all people to find the information. Moreover, Web-based information is preferred by students and instructors to print information resources and resulting to desert traditional physical libraries (Greenstein and Healy; 2002; Chandel and Saikia, 2012). The Web is rapidly increasing in the volume of unorganized information that is made available through multiple formats such as 'graphical, audio, and textual, and stored in a variety of web-based databases. Despite some online resource restriction, the amount of information is freely available on the Web and it is increasing continuously. Even online systems like Online Public Access Catalogues (OPACs) have made easy to access to print resources.

Now we can see that web is particularly used as an important platform to increase visibility and access of their information resources by authors, publishers and libraries. Largely the web social media like Face book, Twitter and YouTube has changed the way users experience the Web. The users are becoming more active co-producers of knowledge rather than passive consumers of content (Lee and McLaughlin, 2010). Greatly the Web is transforming the information landscape and has given a revolutionary change in teaching, learning and even research.

Unlike traditional information systems which have rather homogeneous groups of users, the Web has more heterogeneous groups of users (Kim, 2001). If we talk about Web users, they vary from computer novices to experts, users having training in information retrieval and those without search skills, as well as those of different ages and education backgrounds. The different user groups that may have different information needs, search strategies and goals, use the Web (Holscher and Strube, 2000). Having analyzed Internet search behavior of students and faculty members of Kuvempu University, Birader (2008), we found that they mostly preferred search engines such as Google and Yahoo. Similarly, Lewandowski (2008) found that Google and Yahoo were used more frequently than other search engines. Even it was noticed by Mohamed and Jina (2011) that a large number of students used web-mail and social networking sites very frequently; all students used simple search methods; and that Google was the most preferred search engine followed by Yahoo. The users of e-journals and
databases were very few. It was also noticed that due to lack of training, computer infrastructure, full text e-journals and low Internet they did not utilize the web-based information resources. In the present scenario, mostly groups have been able to understand the use of Web social media. It was also seen by surveys that the use of social media for education-related purposes indicates mixed feelings. Generally, social media like Facebook is already being used by the students for education-related communications. For example, Ophus and Abbitt (2009) found that by the survey of more than three quarters the students used Facebook to communicate with other students in their courses. In the same manner, Towner and Mutioz (2011) noticed that more than half of surveyed students use Facebook to ask other students questions about class assignments or projects. Even through other studies it has been noticed that students and faculty had reservations in using Face book for more formal, instructional purposes. Roblyeret.al (2010) found that approximately half of faculty surveyed felt that Facebook should not be used for education because it is personal or social. It was also reported by Towner and Mufioz (2011) that 57 percent of students felt that Facebook should not be used for course or instructional purposes and only 13 percent of instructors surveyed were using it for formal educational practices. Some empirical studies of Tanzania have attempted to assess the use of Internet by students. Luambano and Nawe (2004) found that many students at the University of Dares Salaam were not using the Internet because of inadequate computers, lack of search skills, and slow speed of the Internet. The students who used the Internet did not use it for academic purposes. The assessing conditions of e-resources in Tanzania made Manda (2005) know that there were limited accesses to computers, variations among institutions in accessing e-resources, inadequate user.

If the users acquire the information from the Web, they need some different skills from those required in traditional print environment. As a result, the Web is having impact on information seeking behavior of users. It was the view of Chandel and Saikia (2012) that users' information seeking behavior has changed to less reliance on physical libraries; more dependence on online resources; considerations on convenience and instant accessibility; and that many users get satisfied with what is easily available even at the cost of quality. Through the different Studies on the web search behaviour of users around the world have come to know different aspects including searcher's background and experience, tasks performed in
searching, perceptions on web resources and how they search (Hsieh-Yee, 2001). According to Jansen and Pooch (2001), there were differences in the search behaviour of web users and users of traditional systems in using terms per query, searching session length, and use of Boolean operators or advanced search features. Batthini and Madnani (2003) noticed that many Library and Information Science (LIS) professionals depended on search engines and a good number were familiar with the engines' advanced search options. Likely, Bond (2004) found that the efficient use of search engines was the most successful way of finding web documents. However, the main underlying factors for the successful retrieval of web documents were poor searching skills. With the support of earlier observations searching for relevant information on the Web is often a laborious and frustrating task (Holscher and Strube, 2000). It was through the Studies on Web searching by students that the Web is utilized for academic and nonacademic activities; they took hours on searching by varying their search skills. Chang and Perng (2001) noticed extensive use of Internet by the students, mostly web-based databases, electronic journals, and search engines. According to research review conducted in 1998-99, Ebersole (2005) concluded that it was believed by the students about the Web to be an important and valuable resource for academic purposes. It was the observation of Lalet.al. (2006) that the use of the Internet for educational purposes was higher among the postgraduate medical students. Suggested by a study on information-seeking behaviour of students in a digital scholarly environment, students constituted the biggest users in terms of sessions and pages viewed, and they were more likely to undertake longer online sessions (Nicholas et al., 2009). Through some other studies we have sought to understand search engines use by training, slow Internet, inadequate search skills, and frequent power cuts. Malekani (2007) noticed that mostly students of the Sokoine University of Agriculture had positive perception regarding the use of Internet for academic purposes and they perceived information from Internet as current and easier to retrieve compared to print resources. Comparatively there were many factors that restricted the effective use of the Internet and these factors were low bandwidth, few internet access points, and inadequate skills. It was also examined by Manda and Mkangara (2007) that there was association between gender and the use of e-resources among postgraduate students at the University of Dar es salaam. The fact was that the number of male postgraduate students was more to use e-resources than female students. The study also revealed that the use of electronic databases
and e-journals among postgraduate students was low but the use of search engines such as Google and Yahoo and other free internet resources was high and frequent. According to Lwehabura (2008), the students in Tanzanian universities had inadequate knowledge and skills in using electronic information resources. It was a view that this study sought to understand the Web behaviour of postgraduates at Sokoine University of Agriculture. Particularly, the study revealed the search characteristics of postgraduates, reasons for using the Web, usage of various web features, web search skills and problems faced while using the Web. It is to be noted that postgraduates are involved in research so they require lots of information to complete their academic assignments and fulfill other information needs. Hence, information search is a very essential activity in postgraduate studies. Moreover, this study would help the higher learning institutions to develop strategies, policies and plans to improve the college library play an important role in the overall development of students. Generally, the library is visited by undergraduate students to consult previous question papers and syllabi, to borrow books and other useful material.

This is due advancement of information technology and Web-based services that the useful study material is now available to students on their desktop and the students are able to find the digital contents anytime and anywhere. Students want to see traditional services transformed into digital information services. College libraries are able to provide such type of information that is always helpful to graduate, postgraduate and research students (Jefferson and Smith-Burnet, 1978). It was also noticed by De Jager (2002) that student exam result was improved by the use of the library. This is the importance of the college library that it provides conceptual information to students for preparing assignments. The reliability of teaching largely depends more on lectures than on text books. Basically the main function of the college library is to provide the study material to the users in a short possible time in order to serve the information requirements of the students and teachers. It is due to the digital age that most of the college libraries have started computerization of in-house activities. There are several Integrated Library Management softwares (ILMS), LIBSYS, SLIM++, LIBERTY, Trodoon, LIBMAN, and even open source software like New Genlib, Koha, Weblis, ABCD, Evergreen, which are publicly available to automate the library operations. There is INFLIBNET (Information Library Network) which has amazingly developed the libraries in India. Even SOUL library automation software is the result of the
development of INFLIBNET and easily available to university and college libraries at a very comfortable price. Undoubtedly, this is associated with the reputation and status of any college library that the quality information services are being provided to the clients but nobody can deny advancement in the field of ICT and libraries providing the new mode of information services.

**Function:**

The primary purpose of a web browser is to bring information resources to the user allowing them to view the information and then access other information. This process begins when the user inputs a Uniform Resource Locator (URL). The prefix of the URL, the Uniform Resource Identifier or URI, determines how the URL will be interpreted. The most commonly used kind of URI starts with `http:` and identifies a resource to be retrieved over the Hypertext Transfer Protocol (HTTP). Many browsers also support a variety of other prefixes, such as `https:` for HTTPS, `ftp:` for the File Transfer Protocol and `file:` for local file. Prefixes that the web browser cannot directly handle are often handed off to another application entirely. For example, `mailto:` URIs is usually passed to the user's default e-mail application, and `news:` URIs are passed to the user's default newsgroup reader. In the case of `http`, `https`, `file`, and others, once the resource has been retrieved the web browser will display it. HTML and associated content (image files, formatting information such as CSS, etc.) is passed to the browser's layout engine to be transformed from markup to an interactive document, a process known as "rendering". Aside from HTML, web browsers can generally display any kind of content that can be part of a web page. Most browsers can display images, audio, video, and XML files, and often have plug-ins to support Flash applications and Java applets. Upon encountering a file of an unsupported type or a file that is set up to be downloaded rather than displayed, the browser prompts the user to save the file to disk.

Information resources may contain hyperlinks to other information resources. Each link contains the URI of a resource to go to. When a link is clicked, the browser navigates to the resource indicated by the link's target URI, and the process of bringing content to the user begins again.
Internet

Introduction: Internet is computer-based world wide information network. It can be assumed as an example of WAN (wide area network). The internet is composed of a large number of smaller interconnected networks. These networks may link ten, hundreds or thousands of computers, enabling them to share information with each other to share various resources, such as powerful supercomputers and databases (collection of data) of information.

The internet has made it possible all over the world to effectively and inexpensively communicate with each other. Unlike traditional broadcasting media, such as radio and television, the internet is a decentralized system. Each connected individual can communicate with minimum overhead cost. The internet has brought new opportunity for business to offer goods and services online. In the future, it may have an equally dramatic impact on higher education as more universities offer internet-based courses.

The internet has revolutionized the computer and communications work like nothing before. The invention of the telephone, telegraph, radio and computer set the stage for this unprecedented integration of capabilities. The internet is at once a world-wide broadcasting capability, a mechanism for information dissemination, and a medium for collaboration and interaction between individual and their computers without regard for geographical location. Internet, put simply, is a global network of numerous computers and computer networks all over the world, allowing one to access information over the network, and enabling information exchange by following standards protocol for development of software in terms of HTML or VRML languages and TCP/IP for data communication, as well as business transactions. Specific websites are located by using the universal resources locator (URL), which is a unique address.

It is possible to put information related to ones activities on the internet, making the dream of a world without frontier a reality. The internet facilitates the speedy sharing of information among research and education communities, advertisement on the internet is another phenomenon that has caught on in a big way. All this is leading to more efficient style of
working and an improved quality of life in general. It has made their life very easy and comfortable.

The beginnings: ARPANET:

In 1957, the U.S. government formed the advance research projects agency (ARPA), a segment of the department of defense charged with ensuring U.S. leadership in science and technology with military applications. In 1969, ARPA established ARPANET, the forerunner of the Internet.

Research and Education:

ARPANET was a network that connected major computers at the University of California at Los Angeles, the University of California at Santa Barbara, Stanford Research Institute, and the University of Utah. Within a couple of years, several other educational and research institutions joined the network. In response to the threat of nuclear attack, ARPANET was designed to allow continued communication if one or more sites were destroyed. Unlike today, when millions of people have access to the internet from home, work or their public library, ARPANET served only computer professionals, engineers and scientists who knew their way around its complex workings.

Tim Berners-Lee: Father of the Web:

The World Wide Web came to into begin in 1991, thanks to developer Tim Berners –Lee and others at the European Laboratory for practical physics, also known as counsel European pourla Research Nuclear (CERN),

Possible to connect content on the web with hyperlinks. Berners- Lee now directs the World Wide Web Consortium (W3C), a group of industry and university representatives that oversees the standards of web technology. Early on, the internet was limited to noncommercial uses because its backbone was provided largely by the national Science foundation, the national Aeronautics and space administration, and the U.S. department of energy, and funding came from the government. But is independent networks began to spring up, users could access commercial websites without using the government- funded network.
By is independent networks began to spring up, users could access commercial websites without using the government-funded network. By the end of 1992, the first commercial online service provider, Delphi, offered full internet access to its subscribers and several other providers such as CompuServe, American online etc. In June 1993, the web boasted just 130 sites. By a year later, the number had risen to nearly 3,000. As of April 1998, there were more than 2.2 million sites on the web.

**INTERNET SERVICES:**

The internet offers access to data, graphics, sound, software, text, and people through a variety of services and tools for communication and data exchange. Some of the services are:

- Remote login (Telnet)
- File transfer (FTP)
- Electronic mail (E-mail)
- News (USENET of network news)
- Hypertext (WWW)

**WHAT ARE DOMAINS?**

Domains divide World Wide Web sites into categories based on the nature of their owner, and they form part of a site’s address, or uniform resource locator (URL). Common top-level domains are:

- .com – for commercial enterprises
- .org – for nonprofit organizations
- .net - for networks
- .edu – for educational institutions
- .gov – for government organizations
.mil – for military services

.int- for organizations established by international treaty

Additional three – letter and four – letter top- level domains have been proposed, and some are likely to be implemented. Each country linked to the web has a two – letter top – level domain.

WHO RUNS THE INTERNET?

No one authority controls the World Wide Web. Today’s web site authoring tools allow virtually anyone who has access to a computer and the internet to post a web site and contribute to the definition of what this medium is and what it can do. But the World Wide Web consortium does oversee the development of web technology. Every network that is connected to the internet is responsible for its own part. There is no organization or agency controlling the activity on the internet.

WORLD WIDE WEB (WWW)

The World Wide Web was originally developed at CERN, the European Laboratory for practical physics. Its first stated purpose (from the original proposal) was to provide a common (simple) protocol of requesting human readable information stored at a remote system, using networks. The underlying objectives were simple.

Give scientists a way to exchange many kinds of data (text, graphics, figures, databases) using a concept known as hypertext for the purpose of advancing their research. From this test-bed, the implementation and response from the online community has exploded into the most promising internet access method ever.

From the late 1960’s to the early 1990’s the Internet was a communication and research tool used almost exclusively for academic and military purposes. This changed radically with introduction of the World Wide Web (www) in 1988. The www is a set of programs standards, and protocol governing the way in which multimedia files are created and displayed on the Internet. The internet contains the www and also includes all hardware and other software and protocol on which the www runs. The difference between internet and
WWW is similar to the distinction between a computer and a multimedia program that runs on the computer. Many analysts attribute the explosion in used and popularity of the Internet to the graphics intensive nature the WWW.

The World Wide Web or w3 or simply the web is a very powerful tool of the internet. It has billions of ‘pages’ of information, sounds, images, movies and animations. It contents has a wide range of topics covering education, cartoons, drama, fashion, computers, business and just about everything. You can retrieve that information, using link to other www pages. Web links are stored within the page itself and when you wish to ‘jump’ to the page that is linked, you select the ‘hotspots’ or ‘anchors’ this technique is called hypermedia or hypertext. A collection of such web pages, which are stored on host computers or Internet server, is known as a web-site.

**Web server**

A web site is a collection of *web pages* which are digital files generally written using Hypertext Markup Language (HTML). For a web site to be available to everyone in the world at all times, it need to be stored or "hosted" on a computer that is connected to the internet 24/7/365. Such a computer is known as a **Web Server** (note the first letter is in uppercase).

You can potentially host a web site on your home computer but this involves a lot of work and constant monitoring. It is easier to "buy" web hosting from a company because there are thousands that offer this service at reasonable prices. A brief on one of the best companies is at the end of the article - you can not only get web hosting but also a domain name and a web site really cheap!

There are several requirements for a Server computer - it needs to be fast, have a large storage capacity hard disk and lots of RAM. But the most important is having a permanent internet address also known as an I.P. (Internet protocol) address. If the I.P. address changes, the web site would not be found and will appear *offline* - the browser will display cannot find *web site* error.
Protocols

The main protocol for transforming information on the web is the Hypertext Transfer Protocol or HTTP. Web pages, both text and graphics are sent from the server to the browser using this protocol.

The web also supports most of the other popular Internet protocols, such as File Transfer Protocol (FTP), Gopher, News and Wide Area Information Services (WAIS). But you need not remember all these protocols. Your browser does all the work, dynamically switching between protocols as needed.

Uniform Resource Locators or URL’s are the standard way of locating and retrieving information on the World Wide Web.

Web Pages

Familiarising you with the web does not take very long, and is fun way to prepare yourself for creating web documents. The best place to start is with the web page, the visual part of a much larger system that people most often associate with the World Wide Web. There are many components to the web, just as there are many pieces to the television industry. Here, there are broadcast companies, cable companies, antennae, remote controls, repair shops, satellites, and the television set itself, to name a few. The same holds true for the web. Most people think mainly of the individual web pages, as they are most visually captivating aspect of the entire system and what we “tune in” to see. The term “page” refers to nothing more than a World Wide Web document. A webpage is much more like a word processing document than a printed page, especially the way it is viewed. When the information on a web page is not visible, you scroll either vertically or horizontally to see more.

Web site

A world wide web site is simply a collection of inter linked web pages. Web pages not be related. But its very nature, the web makes it possible to link any number of items, including other pages. For instance, a page might have links to other pages containing photography, basketball, cartoons or just about anything else. Because of the internet diversity found in the
web, to suggest that a site is a related group of documents would be big mistake. If you were
to think of the web as a giant filing cabinet, each site would be a folder inside it. The pages in
turn would be documents inside the folders.

**Home page**

How to find a site if it is merely a collection of inter linked pages? Simple, each site has a
home page, the official access point into the site. From the home page, you can get an
overview of the site and begin exploring it. A properly designed homepage is, in essence, like
a hospitable host. It invites you in and tells you about all the things you can see and do during
your visit. It is the most important page of any site, the starting point for your journey.

**SEARCH ENGINES:**

There is plenty of interesting materials available on the Net but how do you find it? There are
different kinds of indexes and directories for different kinds of material. Unfortunately,
because they tend to be organized by the kind of internet services they provide (rather than
by nature of the material) you find web resource in one place, gopher resource in another
place and so on. Because most of what you’d want to access is on the web on gopher, they
are the main place that will be discussed here. All the directories and indexes described
below fall in the broad category called search engines.

When you use a search engine, you are searching only that search engine’s database for the
keyword or keywords you have chosen. The engine finds and displays a list of links to web
sites where those words were found. What’s more, even the most powerful search engine,
with the most sophisticated program, doesn’t have every web site out there in its database.
Still, all search engines have huge databases and will, most likely, return impossibly long
lists of matches or “hits” it is easy to be overwhelmed at the prospect of sifting through them
all. For researchers and journalists, hundreds of thousands of hits are almost as useless as no
hits at all. So when you send a search engine out looking for a keyword, the results will vary
depending on which search engine you use. To find just what you want, it’s best to learn how
to use several of them. Different engines require you to refine your searches differently. For
example, the rules about searching for phrases can vary. Understanding the differences among search engines is the key to choosing the right ones and using them most effectively.

There are many search engine is an interactive on the web. A web search engine provides an interface between the user and the underlying database. The interface presents the user with place to type in a searching string, which may be a word, a phrase, a data, or some other criterion, and a way to submit the request.

The web search engine runs the search string against the database, returns a list of resources that match the criteria, and displays the result for the user. Many web search engine use “fill out” forms as an interface, and support complex queries. Many also include instructions and tips to search the database more effectively. Because web search engine can use hypertext, users are able to link directly to resources listed in the result display.

Some of the most popular search engines are:

Google  (www.google.com)
Alta Vista  (http://www.altavista.digital.com)
Excite  (http://www.excite.com)
WebCrawler (http://www.webcrawler.com)
Lycos  (http://www.lycos.com)
Opentext  (http://www.opentext.com)
Infoseek  (http://www.infoseek.com)
Yahoo!  (http://www.yahoo.com)
Google  www.google.com/

Google is the best new search engine to come along in years. Unlike other search engines, which are now offering subject directories, free e-mail, chartrooms, online shopping, etc., Google is (so far, at least) a no-frills search engine that aims to do one thing well- find
relevant sites fast. It seems to offer a unique blend of the best features of both subject directories and search engines. It consistently finds relevant sites fast, the way Yahoo! Does, but it searches a database as comprehensive as some of the bigger search engines, such as Alta Vista and Infoseek. Google quickly gained a reputation for effectiveness because it was the first search engine to use a new formula for ranking its results. Older search engines generally ranked sites according to how many times a search term appeared on a page, or how prominently it appeared. Google sophisticated program ranks web sites based on how popular they are with other popular or important web sites.

When you do a search at google, you can choose to skip the result list completely and go straight to the first hit on the list by pressing the button labeled “I’m feeling lucky” rather than the google search button.

Google makes searching using keywords fairy simple. All you need to do is type in a few description keywords and click on the search button. It looks only for pages with all those search terms on them. You can also use google to search for any pages that like to a particular site. Google is an excellent tool for findings official information and popular sites. But other older search engines are still better for some searches.

**YAHOO**

Yahoo is a large, well – indexed directory of web pages. It begins as a student project at Stanford and is now commercially supported. It organizes its information in categories and subcategories, like a library, although you can also do keywords searches. It is one of the best places to begin any search. Now it also includes Reuter’s headlines and some other ‘real world’ information. Yahoo’s URL is

http://www.yahoo.com

You can either click down though categories starting from the yahoo home page or search for categories by keyword. (You are searching the categories, not the web pages themselves.) Yahoo page contain a mixture of references to information pages out in the rest of the web, and references to sub pages (and sub- sib- sub and so on) within Yahoo. You can also go
back to more general categories by clicking the category titles that appear at the top of each page.

LYCOS

Lycos is a largely automated ‘web crawler’ that collects pages from all over the net that you can search by keyword. It begin as a project at Carnegie Mellon University and, like Yahoo, has gone commercial Lycos’ URL is http://www.lycos.com

WEB CRAWLER

Web crawler is an automated indexer that crawls around the web cataloguing and indexing every page it comes across. It is owned by America Online (AOL), but one need not have an AOL account to use WebCrawler. WebCrawler’s URL is http://www.webcrawler.com

INFOSEEK

It is a popular search engine with a robot that retrieves HTML and PDF documents. It indexes full text and generates a short summary of each document. InfoSeek allow searches in the web, Usenet groups and web frequently asked questions (FAQs). This offers indexed site searches and divides the Web into a number of convenient baskets. Unlike Yahoo! Infoseek aims to have catalogued more websites than virtually any other search engine on the Internet.

KHOJ

A search engine for Indian web sites. The khoj home page has links to topics of Indian interests. URL is www.khoj.com

HOTBOT

The search options are a hunter’s delight. You can search in terms of words, language and time. URL is www.hotbot.com

ISLEUTH
It’s the mother of all searches, because six engines do the work for you at once. URL is www.isleuth.com

**EXCITE**

The exciting thing about this engine is the profusion of chat links ranging from the general to the very specific. URL is www.excite.com

**Other search engines**

There are many other search engines on the web such as Info Market, Meta Crawler, IndiaInfo.com, All4one and Highways61.com. Choosing the right search engine will need patience and experience if you use Meta search engines, then they minimize your effort to search to a great extent. A search engine is evolving everyday to improve web retrieval efficiency.

**What you do with the Internet**

Search for Information: In the internet there are sites that have electronic versions of classic literature pages and pages of movie facts, stock quotes, collection of music and other interactive contents and mountains of additional information. You may have trouble findings a place of start. There are search tools in the internet that helps you search for specific information. Yahoo (http://www.yahoo.com), Lycos (http://www.lycos.com), Web Crawler (http://www.webcrawler.com), Hotbot (http://www.hotbot.com), Web Crawler (http://www.webcrawler.com), Hotbot (http://www.hotbot.com), Khoj (http://www.khoj.com), cyber (http://www.cyber411.com) are popular search engines available. Cyber 411 isa great search engine as it combines results of16 search engines and still very fast. Khoj is an Indian search engine.

**Use of Electronic Mail**

One of the widely used features on the Internet is electronic mail (email). With e-mail you can send and receive mails without even leaving the keyboard. Messages can be sent globally just by paying local telephone charges. When someone sends you an email, it is stored in your mailbox (on service providers’ computer). Using the e-mail program, computer
program, connect to your ISP, download your message to your local hard disk. Email eliminates the need of postage stamps and greatly reduces the time taken to send and receive messages.

**Chat with other people**

If you like talking to complete strangers and making new friends, Internet is the best place. With chat programs you can chat with a group of people, whose geographical location you need not know.

**Telnet to other computers**

With telnet program, you can connect and use it as if you were sitting at its keyboard. When the telnet program connects your computer to remote computer, the remote computer usually asks you to centre a user name and a password. On telnet sites that allow anonymous access you can entre anonymous as your user name and your e-mail address as the password.

**Internet Services**

The rise of Internet has changed the image of libraries. It restrains the task of the library in retrieving and disseminating the information. It is a substitute for the large number of reference tools like books, journals, encyclopedias, dictionaries, directories, yearbooks, etc. The total collections of a library can be indicated through web pages. Internet does provide a variety of services to the different types of users. So a few of them are:
INTERNET IMPACT ON LIBRARIES FUNCTION AND SERVICES

As like other domains Internet has revolutionized the library functioning. On one hand the day to day tasks performed by library have become more efficient, simple and considerable time and effort saving while retrieving information. On the other hand, libraries are no longer in isolation. There resources are now shared and in fact they have become distributed information centers worldwide.

Library have to handle tedious responsibility of gathering, allocating information resources and these are unlike old days, local repository of information resource but rather they are
accessible to the world wide community and this change has been possible by inception of internet. Now Libraries could help both local and global users depending on their need and priority.

1- For acquisition: Email is one of the most popular services on internet.
   • By using email we send suggestions to users and get their response for their requirement.
   • We can through email, correspondence with booksellers and publishers for the very short period
   • We send Reminders to the library users and booksellers etc.
   • We get bibliographical details downloaded through the internet.
   • We can search online catalogue searching.
   • We can update information books, magazines and other resources, Likes as amazon.com. Flipkart.com etc.

2- For classification:
   Classification systems available on the internet
   • Dewey Browser
   • Union catalogue of Books
   • BUBL- user DDC
   • LC Classification

3- For Circulation
   • We can use interlibrary loan services
   • Reminders by email
   • For user requests
   • For direct Borrowing

4- For preservation and storage
   • JSTORE project

5- For Serial collections
   • We can use acquisition process
   • For e- Journals

6- For resource sharing
• We can be accessed Union catalogues
• Database over networks, WLN, OCLC, DELNET.
• Full text journals access
7- For reference services
• Linked by useful sites
• Through Subject guides
• How to search
• Answering short range and long range questions
8- For library Services
• Inter Library Loan
• Document delivery services
• Reference/ Information services
• Current Awareness Service
• Current additions
• Current publication content pages
• Selective Dissemination Information Service
• From library collection
• Online databases
• Internet sources
• Online Public Access Catalogue
• Bibliographical
• Free full text of certain journals
9- Used in Cataloguing
Cataloguing systems on the internet
• Use by Internet
• Use by CORC
• NETFIRST
• OPAC.
Web browsing

The process of navigating and exploration the World Wide Web is often called surfing. Many have wondered why this term (instead of other such as searching, browsing, etc.) has stuck in the Net community. A browser is a piece of software that acts as an interface between the user and the inner workings of the Internet, specifically the World Wide Web. Browsers are also referred to as web clients, or universal clients, because in the client/Server model, the browser functions as the client program. A web browser is software that allows you to access the WWW and surf it. Netscape Navigator and Microsoft Internet Explorer are the two most popular browser software. The web browser incorporates both hypertext transfer protocol (HTTP) and file transfer protocol (FTP), i.e., it allows you to download files from servers and it also allows you to send files. There are basically two ways to access a browser. The first (and preferred) ways is to have one installed on the computer you use to access to its WWW browser.

The browser acts on behalf of the user. What it does is as follows

- Contacts a web server and sends a request for information.
- Receive the information and then displays it on the user’s computer.

A browser can be graphical or text- based and can make the internet easier to use and more intuitive. A text based browser shows the user only the textual matter. A graphical browser allows the user to see more of what the WWW has to offer such as graphics, photographs and multimedia.
A web page as seen in a graphical browser

A graphical browser allows the user to view images, “point – and- click” with a mouse to select hypertext links and use drop- down menus and toolbar buttons to navigate and access resources on the Internet.

To illustrate, here’s a part of an Internet Explorer screen showing a page from the web site of L & L consultancy services Pvt. LTD. (http://www.lnl.net) The WWW incorporates hypertext, photographs, sounds, video, etc. That can be fully experienced through a graphical browser.

Browser often include “helper application” which are actually software programs that are needed to display images, here sound or run animations sequences. The browser
automatically invokes these helper applications when a user selects a link to a resource that requires them.

Here are many different types of browsers and all of them perform the same basic functions (transferring hypertext) but many have specific features that are unique.

Examples of some common browser are:

Netscape Navigator

Microsoft Internet Explorer of IE

Mosaic

Opera

Amaya

HotJava

Lynx (Text-based).

**BROWSING TIPS AND TECHNIQUES:**

Internet browsing or “net surfing” is the process of visiting different web sites on the internet hosted by various companies, organization, educational institutions, magazines, individual and others. The internet contains a wealth of information that can help in many ways. If you are in business, armed with a good internet browser, you can easily get around to myriad of sites, gathering competitive information, conducting market research, reading publication, and staying in touch with what’s happening at your business association.

There are many interesting sites out there, so don’t let technology hold you back. Look for an internet browser that lets you experience the best of the web. It can be either a graphical browser or a text based browser.

You can go to a particular site by typing – in the URL of the site. Then you can go to different pages in the site by clicking on the hypertext links. The site may contain links to other sites and you can visit them just by clicking on the hypertext links. The site may
contain links to other sites and you can visit them just by clicking on the hypertext links. Surfing is fun when you have time and it is the easiest way to explore the vast resources available on the Internet.

When you are new to the Internet, you will definitely want to surf the net and soon this will become an addiction. There are computer “geeks” who spend more than 12 to 18 hours a day surfing the net. While in beginning this will be fun, at some point you will have to stop the aimless wandering.

Here are some techniques to help you maximize yours surfing productivity:

First of all remember that the Internet or the web can become a time waster, if you don’t know how to manage your time. You start searching for some time in a site, then follow the links to other and so on… and before starting your search and stop when the time is over. Stay focused on the subject you are searching; don’t jump to the other links just because they appear to be interesting.

While searching for a particular subject on the Net, before actually getting connected, spend some time with paper and pencil. Write down the URLs of all the sites that you are going to visit. Then use a good search engine and efficient search techniques.

The difficulty of findings specific information is often the biggest complain. Although dozens of search engines are available, pick any two, and then spend the time to learn them well. In case you are interested, our favorites are “yahoo” and “Alta Vista”

When you access the web site, what you are actually doing is downloading a set of file. You can see how the download is processing if you look at the status bar located in bottom of your web browser. If you tired of waiting, click the stop button to view the files that have already been downloaded. Then you can decide if you want to continue. If yes, click the reload or refresh button.

Another time and resource saving techniques are called off- line browsing. Most of the new browsers now have the off- line browsing feature. You just have to enable the off- line browsing option and the browser will downloaded and store all pages that you have visited
all the sites that you wanted to, you could disconnect from the net and review the documents or pages off-line. So when you are on-line, you can just skim through the contents and move on. This will save you a lot of time and money.

Files you downloaded are stored in a cache on your hard disk. That way when you want to return to a site, you don’t have to download the file again, just pull them up from your cache. After a while, through the cache becomes full. Your web browser automatically deletes old files as you continue to surf the web. But if you visit many of the same sites regularly, you can speed up access by caching for of them. To do this, you must increase the size of your cache. 10MB is optimal. If you see Navigator, go to the “options” menu choose “network preferences” and increase the cache’s size. With explorer, go to the “views” menu, select “options” then click on the “Advanced tab” choose “settings” and use the slider to increase the cache.

Once you have downloaded a document, the find button can quickly locate a particular term in which you are interested. Why take time to scroll through the whole document?

With the number of users increasing at an exponential rate, getting connected to internet is a big challenge these days. If you are trying to get connected during peak hours, it will take hours and many retries, before you get a connection. So you can save a lot of time and energy (and avoid lot of frustration) by connecting during the non-peak hours (early mornings and late nights are the best).

If you are still using a 144 modem, perhaps it’s time to upgrade. Most people these times are accessing the web at twice that speed recently however, new modems offer access at 33.6 kbps and even 56 kbps, but because of lack standard, it may be to buy one, make sure your Internet service provider supports it.

**Browsing the sites using Web Browser**

Start your web browser. If you are using Internet Explorer Choose Start>Programs>InternetExplorer> Internet Explorer. When you start web browser, you automatically begin at the home page. The home page URL can be customized according to your interest.
• If you are using the Internet Explorer to customize the home page, select view> Options. Internet options dialog box appears. Under General tab, in home page address box, type your favorite site. If you choose, Use current button, it sets the current page as home page. If you choose, use default http://www.home.msn.com will be your home page. You can choose, use blank, if you do not want to specify any home page.

• To jump to another web page, click a link. Links look like highlighted or underlined text or simple graphic icon. When the mouse cursor moves over a link, the cursor changes to a pointing finger. To go directly to a specific site type the URL of that site. Say for examples you like to visit R. Gupta’s group web site, then type the URL://http://www.rphgroup.com

• If you want to go back to the previous page, click BACK buttons on the toolbar. If you want to go forward to the next page, click the FORWARD button on the toolbar. These buttons are used to move between ages you have already visited. You can also jump to the home page at any time by clicking HOME button on tool bar. There are buttons to print the page, visit a favorite web page, to view the history of visited web pages.

CONNECTING TO THE INTERNET:

The first step of browsing to the Internet, is of course, going, i.e. connecting to the Internet Service, Provider (ISP) like VSNL; for example, using the modem and phone in. (We assume that your modem is connected properly installed on your computer).

Go to may computer-→ Dial up networking. You will be able to see one icon named make new connection and at least another icon named VSNL.

Double- click the VSNL icon to get the following connects to window: Input VSNL’s phone number in the phone number textbook (do not input the username and password textboxes). Now click on the connect button. Your modem will dial the number and try to make a connection. If at this stage, you get an engaged tone from your modem, click on the connect button on the ensuing connecting to VSNL, dialog box and repeat the above till you get a ringing tone from modem, which will turn into a shrill sequence of sounds, finally presenting you with a popup window.
Enter your Username and Password (as received from your ISP) after which you will get a sequence of junk characters.

At this state, click the continue button on press the F7 key you are online!

At this stage, you can surf the internet, visit interesting web sites, send & receive mail, download files etc. To start with, fire up the browser by double clicking the Internet Explorer icon present on your desktop.

**USING MICROSOFT INTERNET EXPLORER:**

To seek information on the Internet you need to have what is called a browser. There are verities of browsers available but we are going to concentrate on Microsoft Internet Explorer. When you double – click on the internet Explorer (IE) icon on your desktop you get a window similar to the one given below, depending on the version of IE that you are using.

![Microsoft Internet Explorer](image)

**Figure no. 1.1 Microsoft Internet Explorer**
Users can customize the internet explorer screen for their particular needs. There are many options that can be changed, including fonts, colors, and toolbar appearance. You can do the customization using the options dialog box. To go to the options dialog box, choose “options…” menu item from the view menu. In the options dialog box, there are different tabs like ‘General’ connections’ ‘Navigation’ etc. Where you can customize the Internet explore to suit your needs.

OTHER RESOURCES

Internet explorer enables you to access most of the Internet resources, including those available through FTP, Gopher and Telnet. In addition, Internet Explorer comes with a newsreader and an e-mail interface. Users can access Usenet newsgroup and send or receive e-mail from within the Internet Explorer.

**Title Bar:** It shows the name of the browser and the current web page being displayed by the browser

**Menu Bar:** All the commands that can be performed by the browser are present in the menu-options. Though the simple commands of the browser can be accessed from the toolbar itself, the various menu options of the menu bar have to be accessed for the advanced customization commands.

**Toolbar:** The most-accessed commands of the browser can be accessed easily from the toolbar with a single click the mouse button. The same commands can also be accessed from various options of the menu bar, but would require more than one click.

**Address bar:** This is the bar where you type in the Internet address of the site, that you surf from site to site (or through different pages of the same site), the Internet address of the respective pages are displayed in the address bar.

**Links:** This is another bar which contains some of the popular Internet address of Web-sites. Clicking on these links will transport you to the respective web – site. These links may not be the best available on the net, but serve as a medium of advertisement for some Internet sites. For example, clicking on some of the links will take you to Microsoft related sites, the same
company who has developed the browser. Or for example, when you install the real player web-site http://wwwireal.com is automatically added to the links bar. The Kubjs bar can also be customized; i.e. one can added his/her own favorite web addresses for quick navigation.

**Status bar:** This bar is present at the bottom of the screen and displays the progress rate at which a web-page is being displayed.

**Explorer Bar:** This is another bar which by default is not visible, but is invoked when you click on some of the toolbar and menu bar options, it consists of our elements which are: Search, Favorite, History and channel. These are the same options as are present in the toolbar. The explorer bar can be accessed from the View option of the Menu Bar. Whenever any of options in the Explorer bar (or the equivalent options on the tool bar) is clicked, a left panel pops up, showing the list of sites in that category.

**TOOLBAR BUTTONS:**

Let us study the functions of the various toolbar buttons in detail.

**Back button:**

Takes you to the previous web-page that was being, displayed by the browser.

**Forward button:**

After you have pressed the back button, the forward button will bring you back to the existing page.

**Stop button:**

Stop the loading of the current page by the modem. This is especially useful if a web page contains a lot of unnecessary advertisement and is taking forever to load, whereas you wish to quickly move to a new page.
**Refresh button:**

Loads the current web-page once again through the modem. This is done when a particular web-page not displayed by the browser (by reading from the hard-disk cache rather than the modem.

**Home button:**

Clicking this button takes you to the home-page of the browser which by default in http://home.microsoft.com (this can be changed by the users). As mentioned earlier, this is also first page to be displayed by the browser at startup.

**Search button:**

Takes you to search sites present at the Microsoft Web-site. There are, of course, much better search sites present on the Internet, which we shall learn to access shortly. This option is also present on the Explorer bar.

**Favourite button:**

One of the frequently-used features of the browser, this button displays a list of some present web-sites that are widely popular. It can be highly customized by adding the user’s own favourite sites and deleting any or all of existing ones. Latter, to access any web-site that is listed in favourite category, one only has to click the option rather than type the complete address bar. This option can also accessed from the Explorer bar.

**History button:**

It shows a list of previously accessed web-pages. You can quickly move to any of these by clicking on the respective page. Rather than pressing the back button several times.

**OTHER FUNCTIONS OF INTERNET EXPLORER**

Let us add this web-page to the favorites list, so that we can access it quickly at a later time. For this, on the menu bar, click on the favorites add to favorites No, just add the page to my favorites.
Now click once again on the favorites option of the menu bar we find that the “Librarycom” pages has been added to the list now, whenever we wish to view this page, simply have to choose this option from the menu bar. We now know how to add items to the favorites option of the menu-bar but how do we remove it? For this, the menu bar, select. Favorites- > organize favorites

SAVING FILES ON THE INTERNET

Saving files while you are browsing in any easy task first. Make a directory on the hard disk where you wish to keep your saved files, as littering the hard disk with random files is not a good idea. Now whenever you wish to save a web page. Click on file---> Save or File---> Save as from menu bar. To open the file later when you are offline, fire up your browser and click. File---> open---> Browse and then point to the file on your hard disk. You will notice that when you save a file from the Internet, it always has .html extension, which is the default extension of files shown by the browser other than image file. The image do not get saved. To save an image from a web page, right click on the image and choose save picture as option.

SPEEDING UP BROWSING THROUGH THE USE OF HARDDISK CACHE:

While you are browsing you must have noticed that on clicking the back button of the toolbar, the previous page is retrieved much faster as compared to the speed at which a new page is retrieved by the modem. This is because whenever a page is retrieved through the modem, a copy of the page is stored in area of hard-disk cache, select from the menu bar.

View → Internet options

In the General tab, click the settings button in the temporary Internet files section.

Now move slider bar to indicate the amount of hard-disk space you wish to use for the cache. Finally click ok.
PUTTING IMAGES OFF WHILE BROWSING:

Sometimes when you wish to increase the speed of browsing and when are searching for primarily text on the Internet, it makes sense to put the display of images off to do this, click on

View--> Internet Options

Choose the advanced tab. Scroll down to the multimedia section and uncheck show pictures. Finally click Ok. Whenever you wish to put the display of images on again, repeat the above procedure and check the show pictures option once again.

SEARCHING FOR INFORMATION THE WEB

So far, we have visited web-sites whose Internet addresses we already know. But what do we do when we wish to search for some information and we no linking as to which site will contain it. In such cases, we visit certain sites known as Search engines.

The most popular search engine is Yahoo! (No, nothing to do with Shammikapoor !)

So type the following address in your Web-browser and get the following page: http://www.yahoo.com

Number of internet users in Indonesia from 2013 to 2018 (in millions)

This statistic shows the number of internet users in Indonesia from 2013 to 2018. In 2013, 72.8 million people were accessing the internet in Indonesia. This figure is projected to grow to 102.8 million in 2016. With over 71 million internet users, Indonesia is one of the biggest online markets worldwide. As of the first quarter of 2015, online penetration in the country currently stands at only 28 percent. The average number of hours spent online by internet users in Indonesia was 5.1 per day. Popular online activities include mobile messaging and social media. The most popular social network in Indonesia is Facebook with 14 percent of the population actively using the platform.
Number of internet users in India from 2013 to 2018 (in millions)

This statistic provides information on the number of internet users in India from 2013 to 2018. In 2013, India had 167.2 million internet users. This figure is projected to grow to 283.8 million internet users in 2016.

![Number of internet users in India 2013-2018](chart.png)

**Graph No. 1.1**


*(THE HINDU, JANUARY, 2014)*

With more and more people accessing the Web through mobile phones, the Internet user base in the country is projected to touch 243 million by June 2014, a year-on-year growth of 28 per cent.

According to the Internet and Mobile Association of India (IAMAI), the Internet user base in the country stood at 190 million at the end of June, 2013.

For the whole year 2013, the Internet user base grew 42 per cent to 213 million, from 150 million in 2012. Of the total user base, mobile Internet users accounted for 130 million in 2013, a growth of about 92 per cent from 68 million in 2012.
IAMAI expects the number of mobile Internet users to touch 185 million by June 2014, accounting for about 76 per cent of the Internet user base in the country.

“Year 2013 was the year of Internet. The numbers affirms the fact that Internet in India is now becoming inclusive, which augurs well for the industry and society at large,” IAMAI said.

The growth of Internet users has also led to a substantial growth of other digital industries such as e-commerce and digital advertising, it added.

Digital commerce market stood at Rs 8,146 crore in December 2007 and it grew to Rs 47,349 crore by the end of 2012. At the end of December 2013, digital commerce in India grew to Rs 62,967 crore.

Digital Advertising has also been witnessing a steady growth. The study projects the online advertising market in India to touch Rs 2,938 crore by March 2014.

THE HINDU NEWSPAPER (AUG, 2013)

India has bypassed Japan to become the world’s third largest Internet user after China and the United States, and its users are significantly younger than those of other emerging economies, global digital measurement and analytics firm comScore has said in a report.

India now has nearly 74 million Internet users, a 31 per cent increase over March 2012, the report says.

The numbers are lower than other recent estimates, possibly reflecting comScore’s methodology that only factors in PC and laptop-based Internet usage.

The Telecom Regulatory Authority of India (TRAI) pegged the number of Internet subscribers in India at 164.81 million as of March 31, 2013, with seven out of eight accessing the Internet from their mobile phones
1.1 Need for the present study

In this study focused on the web browsing behavior by the library users of IIT Delhi, Kanpur and Roorkee. To know their information access patterns. The main focus of this study is to identify the web browsing techniques, skills, and awareness of latest technology by library users.

The study shall be benefit and motivate to library users of three IIT and know the importance of libraries in present era.

1.2 Statement of the research problem

The phenomenon of web browsing behavior of library user in India is still a recent development. There is need to study the awareness of web resources through web browsing. The literature review indicates there is no exhaustive work on this topic has done. In the light of the above facts a need has been felt to undertake the research on the topic “Web browsing behavior of library users of IIT Delhi, Kanpur and Roorkee: A comparative study” This study will enable to learn all the important aspects of usage the web resources benefits and its impact on their study and research work

1.3 Objective of the study

The main objectives of the present research are to discover, investigates and determine the web browsing behavior of library user of IIT Delhi, Kanpur and Roorkee. Also the other aims of this study are as follows-

a) To study and assess the needs of faculty members, research scholars and students in terms of the information needs by them for their academic and scholastic requirements.
b) To analyses the use of communication tools like e-mail, web browser and chat software.
c) To identify the problem faced by the users in use of internet service.
d) To know the satisfaction level of the users with the information retrieved through the Web.
e) To evaluate the usage pattern, frequency of usage, amount of time spent for access to web browsing.

f) To study and examine the awareness of e-resources among the library users.

g) To find out the preferred information form web browsing.

h) To find out the satisfaction of the library services.

i) To identify the extent of awareness of web browsing among the users

j) To find out the existing situation of different types of web browsing facility and services and their utilization by the users

k) To examine the utility of web browsing by users

1.4 Hypotheses

Formulation of hypothesis is the foundation of all scientific research work as it gives direction to inquiry and helps the researcher to draw specific conclusion. Hypothesis of the research topic be defined as tentative solution to the problem, which can be put to determine its validity. A plan to study the topic by using Questionnaire method I will give the consideration on following.

The various parameters which effect the internet user behavior are to be considered. As we know internet users mostly access for some knowledge domain. So we will see either there is drastic change in the knowledge domain or not. Some time we see there is wastage of time by internet users and their internet access content pattern. Here we also consider the effect of online studies and what are the advances content available online. Some technical problems are also to be considered and we will suggest the some issue for enhancement of quality content delivery over the network.

In the light of theoretical constructs available in the literature and findings of the earlier researches in the problems related to that of present study, following hypothesis will be formulated for testing.

a) There is a significant difference in the in the web browsing behavior among library users

b) The user have considerable awareness about library facilities
c) Library users are satisfied with internet facility

d) Users get quality information through web browsing

e) The information needs and reading habit of users vary because of their different level.

1.5 – Limitations of the study

The study is delimited to the web browsing behavior of library users of IIT Delhi, Kanpur and Roorkee only. The greatest limitation of HTML is that it does not handle text very well from a design point of view. Text size, font, color and treatment (bold, Italic, underline) can be specified, however, text fonts are not embedded in the document. This means the actual font used must be installed on every computer that views the web page or it will not display correctly. For this reason, the text is usually limited to times New Roman/ Palatino Aerial? Helvetica since there are generic fonts that are installed on almost every Pc and MAC computer. In addition, text size is specified in relationship to other text and is not specified points. Because of above limitations, if you need a special font, text treatment or size, you should design an image in photo shop using the text and size you want and then place the image on the webpage possibly with a transparent background. The HTML file itself contains the description of the web page including the tags that format the page and the text and pictures to be displayed on the browser window. It does not however, contain the actual images. Images are stored on the web server and are transferred to the viewer’s computer separately, this means the image must be in a folder accessible to the web or they will not be available to the viewer and blank box will be displayed instead. Another restriction is the connection speed of computer. Most people are still using a dial –up connection, which allows a 56 Kbps data rate. For the designer point of view, this means that you should try to keep the total amount of data required for each page should be less than 70kb. And more than that the viewer may get tired of waiting for your page to load and leave your web site.
Users Aspects

A part from this there is some logical limitations as well

- Costly affair
- Knowledge of IT
- Technological dismay
- Psychological approach
- Time Rigidity

Web Browsing Aspects

By now everyone who has data to protect and is aware that the Internet exists is using (at the very least) a basic firewall to protect the computers storing the data (and often client workstations, too) from unnecessary connections from the Internet. But most organizations, even large ones, have many or all of the following shortcomings in their firewall implementations:

- Web browser is just IE embedded in a window, it would not be able to do so either.
- There is no outbound filtering of traffic from client workstations.
- There is an often-minimal restriction of outbound connections from servers storing the important data.
- The firewalls offer only partial mediation of connections – a concept I will explain later in the article – between what should logically be considered different segments of the internal network (many organization have some segmentation, but poor mediation of connections crossing the segment boundaries).
- The firewalls don’t protect mobile devices (off the corporate network communications).
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