CT2207	Lab: **Lab: Web Technology**

Name of Students: Badal Wanjari	**Semester/ Section: 3rd/ B**
Roll No: 140	**Enroll No: 20011045**

Practical No 1.

Aim: Introduction to Internet (overview of Internet, email, www, broad band, FTP).

Requirement (Hardware/Software): Computer/ Mobile, Internet connection, Any browser

Theory:

OVERVIEW OF INTERNET:

The Internet, sometimes called simply "the Net," is a worldwide system of computer networks. In other words, the Internet is a network of networks in which users at any one computer can (if they have permission or connected) get information from any other computer (and sometimes talk directly to users at other computers). Today the use of internet has increased tremendously. It has revolutionized the whole world and made computers the most effective communication tool. Internet gives us access to information on almost every subject. In this chapter we will learn about what is Internet and how it came in to existence. Also, we will discuss some of the services and tools which are commonly used to access the Internet, and will learn about how to begin searching the Internet for information. A specific technology which is rapidly becoming one of the central mechanisms for providing information on the Internet, the World Wide Web, will also be explained in it. The Internet is a communication system that connects computers and computer networks all over the world. Thus, we define the Internet as a global network of computers/devices. “Inter” comes from the word “International”, “Net” here refers to a computer network. The Internet is an arrangement of connected computers, which lets the computer users all over the globe to exchange data or information.

EMAIL:

Electronic Mail (e-mail) is one of most widely used services of Internet. This service allows an Internet user to send a message in formatted manner (mail) to the other Internet user in any part of world. Message in mail not only contain text, but it also contains images, audio and videos data. The person who is sending mail is called sender and person who receives mail is called recipient. It is just like postal mail service.

Components of E-Mail System :

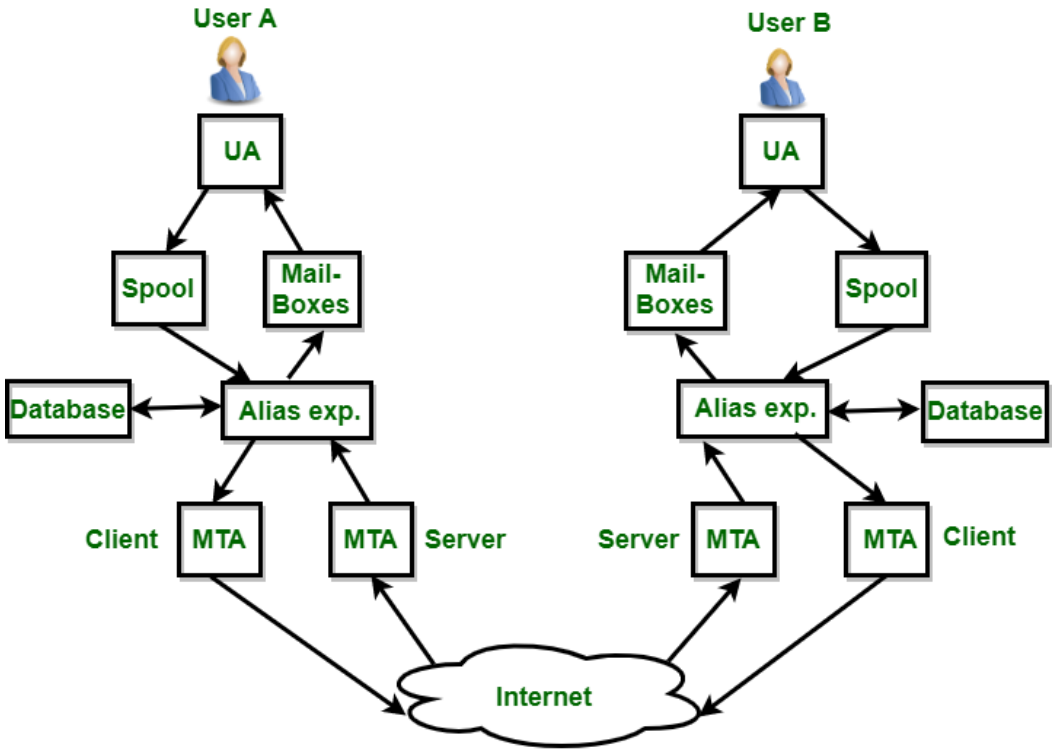
The basic components of an email system are : User Agent (UA), Message Transfer Agent (MTA), Mail Box, and Spool file. These are explained as following below.

1. User Agent (UA) :

   The UA is normally a program which is used to send and receive mail. Sometimes, it is

called as mail reader. It accepts variety of commands for composing, receiving and replying to messages as well as for manipulation of the mailboxes.

2. Message Transfer Agent (MTA) :
   MTA is actually responsible for transfer of mail from one system to another. To send a mail, a system must have client MTA and system MTA. It transfer mail to mailboxes of recipients if they are connected in the same machine. It delivers mail to peer MTA if destination mailbox is in another machine. The delivery from one MTA to another MTA is done by Simple Mail Transfer Protocol.



3. Mailbox:
   It is a file on local hard drive to collect mails. Delivered mails are present in this file. The user can read it delete it according to his/her requirement. To use e-mail system each user must have a mailbox. Access to mailbox is only to owner of mailbox.

4. Spool file:
   This file contains mails that are to be sent. User agent appends outgoing mails in this file using SMTP. MTA extracts pending mail from spool file for their delivery. E-mail allows one name, an alias, to represent several different e-mail addresses. It is known as mailing list, whenever user have to send a message, system checks recipient's name against alias database. If mailing list is present for defined alias, separate messages, one for each entry in the list, must be prepared and handed to MTA. If for defined alias, there is no such mailing list is present, name itself becomes naming address and a single message is delivered to mail transfer entity.

BROADBAND:

Broadband is a term frequently used with accessing the Internet using high speeds, usually in excess of 248kbps. In general terms broadband referred to communication technology that can employ different channels of data or data streams by using any medium (air or Physical). Obviously, to transfer data at a higher rate, it requires more bandwidth (or frequencies). With wide band of frequencies, information can be multiplexed and sent on many different frequencies or channels within the band concurrently, allowing more information to be transmitted in a given amount of time.

Broadband can be provided over your phone line, via cable, or via satellite. It involves large volumes of information being carried at high speeds to your PC and vice versa. This allows graphics, music and videos to be experienced in real time by the user. Broadband, therefore, has many features that can be taken advantage of in the home or office:

1. The connection to the Internet is always on, allowing for instant Internet access and no need to wait for a connection to be made, as in dial up access.
2. The phone line is unaffected; this means that you can make telephone calls whilst the Internet is on. This is due to the fact that voice and Internet data use different frequencies for transmission.
3. Normally, you pay a standard monthly fee for unlimited Internet access, and you are not charged for the time you are connected to the Internet. There are certain broadband products now that also offer pay as you go access.
4. Broadband allows music and videos downloaded at a faster rate.
5. You can take advantage of instant messaging and online high-speed interactive games.
6. You can receive uninterrupted real time services, such as Internet radio, streaming video and voice-over-ip, phone calls.

In the next section, we discuss about different types of broadband access technologies like wired broadband (includes xDSL, and Cable Modem), and wireless broadband access.

FILE TRANSFER PROTOCOL (FTP):

It is a standard protocol used on network to transfer the files from one host computer to another host computer using a TCP based network, such as the Internet. FTP uses separate control and data connections between the client and the server. To use FTP server, users need to authenticate themselves using a sign-in protocol, using a username and password, but can connect anonymously if the server is configured to allow it. For secured transmission the data encrypts (hides) the username and password, and even encrypts the content, using SSL. To transfer files with FTP, use a program often called the client. An FTP client program initiates a connection to a remote computer running FTP server software. After the connection is established, the client can choose to send and/or receive files. To connect to an FTP server, a client requires a username and password as set on the server. Many FTP servers

use a username as “anonymous”. Using FTP, you can also update (delete, rename, move, and copy) files at a server. You need to logon to an FTP server. However, publicly available files are easily accessed using anonymous FTP. FTP using TCP/IP, works in the same way as HTTP used for transferring Web pages from a server to a user’s browser. FTP sites are heavily used and require several attempts before connecting. To use your web browser to connect to an FTP site, where you normally enter a URL as: ftp://username@ftp.site name/

Conclusion: I have learnt about different web technologies related to internet like www, email, ftp, broadband via internet reference and resources.