UNIT 2: INTERNET/LAN APPLICATIONS

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2.0 Learning Objectives

After learning this unit, you will be able to understand:

•   About Browsers

•   About FileZilla File Transfer software

•   About Remote Desktop

2.1 Introduction

Internet is a setup of computers across the globe. Every computer that is connected to the internet is considered as a part of that network. The figure 2.1 shows the arrangement of Computers in a network.
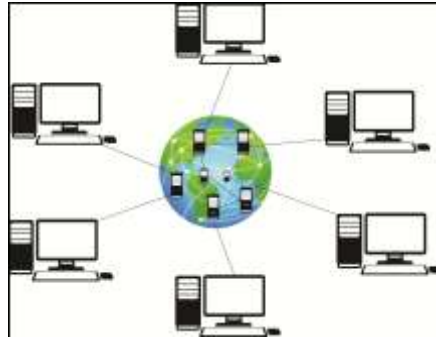

Fig 2.1 Arrangement of computers

In this each computer is connected with server to form the internet. The Internet provides many types of information such as:

- E-mail: It is called as electronic post office that is used to send messages across globe.

- World Wide Web: It is a library of information.

- Newsgroups: It is a platform where people can share and write information.

- Chat Rooms: It is place where live conversation is done among people through computers.

The purpose of Internet connection is to allow a person to communicate with each other. It is often known as World Wide Web that shows a quick and easy exchange of information. Apart from this, the Internet has many scope and applications.

Local Area Network (LAN): LAN is a computer network that consists of few or more computers and other communication devices connected in the form of a network within a well-defined area such as a room or a building. A typical example is a college or university computer network. Users in a LAN can share both hardware and sharable software resources. For example, hardware resources include expensive laser printer, plotter, fax machines, modem, etc. Almost all local area networks use a single communication medium, as it is restricted to a limited area. All network resources and their management activities are controlled by means of special system software called Network Operating System (NOS).

2.2 Popular Browsers like Internet Explorer and Chrome

Internet browsing serves as an important part of our day-to-day lives where you can browse things in no time because of availability of software's that are available for web interface. Web browsers results in great impact on the way we observe the internet, so we need to choose correct and appropriate anyone which is required.

Internet Explorer

Internet Explorer also known as Microsoft Internet Explorer is a free web browser application which is produced by Microsoft in the year 1995. It was designed in response to first geographical browser which is Netscape Navigator. Microsoft introduces Internet Explorer as its first web browsing platform in August 1995 with the version of Internet Explorer 1.0 that was initially covered with Microsoft Windows 95. Internet Explorer has been included with all versions of Windows since then.

To start using Internet, double click the mouse pointer on the blue "e" symbol on the desktop. This will start the Internet Explorer. If you learn just a few basic things about browsing the Web, such as how to use the buttons on Internet Explorer (IE) toolbar, you will find that browsing the web is very easy. A page known as Home page appears on your screen when you start the Internet Explorer. If the default Home page is already set in for example, www.academic solution.com then whenever you start with Internet Explorer, you will get the home page of the site www.academic solution.com.

Google Chrome

Apart from Internet Explorer, Google Chrome is also an internet browser which was developed and launched by Google Inc. That is a mixture of minimum design with special technology that allows Web to work faster, safer and easier. Google Chrome offers features which includes access to favourite pages at the same time using thumbnails, desktop shortcuts to launch Web applications and will able to run tabs independently inside the browser so as to save the browser from crashing. Chrome browser is available for Windows Vista, Windows XP, Window 7 and SP2.

It is a faster and famous web browser apart from Microsoft Internet Explorer and Mozilla Firefox. Google Chrome browser has certain features which include:

- Browser sync

- Tabbed browsing

- Translation

- Spell check

- Resize form text boxes

- Omnibox etc.

Google Chrome browser is light weight as it doesn't come with pre-loaded add-ons or plug-ins. There are many types of add-ons and plug-ins that can be easily downloaded and installed in Chrome browser along with extra features and functions.

It is noted and seen that Chrome comes with default home page and allows the user to remember their sites after their visit. It is commonly used browser nowadays as it is easy to access and is simple for user in browsing things on internet. Fig 2.2 shows the home page of Google which comes with many default items. In this the frequently visited website gets shortcut as seen in fig 2.2 where user on clicking can directly visit those particular websites. It has a provision to bookmark the webpage and has good history.
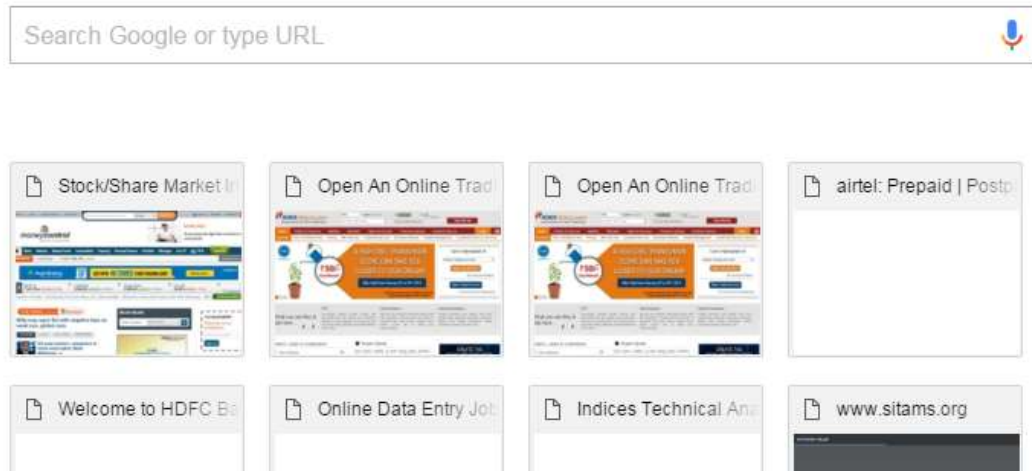
Fig 2.2 Google Homepage

Chrome tabs browsing of new power and hold the tab and drag it out on individual window. It has a provision to drag and drop tabs with existing windows that can easily combines and let you to start and work in any tab configuration which can be custom setup or tab setting in previous session.

Check your progress 1

1. Which among the following is not a web browser?

    a. Google Chrome

    b. Internet Explorer

    c. Microsoft Word

    d. Firefox

2.3 Configuration and settings

Web browsers are common platform that allow the users to visit on internet and can browse their product. Normally it is noted that every browser needs to be configured initially. After loading of windows and connecting on internet, your windows will prompt for web browser to be used in default setting. You can even

set the home page blank also so that each time you start, you will get blank page in address bar of browser. You can also type website URL of site, which you want to visit.
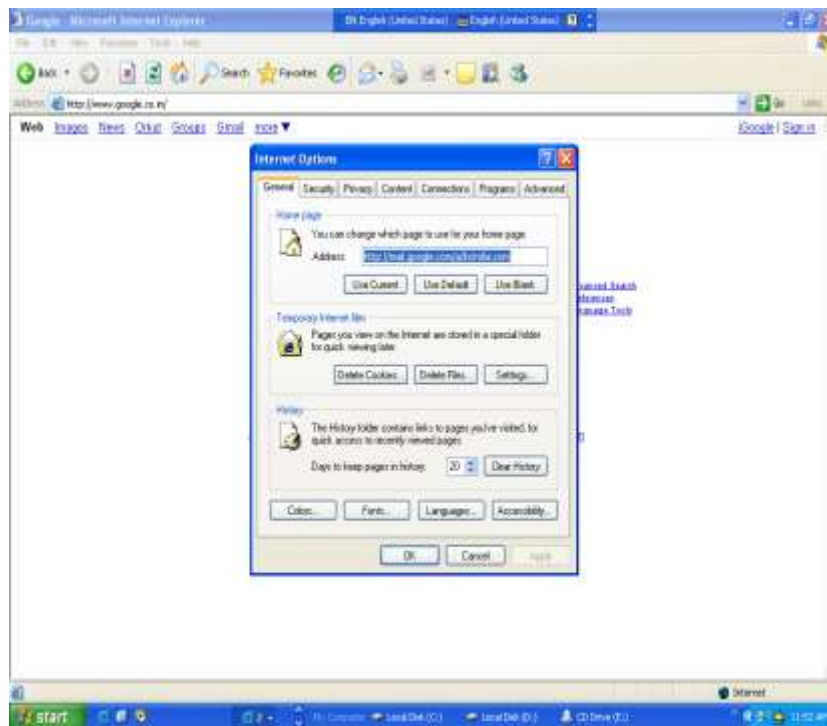

Fig. 2.3: Internet Properties option

The internet properties can be adjusted by right clicking mouse button on IE and further selecting Internet Properties option. You find that at Address space we have given www.google.com.

Click the Stop ⊗ Stop button present on the IE menu. In addition, enter http://www.academicsolution.com/lecture.html at address bar and click on the Go button or press Enter key. Now you will get the home page http://www.educationinfoindia.com/engg/aup.html
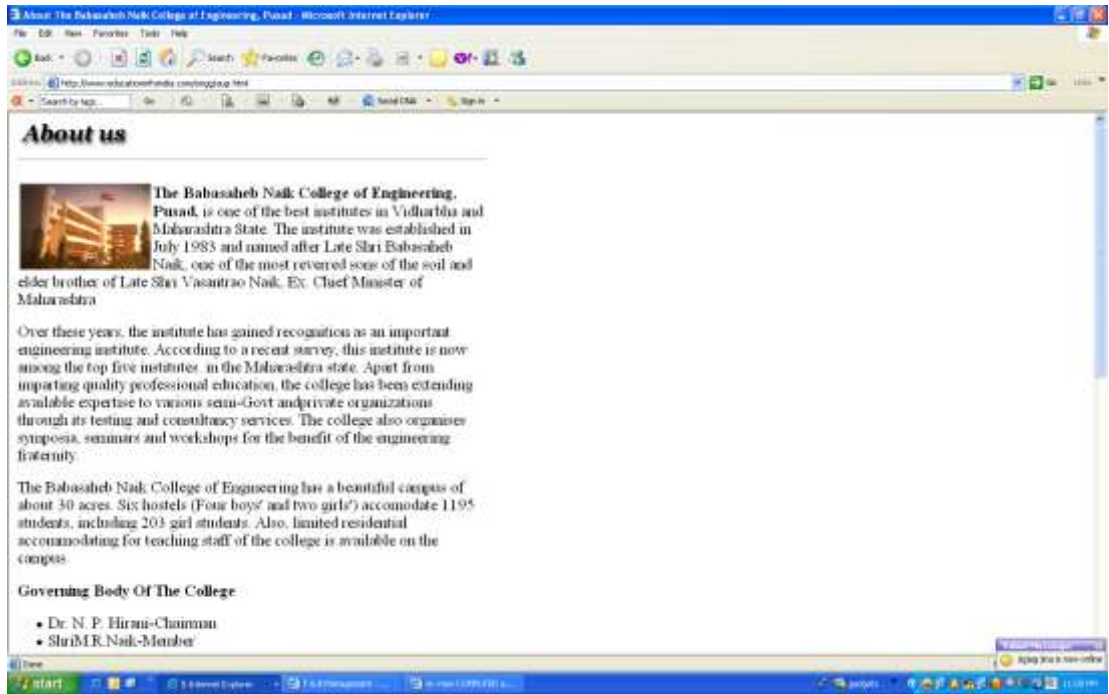
Fig. 2.4: Access a web site

While your request to access a web site is being processed, you can click

Minimise ▬ button and the minimised page sits on the task bar and again double

click on ⟨Internet Explorer⟩ . Now type the address of the web site you want to access say

www.google.com on the address Bar and click on Go ⟨Go⟩ button. Now to go back to the previous web site that is www.educationinfoindia.com, minimise ▬ the current page and click on the minimised page from the task bar. Like this, you can open up many web sites at a time and switch between them. To end the browsing session click on the Close button.

Check your progress 2

1. Web browsers can be used to:

    a. Search Website Which Is Typed By User

    b. Open Default Website

    c. Browse Automatically Without User Intervention

    d. All Of Above

2.4 FileZilla File Transfer software

FileZilla is a famous software application which is used for uploading and downloading of files online. It is an open source software which is available free of charge. It is used for secure file transfer with the help of SFTP or FTPS among Windows clients or Unix servers is done.

For using and running FileZilla software, you need to download and install the FileZilla software. Once you download, you can open and connect the program to web host, by clicking FileZilla icon located on desktop or in Windows Start menu.
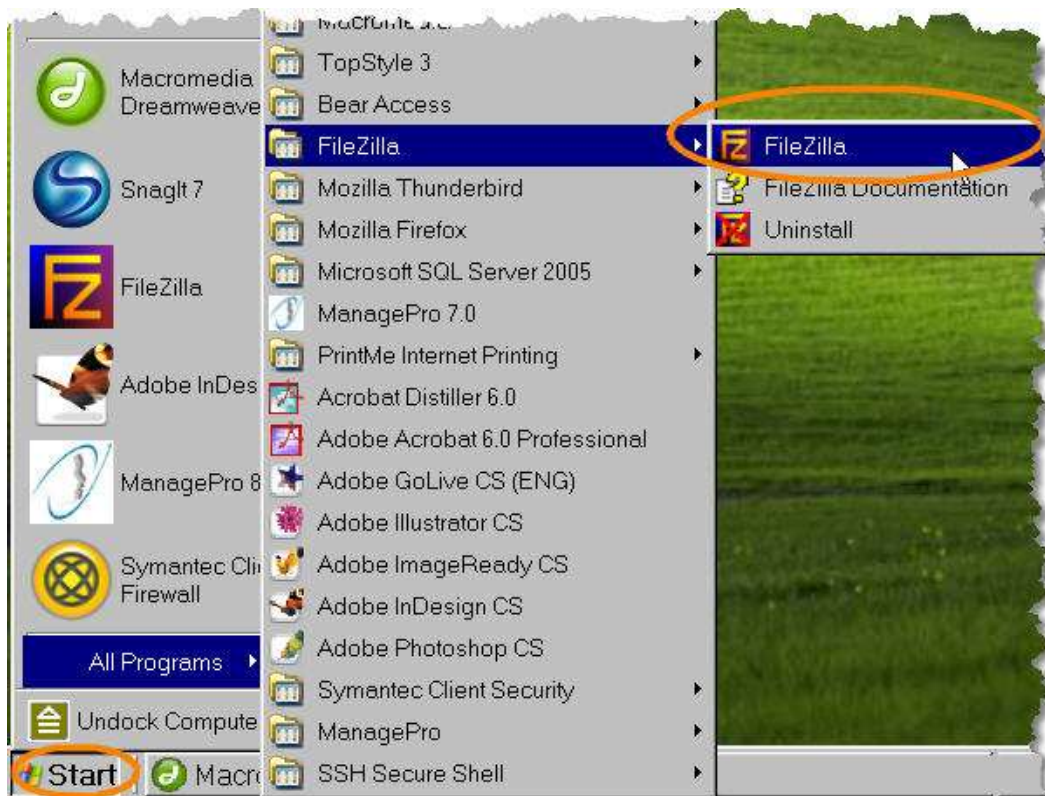

Fig 2.5 FileZilla on menu

From the File menu, select Site Manager.

Fig 2.6 Site Manager
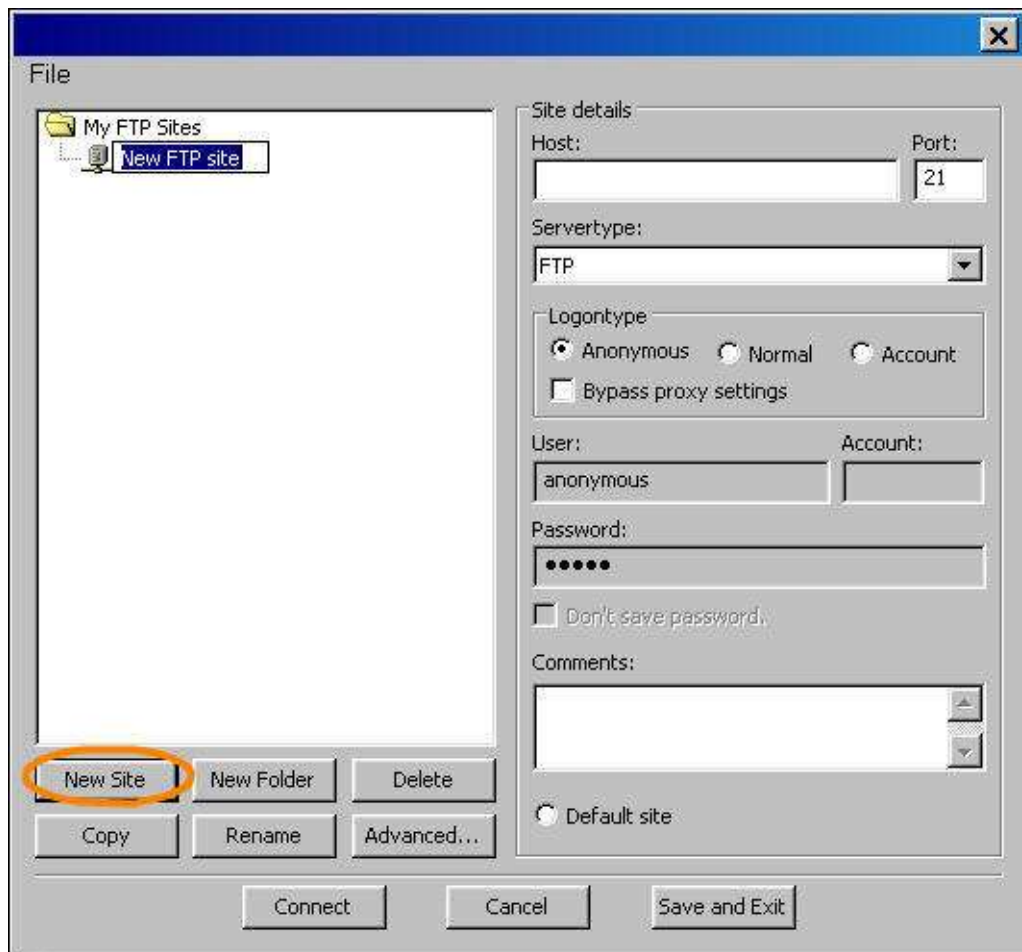
Now in File, Click New FTP Site.

Fig 2.7 Selecting new ftp file

Now you have to enter the information by following steps shows:

Write the Server name in Host box.

Select the drop down option button in Server Type box and select:

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- Select FTP over SSL for FTPS transfers.

- Select SFTP using SSH2 for SFTP transfers.

  In Logontype option box, select the Normal option.

In the User box, enter the username for this server and select Don't save password box.

Fig 2.8 filezilla options

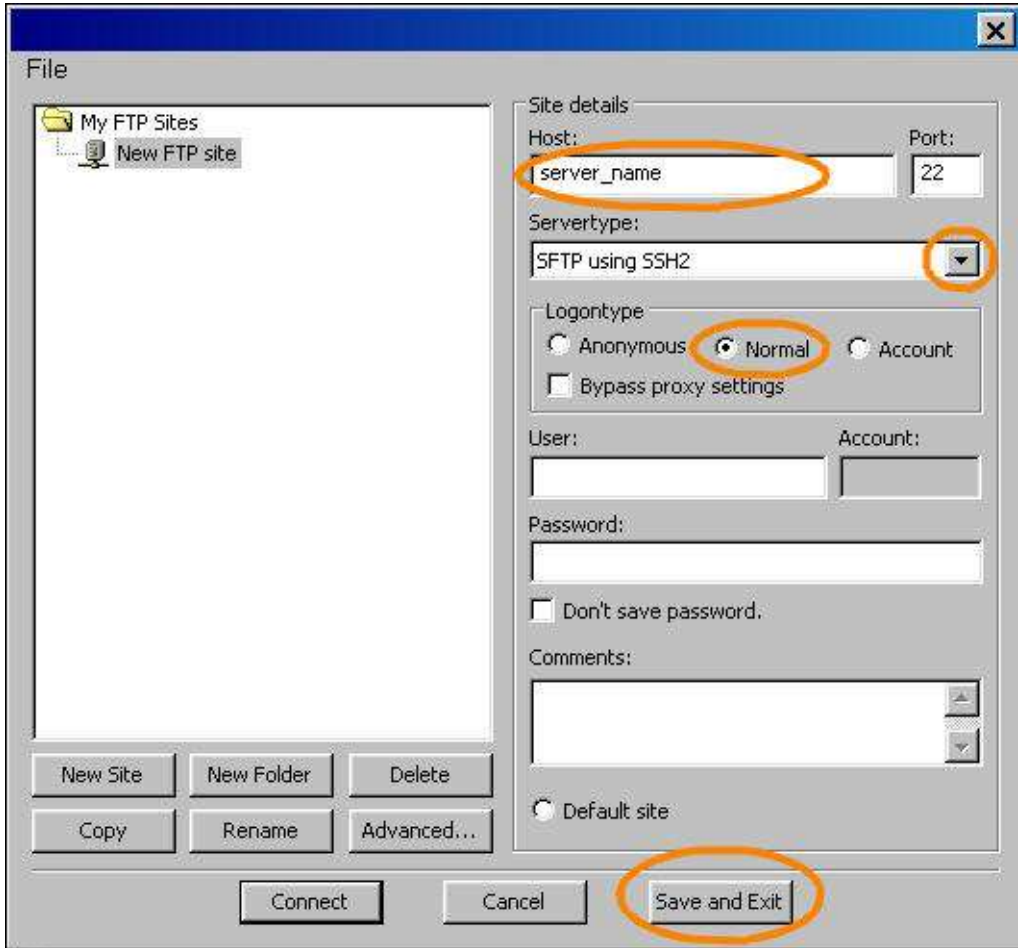Now after entering all the details, click on Save and Exit option.

After giving all the details, you will see that when you open the software next time you will be able to connect directly to the server from the selected options.

Transfer Files Using FileZilla

To transfer the file using FileZilla, you can start FileZilla by clicking FileZilla icon which is placed on desktop or Windows Start menu.

Now you need to click the arrow which is placed next to Open Site Manager
button, and then select the server.

Fig 2.9 filezopen

Now in Enter your Password window, in the password section, enter the password
for the sever and press OK option.

Fig 2.10 filezpwd

After doing all, you will find that the FileZilla gets open. In this, you will
find that the computer which is Local Site is on left of screen while server which
is the Remote Site is on the right as shown in fig 2.10. In this, you can drag and
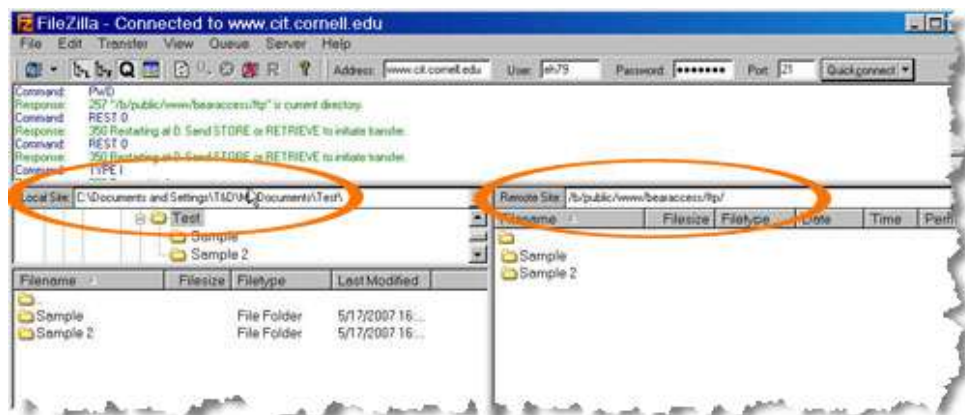drop files or folders to copy files.

Fig 2.11 FileZilla screen

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Check your progress 3

1. FileZilla is used for _____.

    a. uploading of files online

    b. downloading of files online

    c. uploading and downloading the files online

    d. transferring of files in folders in computers

2.5 Team Viewer

Team Viewer is a popular, fast, simple and friendly remote access/control and desktop sharing program which works with Internet. It immediately get control over computer anywhere on Internet by remotely resent yours and computer over internet easily. It is a full solution for remote access and supports over the Internet with any computer or server across the network in few seconds. It is a user-friendly interface which allows beginners and professionals to use even if they have not tested or used this remote Interface before.

With this, your computer screen will be visible to the user without worrying about firewalls, IP addresses and NAT. It is useful in sharing desktop with partner over the Internet in the areas of training, sales and teamwork with software, PowerPoint presentations etc.

Team Viewer appears with built-in file movement which allows you to copy files and folders from and to remote partner. It makes you to remotely control any computer from anywhere on Internet. It works with no installation and simply run with application on both sides of computer in order to connect among each other under strong firewalls. It is a secure utility which has secured data channels with key exchange and RC4 session encoding.

To work with TeamViewer, you need to download the software and run TeamViewer_Setup.exe to open the installation wizard and Double click. You will find that the setup screen will look as:

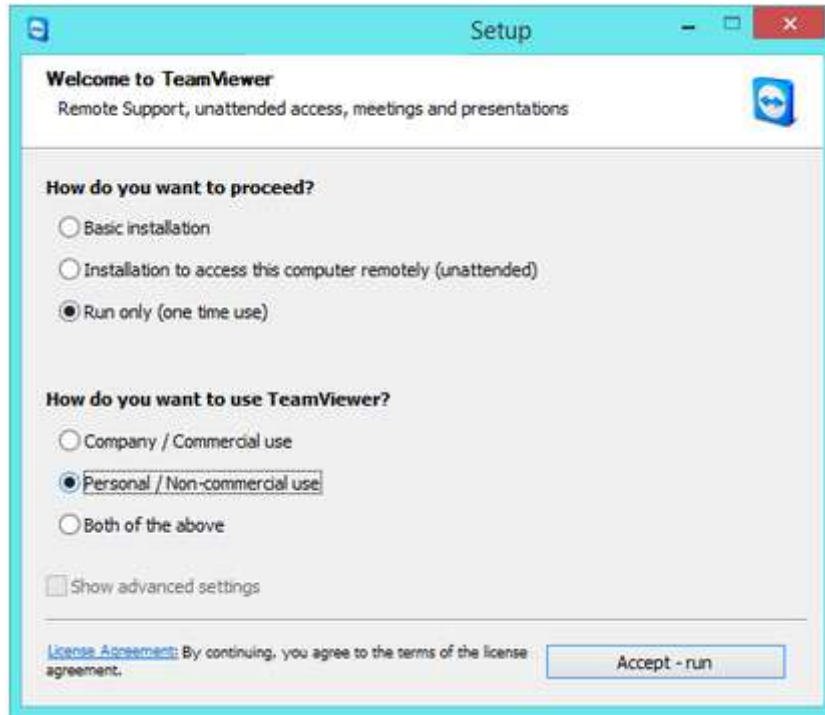**Fig 2.12 Setup screen**

In the setup, you need to select run only option and personal/non-commercial use option as shown in fig 2.12. After clicking Accept-run option TeamViewer, you will find that Team Viewer is ready for use where you can connect to remote PC, by entering correct ID in Partner ID field and further click on Connect to Partner option as shown.
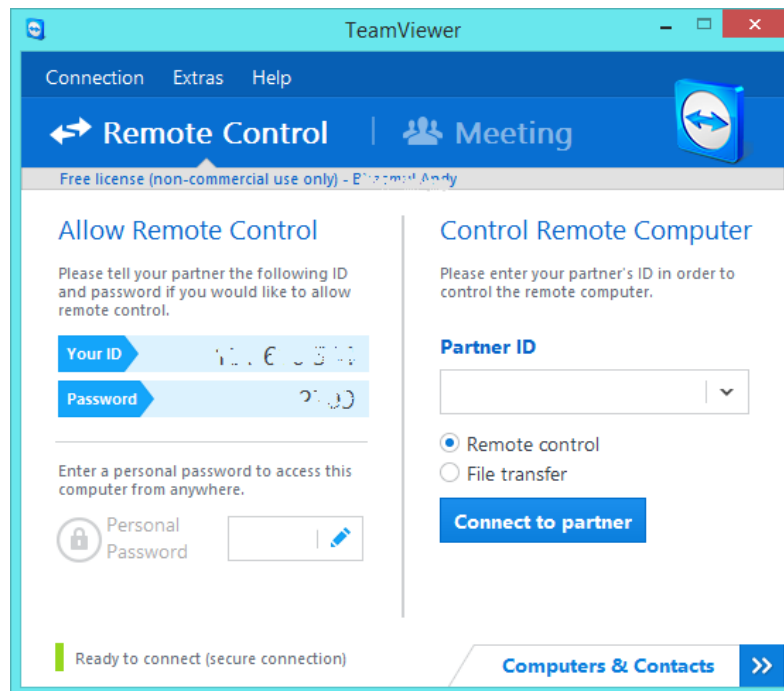

Fig 2.13 Team Viewer screen

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Check your progress 4

1. Team Viewer software allow:

    a. Sharing of information

    b. Computer to work as remote host

    c. Person to view other person desktop screen

    d. All of above

2.6 Remote Desktop

Remote desktop is a program or an operating system feature that allows the user to connect to a computer in another location, see that computer's desktop and interact with it as if it were local.

A remote desktop is a separate program or feature which is available on many operating systems that allow a user to access an operating computer system's desktop. The access occurs through Internet or by another network in certain geographical location and allow users to interact with particular system that makes to be physically available on own computer. USB devices with the ability to start again with remote users desktop serves as secure portable offices.

It is noticed that the remote desktop allow user to work with workplace workstation which can be either at home or vice versa and can easily handle computer problem remotely. It will able to do administrative work easily and can show process or software application. A remote desktop is also used by computer manufacturers which will access, diagnose, repair or reconfigure users operating system, application or hardware problem.

You can setup remote desktop when you are running Windows that carries Remote Desktop connection which is mostly available on right of screen. To get started with these useful features, you need to adjust the System Properties as shown in fig 2.14.
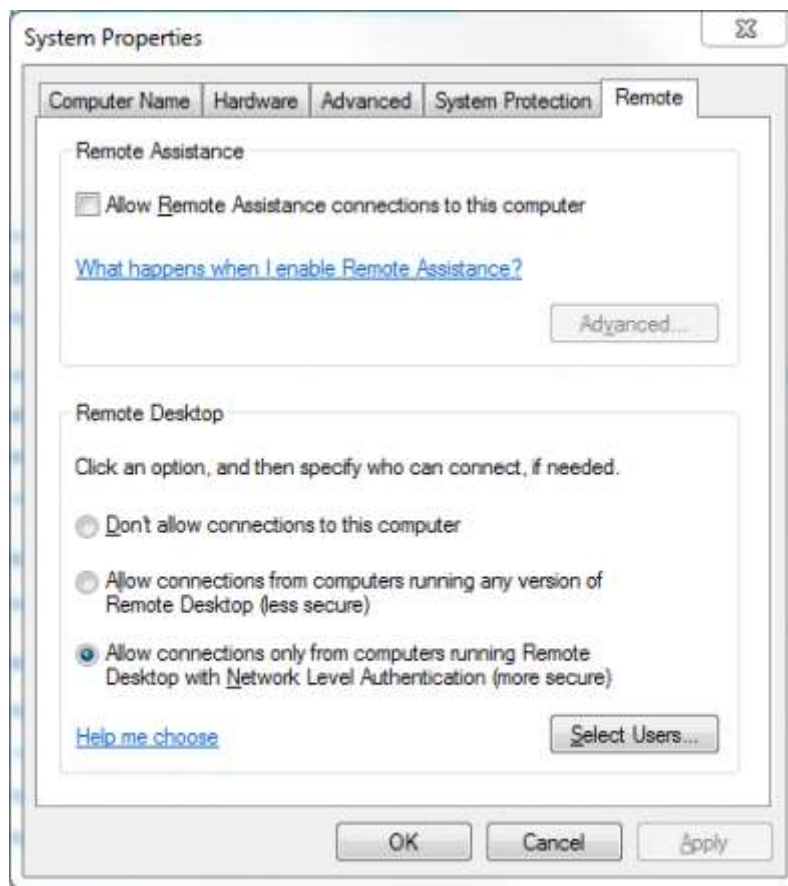
Fig 2.14 System Properties

In the System Properties, click on Remote Settings and under Remote Desktop option, you need to select allow remote connections option. This is NLA enabled, where computer will ask for username and password before fully creating a remote session making it less flat to reject service attacks.

Now after selecting, click on Apply to save your settings. On other computer, click Start-Programs-Accessories-Remote Desktop Connection. When the RDC client appears, click on Options button and spend some time on looking around at all features which can be adjusted.

Fig 2.15 Remote Control option

Once the thing is setup correctly, you will be asked with account name and password. After giving the details, the other machine's desktop will appear in a window where you can interact with it.

Check your progress 5

1. Remote Control option allow user to access using:

    a. Remote desktop

    b. Password or login id

    c. Remote host

    d. All of above

2.7 Telnet

Telnet is a user command which is an underlying TCP/IP protocol that is required to access remote computers. With Telnet, an administrator or other user

will able to see someone else's computer remotely. On Web, HTTP and FTP protocols allow you to request particular files from remote computers, but not to actually log on as user of particular computer. With such technology, user can log on as regular user with whatever privileges you may have been issues for particular application and data that runs on computer. It is applied mostly for remote management and further for initial setup for certain devices especially for network hardware such as switches, access points, etc.

Telnet most important feature is to show zero file transfer encryption where all data transfers done on Telnet are passed around in clear text. During the initial launch of Telnet, not too many users are there on Internet, and by extension not anything near number of hackers like as we see today.

Check your progress 6

1. Telnet uses:

    a. TCP feature

    b. IP feature

    c. TCP/IP features

    a. d. none of these

2.8 Microsoft Outlook Express

Outlook Express also called as Microsoft Outlook Express is an email program which is created and launched by Microsoft which allows you to store, manage, send and receive email messages. There is much such type of email programs which are available but Outlook Express is probably the most popular among all since it is free and comes with Internet Explorer web browser. It is also known as email client which is normally used in corporate as it serves email management details.

Outlook Express is a program that is installed on your computer and allows storing and managing email messages. It is found that such email messages are present on computer and not on web server which is placed far away. In Outlook Express, there is no default email account. You can to add or setup pre-existing email account in the program. Suppose you have two email addresses, one from office and another from ISP (Internet service Provider), in such case you can add

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both such email accounts in Outlook Express. After that, you can collect messages from two accounts at one place which will be on your computer.
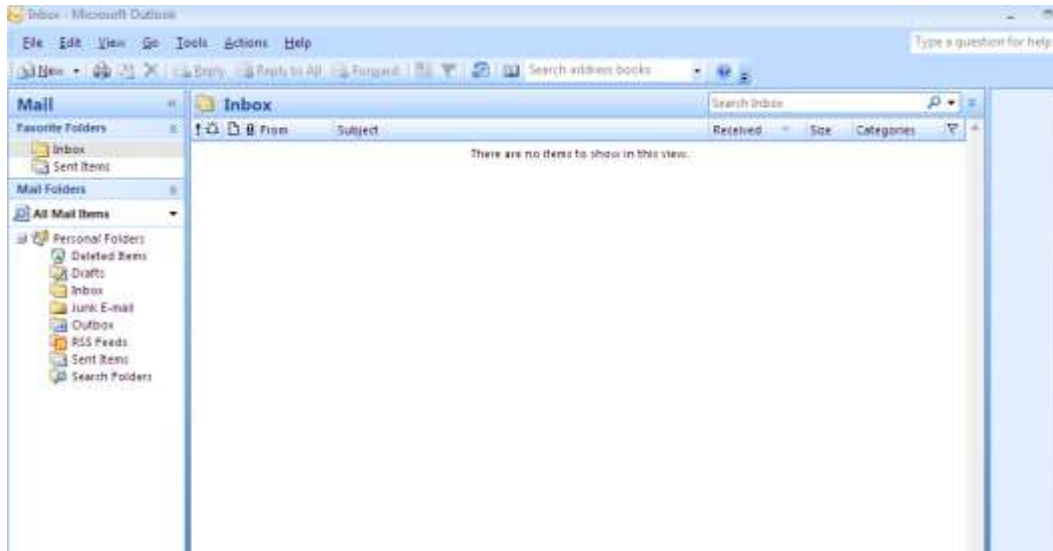

Fig 2.16 Outlook Express default screen

The process of adding or setting up of email accounts in Outlook Express is very easy and fast as it uses only program along with your email account details which can be information about email address, username, password etc. In Outlook Express, you will find step by step instructions that can be available in help menu or you can refer to web site for installation. Once configured, you can add as many email accounts as you want at a time.

From the above figure, we see that in Outlook Express, all incoming emails are arrived at INBOX folder. Apart from Inbox folder, there are three other default folders such as Sent items, Drafts and Outbox. It is found that any email you send from Outlook Express gets directly transferred to Sent Items folder. Such type of program will allow you to create an extra folder which lies under Inbox which will help in segregating messages as per needs. This is a big help in organizing your emails. It also shows automated method which is known as Outlook Express Message Rules that will help in creating certain rules which can be applied to all incoming emails. So, you can have certain messages moved to designated folders, replied to automatically or even delete without your involvement.

Check your progress 7

1. In Outlook Express, emails are present in:

   a. Sent item folder

   b. Draft folder

   c. Inbox folder

   d. Outbox folder

2.9 Let Us Sum Up

In this unit we have learnt that Internet is an arrangement of computers across the globe where every computer is part of that network. It is seen that Internet Explorer is a free web browser application which is produced by Microsoft in year 1995 based on geographical browser known as Netscape Navigator. It is found that Google Chrome is an internet browser developed and launched by Google Inc which is a mixture of minimum design having special technology that allows Web to work faster, safer and easier.

The web browsers serve as common platform which allow users to visit on internet and can browse their product. FileZilla is a famous software application which is used for uploading and downloading of files online which secures file transfer using SFTP or FTPS among Windows clients or Unix servers. Team Viewer is remote access/control and desktop sharing program which works with Internet that immediately get control over computer anywhere remotely by Internet.

Remote desktop is a program or an operating system which allow user to connect to a computer in another location. Telnet is a user command which is an underlying TCP/IP protocol that is required to access remote computers. Outlook Express is an email program which is created and launched by Microsoft that allow to store, manage, send and receive email messages.

2.10 Answers for Check Your Progress

Check your progress 1

Answers: (1 - c)

Check your progress 2

Answers: (1 - a)

Check your progress 3

Answers: (1 – c)

Check your progress 4

Answers: (1 -d)

Check your progress 5

Answers: (1 - d)

Check your progress 6

Answers: (1 –d)

Check your progress 7

Answers: (1 - c)

2.11 Glossary

1. **Internet -** It is an arrangement of computers in a network across the globe.

2. **Internet Explorer -** It is a web browser launched by Microsoft which is based on technology of Netscape Navigator.

3. **Google Chrome -** It is a web browser developed by Google Inc.

4. **FileZilla -** software used for uploading and downloading of files online.

2.12 Assignment

Explain the purpose of Telnet.

2.13 Activities

Write steps to configure Outlook Express in your computer.

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2.14 Case Study

Compile and run the process of transferring of files from your computer to web using Filezila software.

2.15 Further Readings

1.   Internet processes, Ronald, 2010.

2.   An Introduction to Networks, Marconi, 2006.

3.   Introduction to Understanding the Internet, Worth Godwin, 2010.