

4.1 Introduction to the Internet

Today billions of users around the world access the services of the Internet. We can exchange messages, share information, buy and sell things and communicate with each other while using the Internet.



4.1.1 Internet

The Internet is the largest network of computers around the world. It connects many smaller networks together and allows all the computers to exchange information with each other.

A *network* is a system of interconnected computers that communicate with one another and share application, data and hardware components.



Fig. 4.1.1 Internet

4.1.2 Internet Services

The Internet has become so important that its use is considered as the essential part of computer use. The most commonly used internet services are shown below.

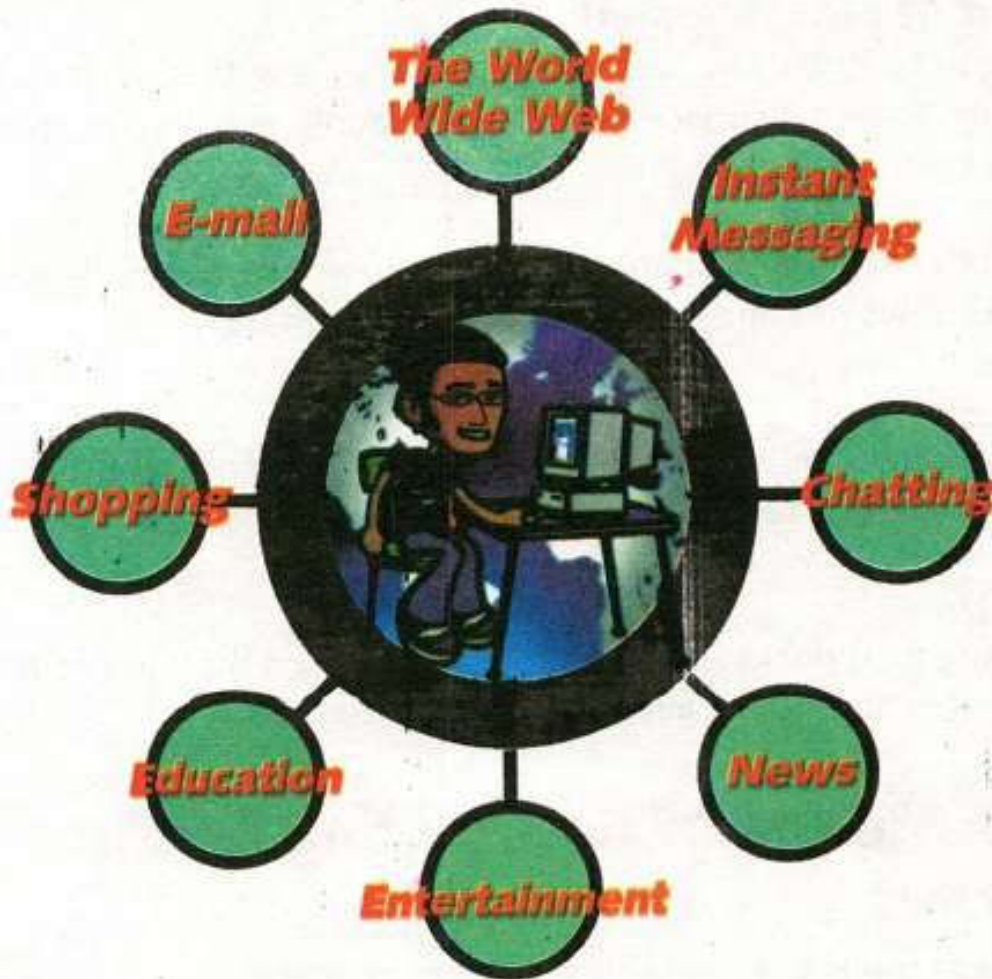


Fig. 4.1.2 Internet Services

The World Wide Web

World Wide Web is a collection of web pages on the Internet which provide a variety of information that can be accessed by people all over the world.

E-mail (Electronic Mail)

A user can send and receive electronic messages and files to anyone in the world using E-mail service.

Shopping

A user can buy and sell things on Internet while sitting at home.

Chatting

A user can chat with anyone using this service. Chat room is a location on Internet that allows users to chat and share ideas with one another.

Instant Messaging (IM)

A user can chat with his/her online friends using the service of instant messaging. Some IM services also provide audio and video conversation.

News

A user can read a newspaper online. A user can access web sites of different news channels to keep themselves update.

Entertainment

A user can access unlimited range of pictures, music and videos using Internet. A user can also play online computer games.

Education

A user can access books and articles of any subject on the Internet. A user can take online lectures and training on different subjects.

4.1.3 Means of Connecting to the Internet

When a user wants to access Internet, first of all he/she has to establish a connection of the computer to the Internet. This connection is provided by a company which is known as Internet Service Provider (ISP). These ISPs offer different types of connections.

- Telephone (dial-up) modem
- Cable modem
- DSL (Digital Subscriber Line)



Telephone (Dial-up) Modems

Dial-up connection is a technology that helps a user to connect to the Internet using standard telephone lines. A user can access Internet by plugging in telephone line in the modem. It is a slow speed and inexpensive technology. In this type of connection telephone line remains busy, one cannot make calls.

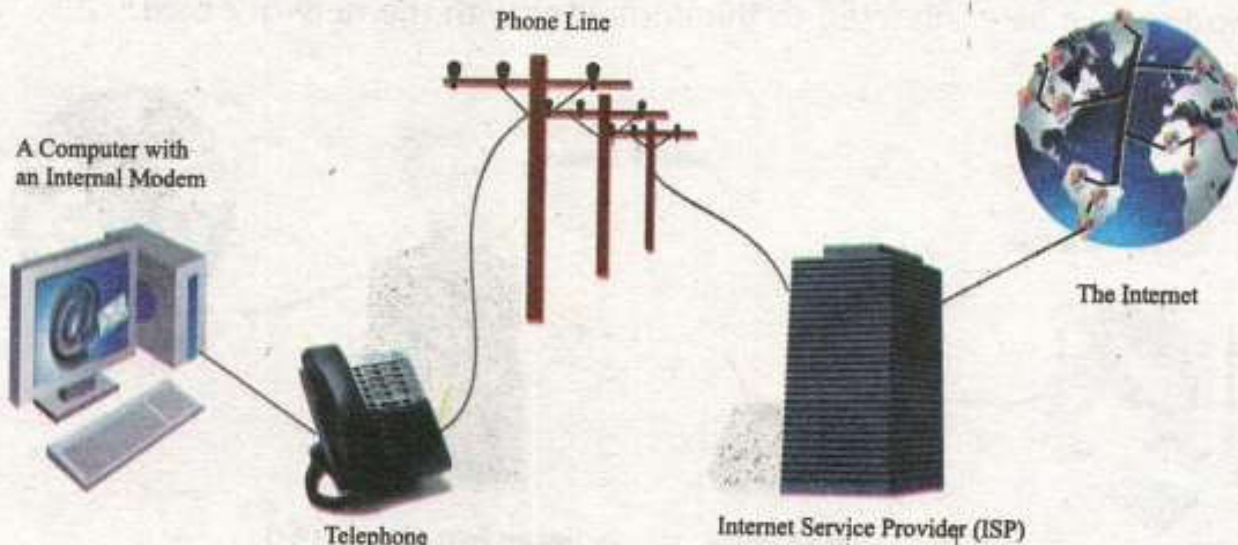


Fig. 4.1.3a Dial up Connection

Digital Subscriber Line (DSL) Modem Connection

DSL is a high speed Internet technology that runs over standard phone lines. It is one of the fastest and affordable Internet connection. A DSL modem is connected to the computer with a network Card. In DSL connection, telephone line remains free to make calls.

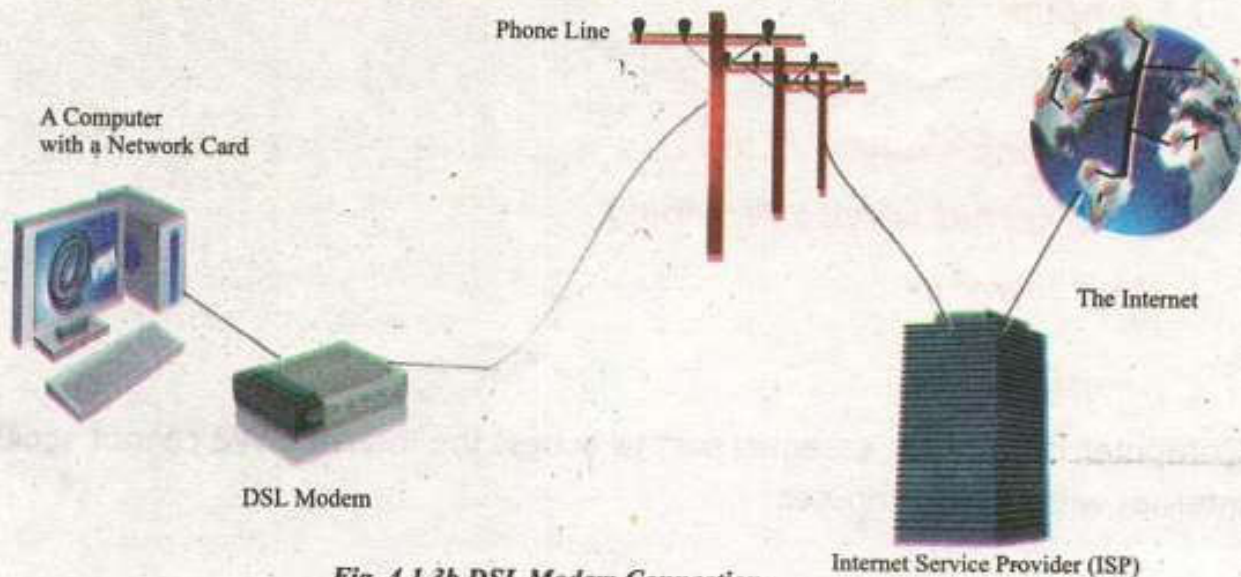


Fig. 4.1.3b DSL Modem Connection

Cable Modem Connection

Cable modem service is a technology that helps users to connect to the Internet using their cable TV wire. It provides a high speed connection as compared to the dial-up modems. It provides an "always ON" connection. It means whenever a computer is powered on the connection is "ON". Cable modem can be connected to the computer with the network card.

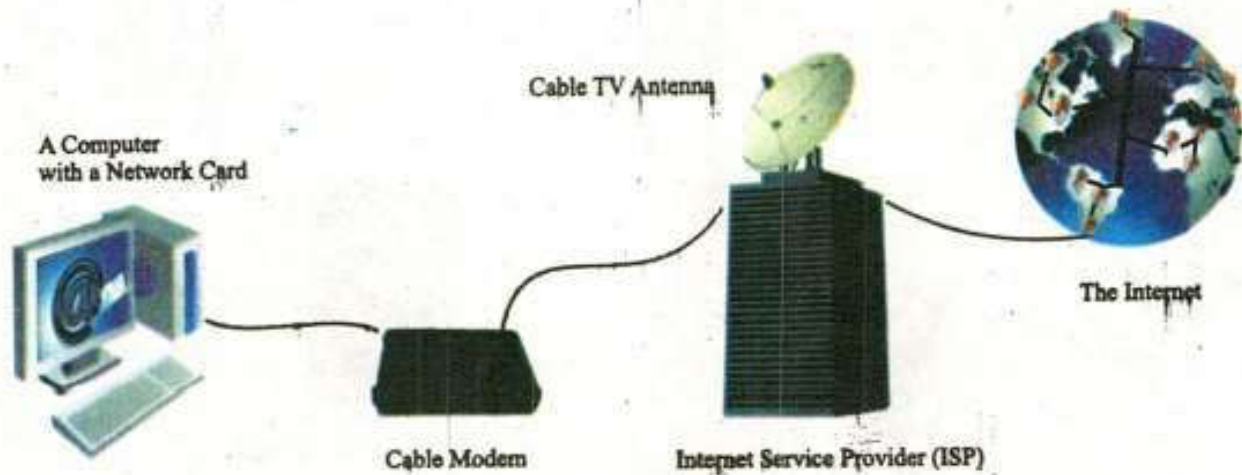


Fig. 4.1.3c Cable Modem Connection

4.1.4 Connecting to the Internet

Following are the requirements to access the Internet.

1. Computer
2. Modem
3. Telephone/Cable TV Line
4. ISP (Internet Service Provider)
5. Web Browser

1. Computer

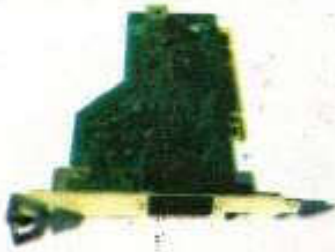
Computer is the most essential part to access the Internet. We cannot access Internet without a computer.

2. Modem

A **Modem** is a device which is used to connect and communicate with other computers. There are two types of modems:

Internal Modem

Placed inside system unit, used for dial-up connection



External Modem

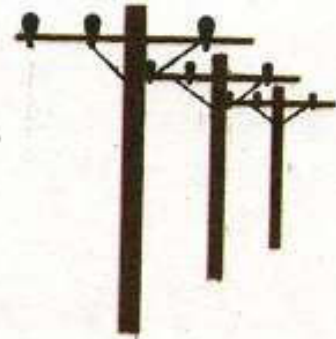
Placed outside system unit, used for DSL and Cable modem connection



3. Telephone/Cable TV Line

A telephone line is required for Dial-up and DSL connections.

A Cable TV line is required for Cable modem connection.



4. Internet Service Provider (ISP)

A company which provides an Internet connection is known as Internet Service Provider (ISP). Some of the leading ISPs in Pakistan are:

- Pakistan Telecommunication Limited
- Wateen Telecom
- World Call Telecom
- w-tribe

5. Web Browser

A **web browser** is a software which is used to access and view different websites. Some popular web browsers are:

- Microsoft Internet Explorer
- Mozilla Firefox
- Google Chrome
- Opera

4.2 World Wide Web (The Web)

The World Wide Web is the most popular service provided by the Internet. It is also known as "The Web". The Web is the collection of web pages on the Internet. It contains a variety of information that can be accessed by the people all over the world.



4.2.1 Web Page

A Web page is a document on the World Wide Web. It can contain text, graphics, audio, videos and links to other pages.



Fig. 4.2.1 Web Page

4.2.2 Website

A **Website** is a collection of related Web pages. Each website contains a number of documents and files.

The very first page of the Website is known as Home Page. It serves as an introduction of the entire website. A user can access any website in the world by writing its address in the address bar of the Web Browser. He/she can move from one page to another page of the website.

This is the home page of the Pakistan Air Force website.

You can access other pages of this website by clicking these links.

If you click the introduction link of this website, a new page with the name Introduction opens.

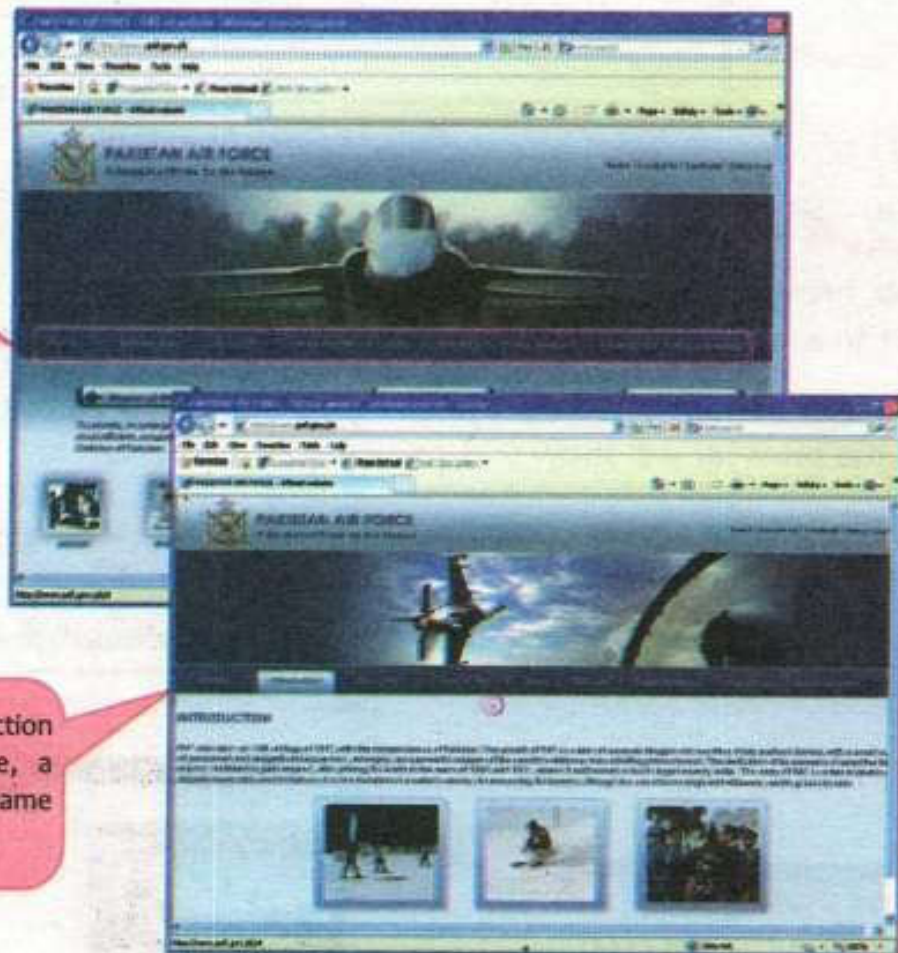


Fig. 4.2.2 Website

4.2.3 URL (Uniform Resource Locator)

URL (Uniform Resource Locator) is an address of a web page on the Internet. Every web page has a unique address. A web page can only be accessed if we know the URL of that page. For example, Google is one of the most popular websites and its URL is <http://www.google.com>.

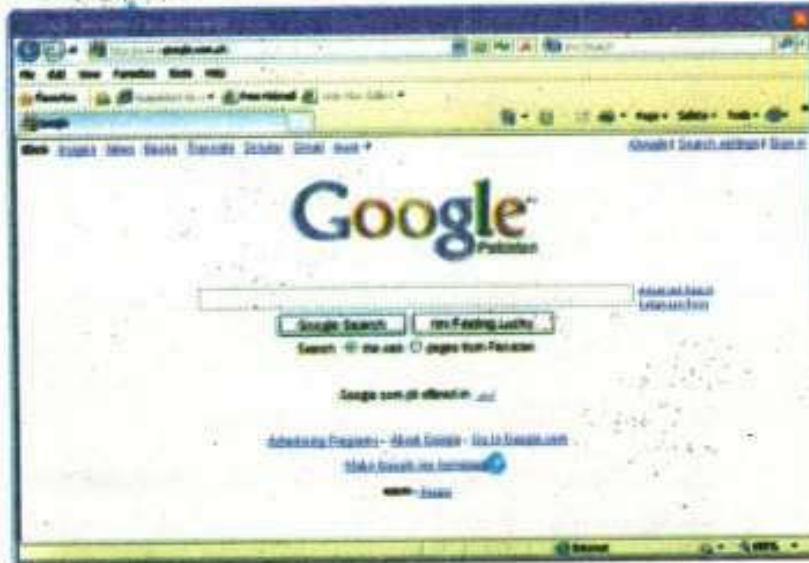


Fig. 4.2.3 Google Home Page

4.2.4 Web Browser

Web browser is a software that is used to access the World Wide Web. We can access and view different web pages or websites using a web browser.

It is a user-friendly software. We can type URL of any website on its address bar, and the browser will show that particular website.

Some of the most popular browsers are Microsoft Internet Explorer, Mozilla Firefox, Google Chrome, Opera and Safari.



Fig. 4.2.4 Different Web Browsers

4.2.5 Internet Explorer

In Windows, the software which serves as a web browser is known as *Internet Explorer*. It has different menus, buttons and icons to help a user to access different websites and webpages.



Fig. 4.2.5 Internet Explorer

Address Bar

You can type the URL of the desired web site here.

Refresh Button

A web page is re-loaded by clicking this button.

Stop

You can stop the browsing of a web page by clicking this button.

Back and Forward Buttons

These buttons are used to go back and forth among pages of a website or multiple websites. These buttons enable only when user visits more than one page.

Menus

You can use different menu options by using these menus.

New Tab Button

A new tab window opens by clicking this button.

4.2.6 Accessing Different Web Pages Using Internet Explorer

➔ Open Internet Explorer

➔ Type the URL
www.google.com
in the address bar.

➔ Press Enter key.

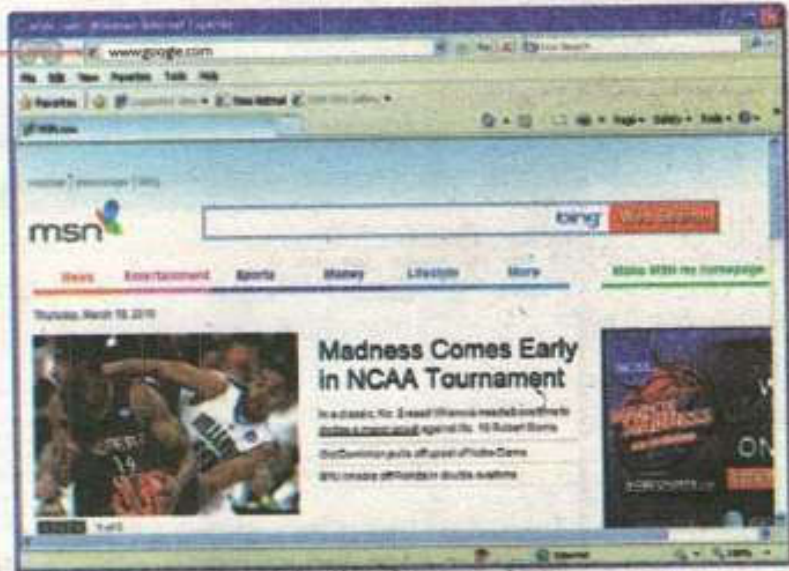


Fig. 4.2.6a Internet Explorer (home page)

➔ The web page of Google appears.

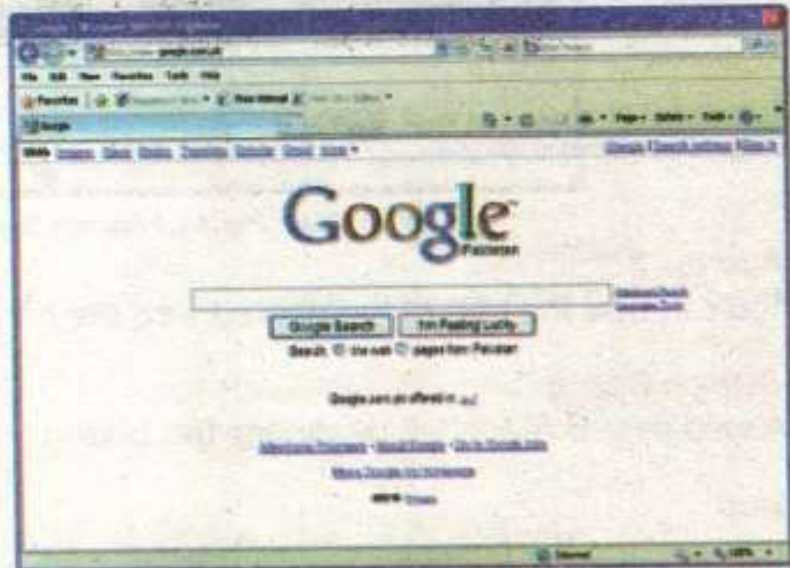


Fig. 4.2.6b Internet Explorer (Google)

➔ Now, one by one, type the following URLs in address bar of Internet Explorer.

- 1) **www.yahoo.com**
- 2) **www.bing.com**
- 3) **www.typingtutor.com**
- 4) **www.funbrain.com**

4.2.7 Search Engines

Search Engine is a program that is used to find web pages and websites on the Internet. When we type a word or a phrase, the search engine will show a list of websites with related information.

Some of the most popular search engines are listed below.

- MSN (www.msn.com)
- Yahoo (www.yahoo.com)
- Google (www.google.com)
- AltaVista (www.altavista.com)
- Ask (www.ask.com)

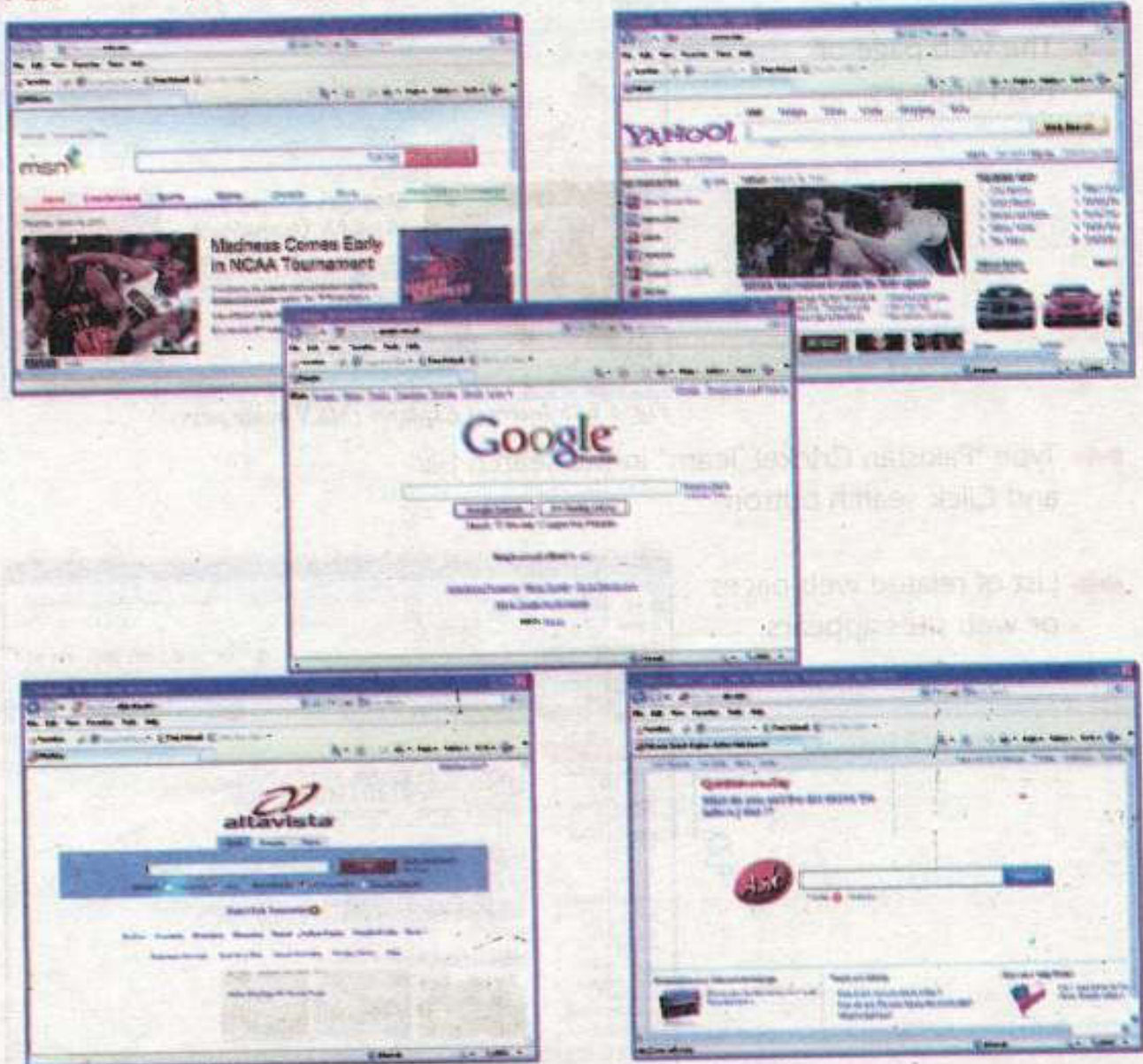


Fig. 4.2.7a Different Search Engines

Using MSN Search Engine

- ➔ Open Internet Explorer.
- ➔ The home page of the browser opens.
By default MSN is set as home page of Internet Explorer.
- ➔ If MSN is not your home page, type the URL

www.msn.com
in the address bar
and press Enter key.

- ➔ The web page of MSN appears.



Fig. 4.2.7b Internet Explorer (MSN home page)

- ➔ Type "Pakistan Cricket Team" in the search bar
and Click search button.

- ➔ List of related web pages
or web sites appears.

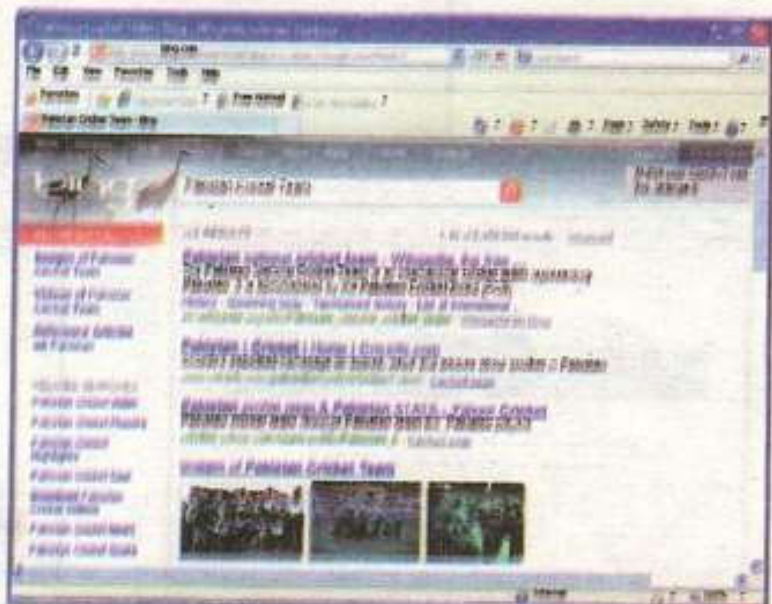


Fig. 4.2.7c List of Related Web Pages

Using Yahoo Search Engine

- ➔ Open Internet Explorer.
- ➔ The home page of the browser opens.
By default MSN is set as home page of Internet Explorer.
- ➔ Type the URL **www.yahoo.com** in the address bar and press Enter key.
- ➔ The web page of Yahoo appears.



Fig. 4.2.7d Internet Explorer (Yahoo web page)

- ➔ Type "Pakistan Cricket Team" in the search bar and Click search button.
- ➔ List of related web pages or web sites appears.

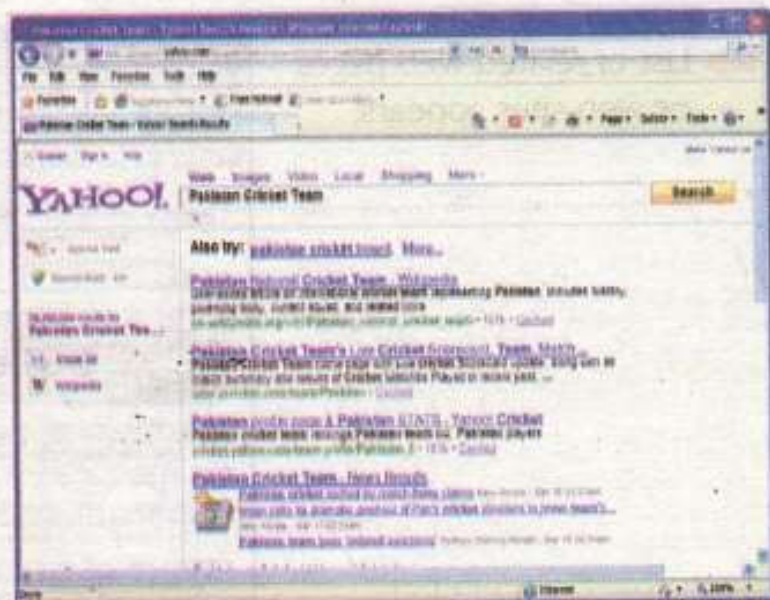


Fig. 4.2.7e List of Related Web Pages

Using Google Search Engine

- ➔ Open Internet Explorer.
- ➔ The home page of the browser opens.
By default MSN is set as home page of Internet Explorer.
- ➔ Type the URL **www.google.com** in the address bar and press Enter key.

- ➔ The web page of Google appears.



Fig. 4.2.7f Internet Explorer (Google web page)

- ➔ Type "Pakistan Cricket Team" in the search bar and Click search button.

- ➔ List of related web pages or web sites appears.

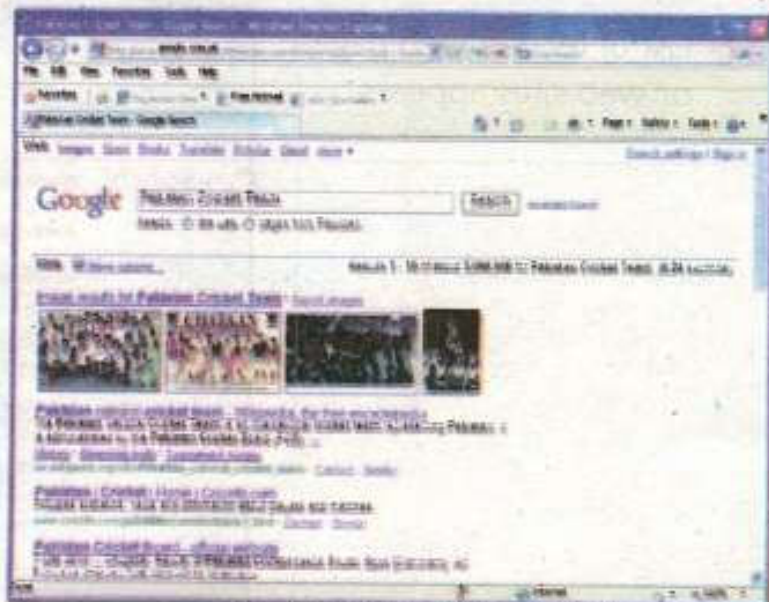


Fig. 4.2.7g List of Related Web Pages

Summary

- **The Internet** is the largest network of computers around the world.
- A company which provides an Internet connection is called **ISP**.
- **Dial-up connection** is a technology that helps a user to connect to the Internet using standard telephone lines.
- **DSL** is a high speed, digital, always-ON Internet technology that runs over standard phone lines.
- **Cable modem service** is a technology that helps users to connect to the internet using their cable TV wire.
- A **modem** is a device which is used to connect and communicate with other computers.
- A **web browser** is a software that is used to access and view different websites.
- **The World Wide Web** is the collection of web pages and websites on the Internet.
- A **Web page** is a document on the World Wide Web. It can contain text, graphics, audio, videos and links to other pages.
- A **Website** is a collection of related web pages. Each website contains a number of documents and files.
- **URL (Uniform Resource Locator)** is the address of a web page on the Internet.
- In Microsoft Windows, the software which serves as a web browser is known as **Microsoft Internet Explorer**.
- A **Search Engine** is a program that is used to find web pages and websites.

Exercise

Q.1 Tick the right choice.

i) The largest network of computers around the world is known as _____.

a) Internet

b) Network

c) Intranet

d) Group

ii) IM stands for _____.

a) Instant Making

b) Internet Messaging

c) Instant Messaging

d) Instant Messages

- iii) ISP stands for _____.
- a) Internal Server Provider b) Internet Service Provider
c) Internet Supply Package d) Internet System Provider
- iv) DSL stands for _____.
- a) Digital Subscriber Line b) Digital Super Line
c) Data Subscriber Line d) Digital Subscriber Lane
- v) There are _____ types of modems.
- a) Two b) Three
c) Four d) Five
- vi) Which of the following is an Internet Service Provider?
- a) PLTC b) PLCT
c) PCTL d) PTCL
- vii) The software that is used to access and view web pages is called _____.
- a) Web Server b) Web Browser
c) Web Explorer d) Web linker
- viii) WWW stands for _____.
- a) World Wide West b) World Was Web
c) World Wide Work d) Wold Wide Web
- ix) Collection of different web pages and sites on the internet is also called _____.
- a) Web b) The Web
c) Web Link d) The Wax
- x) A single document on the world wide web is known as _____.
- a) Web page b) Website
c) Web link d) Web cam
- xi) A _____ is a collection of related web pages.
- a) Web site b) Web Page
c) Web browser d) Web cam

Q.4 Give brief answers to the following questions.

- i) List five uses of the Internet.
- ii) Write steps to connecting to the internet.
- iii) Define Modem and its types.
- iv) Write names of some popular web browsers.
- v) What are the major differences between Dial-up and DSL connections?
- vi) How can we access websites in Microsoft Windows?
- vii) Describe Cable Modem Internet connection.
- viii) Describe the function of Refresh, Stop, Next, Back and Stop buttons in Internet Explorer.
- ix) How can we search a web page using Search Engine?
- x) Write names and URLs of some popular search engines.

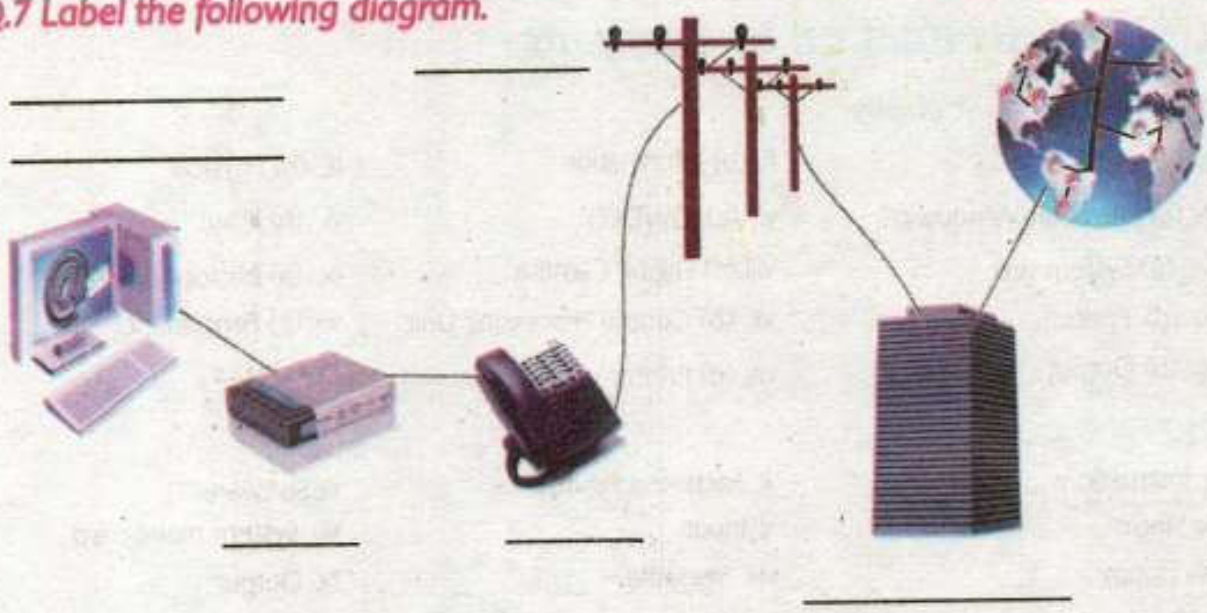
Q.5 Differentiate between the following.

- i) Internet and World Wide Web
- ii) Chatting and Instant Messaging
- iii) Web page and Website
- iv) Telephone Modems and Cable Modems
- v) Web Browser and Search Engine

Q.6 Label the following diagram.



Q.7 Label the following diagram.



Explain the Internet connection with the help of the above diagram.

Q.8 Match column A with column B and write the numbers of matching pairs in column C.

A	B	C
i) URL	a) Related web pages	_____
ii) Web Browser	b) Largest network	_____
iii) Website	c) Digital Subscriber Line	_____
iv) Search Engine	d) Cable TV wire	_____
v) Internet Service	e) E-mail	_____
vi) DSL	f) Yahoo	_____
vii) Dial-up Connection	g) Internal Modem	_____
viii) www	h) PTCL	_____
ix) Internet	i) Mozilla Firefox	_____
x) ISP	j) World Wide Web	_____
	k) Universal Resource Locator	_____
	l) Data Subscriber Line	_____