ONLINE
SUPPROT SERVICES

CERTIFICATE IN
INFORMATION TECHNOLOGY

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IGNOU SC-2281

Jakhepal-Ghasiwala Road, Sunam

For more information visit us at: nirmancampus.co.in

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INTERNET:

Internet is a very large network of networks. These networks are joined together across the world. Computers in these networks can communicate with each other. They can also share data with each other. Internet is used in many fields of daily life. It has become an important part of our daily life. In daily life, it is used for information search, communications, entertainment, e-business, finance etc. Following are some common uses of internet:

- It is widely used for Communication (using emails)
- It is used for Job searches
- It is used for finding books and study material
- It is used for health and medicine
- It is used gets travelling related information
- It is used for Entertainment (play games, listen songs, watch videos)
- It is used for online Shopping
- It is used to get Stock market updates
- It is used for the Research work
- It is used for Business transactions

WORLD WIDE WEB (WWW):

The World Wide Web is also called www or web or W3. It is a system of web servers. In www, information is stored in the form of web-pages. Web pages are written in HTML (Hypertext Mark Language). HTML defines the structural elements of web page. A web-page contains text, picture, audio, animations etc. The collection of related web-pages is called a website. Websites are stored on the web-servers. The web-pages of a website are linked with each other. These links are called hyperlinks. By default, hyperlinks are shown in blue color with underline. The first web-page of a website is known as Homepage.

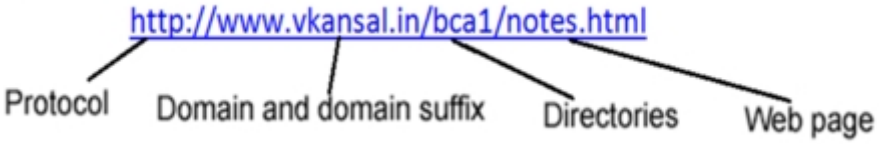
Each web-site/page has a unique address. This address is called URL (Uniform Resource Locater). Example of URL is: www.google.com. To use these web pages, we have to use Web browsers. Some popular web browsers are Google Chrome, Firefox and Microsoft's Internet Explorer.

HYPERTEXT:

Hypertext is the text which contains links to other texts. The term was coined by Ted Nelson around 1965. A webpage consists of hypertext and hypermedia. The link in the text was shown in blue colour with underline. When we click on these links, they take us to some new linked webpages. In HTML, Anchor tag <a> is used to make links in the webpages.

UNIFORM RESOURCE LOCATOR (URL):

Uniform Resource Locator is also called URL. It is the global address of documents/web pages and other resources on the World Wide Web. The URL contains the name of the protocol to be used to access the resource and a resource name. The first part of a URL identifies what protocol to use, for example: http, ftp, https etc. The second part identifies the IP address or domain name where the resource is located. Consider the following example of URL:



WEB BROWSER:

A web browser is application software. It helps us to search, view and read information on web sites. This information can be in many forms. It includes simple text, graphics images, animation, video, and audios. Internet Explorer (IE), Google Chrome, Firefox etc. are the most commonly used web browsers. To view the information, we have to type its address in the browser. This address is called the URL of web site.

The web browser requests a web page from a web server. Web server receives the request and processes it. After processing, server sends the response to web browser. The web browser then displays this information.

IP ADDRESS:

IP Address is called Internet Protocol address. It is a logical numeric address that is assigned to every single computer, printer, switch, router or any other device that is part of a TCP/IP-based network. No network exists without IP address. An IP address is used to uniquely identify every node in the network. Because IP addresses

are logical, they can be changed. They are similar to addresses in a town or city. The IP address gives an address to the network node so that it can communicate with other nodes or networks, just like mail is sent to friends and relatives. An IP address consists of 32-bits. These bits are divided into 4 parts an each part is by dot. Value of each part can be 0 to 255. For example, 192.168.1.21 could be an IP address.

An IP address can be **static** or **dynamic**. A static IP address will never change and it is a permanent Internet address. A dynamic IP address is a temporary address that is assigned each time a computer or device accesses the Internet.

DOMAIN NAME:

A domain name is the name of the website. A domain name is the address which can be used to access our website. A domain name is used for finding and identifying computers on the Internet. Computers use IP addresses, which are a series of number. However, it is difficult for humans to remember numbers of IP addresses. Because of this, domain names were developed and they are used to identify computers or devices on the Internet rather than using IP addresses.

A domain name can be any combination of letters and numbers. The domain name must be registered before we can use it. Every domain name is unique. No two websites can have the same domain name. For example, in the URL *http://www.vkansal.in/index.html,* the domain name is *vkansal.in.*

Every domain name has a suffix. This suffix shows the top level domain to which website belongs to. There are only a limited number of such domains. For example:

- **gov** - Government agencies
- **edu** - Educational institutions
- **org** - Organizations (non-profitable)
- **mil** - Military
- **com** - commercial business
- **net** - Network organizations

Because the Internet is based on IP addresses, so every Web server requires a Domain Name System (DNS). This DNS system translates domain names into IP addresses.

INTERNET SERVICES PROVIDERS (ISP):

I*nternet* **S***ervice* **P***rovider* is also known as ISP. ISP refers to a company that provides Internet services. These services include personal and business access to the Internet. For a monthly fee, the service provider provides a software package, username, password and access phone number. With the help of modem, we can then use the Internet and browse the World Wide Web, and send and receive e-mails. ISPs use fiber-optics, satellite, copper wire, and other forms to provide Internet access to its customers.

INTERNET SECURITY:

Internet security is a branch of computer security. It deals specifically with Internet-based threats. These threats include hacking, viruses and other malicious software (malware). The objective of internet security is to establish rules that can be used against attacks over the Internet. The Internet represents an insecure channel for exchanging information. It leads to a high risk of intrusion or fraud. Various methods have been used to prevent online attacks and improve internet security. Many methods are used to protect the data during data transmission. One of the commonly used methods is encryption. To protect data from the internet threats, many antiviruses, anti-malwares, firewalls, and many internet security software have been developed. Using these security tools, we can protect our data from many attacks through internet.

WEB SEARCH ENGINE:

Search engines are programs that search documents for specified keywords. After searching, search engine returns a list of the documents where the keywords were found. Commonly used search engines are Google, Bing and Yahoo! Search that enable users to search for documents on the World Wide Web. Generally there are three basic components of a search engine as listed below:

1. Web Crawler
2. Database
3. Search Interfaces

Web crawler

It is also known as spider or bots. It is a software component that traverses the web to gather information.

Database

All the information on the web is stored in database. It consists of huge web resources.

Search Interfaces

This component is an interface between user and the database. It helps the user to search through the database.

NET SURFING:

Net Surfing is also known as web surfing or just surfing. Surfing describes the act of browsing the Internet by going from one web page to another web page. For navigation from one page to another, hyperlinks are used in the web browser.

WEB PORTAL

A web portal is a specially designed website that often serves as the single point of access for information. It can also be considered a library of personalized and categorized content. A web portal helps in search navigation, personalization, notification and information integration. Web portals are also known as **portals**.

The information stored in web portals can be accessed from multiple platforms like personal computers, smartphones and other electronic devices. Web portal is capable of presenting information based on the user. It can also allow users to voluntarily personalize the information presented in the portal. Web portals can be classified based on their types, such as market space portals, public web portals, enterprise web portals, knowledge portals, etc. A web portal is capable of handling both structured and unstructured information.

WIKI

A wiki is a server program that allows users to collaborate in forming the content of a Web site. The term comes from the word "wikiwiki," which means "fast" in the Hawaiian language.

A wiki provides a simplified interface. It is not necessary to know HTML to edit contents of wiki. At any time, contributors can review the history of the page they are working on. The contributor can also preview the Web page before publishing it.

A wiki Web site operates on a principle of collaborative trust. The simplest wiki programs allow users to create and edit content. More advanced wikis have a management component. This component allows a designated person to accept or reject changes that were made to the contents of the wiki. The best known example of a wiki Web site is **Wikipedia**.

BLOG:

A blog is a frequently updated online personal journal or diary. It is a place to express our views to the world. In other words, BLOG is a place to share our thoughts and our passions. We can also say that a blog is our own website that we are going to update on an on-going basis. Blog is a short form for the word **weblog** and the two words are used interchangeably.

A blog is a website consisting of entries. These entries are called posts. These posts appear in reverse chronological order. The most recent entry appears first in the Blogs. Typically, BLOG includes features such as comments and links to increase user interactivity. Blogs are created using specific publishing software. The person who posts at the blog is called Blogger. The act of writing a post for a blog is called Blogging.