**Website Development**

**Introduction**

 The Internet is considered as one of the greatest inventions of the mankind. It has become an integral part of our life. We all are using it in our day to day life for various purposes. Today, life without the Internet is not even imaginable not only in our daily lives but also in professional lives. It plays a very vital role in education by facilitating cost effective and affordable quality education, providing effective and interactive teaching-learning tools and by many other means.

 However, having dependent on Internet that much or that extent have we ever thought of who invented this revolutionary stuff and what are the technologies behind it? In this module, we will learn the basics of Internet and how to develop a website for an educational institution library.

**Origin and Development of Internet**

 In simple terms, the Internet is a global network of computers formed by ‘interconnecting’ many small and big computer networks across the world. In fact, nobody invented Internet in its current form. It gradually grew up as a global network from a small network of four computers in USA called ARPANET. (Advanced Research Project Agency Network). The ARPANET was established by the US government for storing and sharing defence related information. It was established in a de-centralized way, i.e. the same resources of the network were simultaneously stored in more than one computer in the network so that if one part of the system fails the rest can still function. This was to make sure that the survival of the network even during unforeseen events and disasters like war. During that period USA was expecting an aerial attack from Soviet Union and Japan. Another feature of the ARPANET was its ability to connect and communicate with computers devices with different configurations. In the early 1980’s, the National Science Foundation Network (NSFNET), a network of universities and research institutes in USA joined with ARPANET followed by many other academic and research networks across the world. Eventually, ARPANET withdrew from the network.

 Different tools and techniques were invented to store and share resources on the Internet over the years. These include e-mail, file transfer protocol (ftp), telnet, Usenet news, gopher and world wide web. Of these, the emergence of world wide web in 1990’s was a turning point in the revolutionary growth of the Internet. The web with its user-friendly nature and flexible features over shadowed other resources and services on the Internet till that time. Eventually, services like gopher and usenet news disappeared, telnet and ftp side lined and email reshaped into a web-based format. Thus, today, the Web occupies the major portion of the Internet.

**Who owns the Internet?** We have earlier learned that the Internet is grown from the four server computers of ARPANET. Later, many small and big computer networks joined the network established by the ARPA. Though ARPA came out of the network many others have linked with it thus becoming a global network. Each one of the network on the Internet has its own identity. However, there no agency to control the Internet as a whole as nobody owns it

**Internet Society**: Though nobody owns and control the Internet, a non-profit American organization by name Internet Society established in 1992 is responsible for overseeing the formulation of policies on access and standards on Internet.

**Internet Engineering Task Force (**IETF): The IETF is a global community of network designers, operators, vendors, and researchers who deals with the Internet architecture and the smooth operation of it.

**Internet Service Provider:** An Internet service provider in short, ISP is an organization that provides Internet connectivity to persons and organizations. Examples include BSNL, Reliance, Airtel etc.

**What is Web?**

As discussed earlier, the Internet is a network of computers spread across the world. Computers on the Internet are of two types: server computers and client computers. The server computers and the computers which stores the information and provide various services. The client computers are the computers used for accessing and using the resources and services stored in the server computers. Thus, when you are downloading an application form from an Institution website, you are actually retrieving a copy of the application form stored in the server computer of that Institution. Your computer, that is the computer you used for downloading the application form is called Client Computer.

**Web Server:** In fact, the term ‘Server Computer’ is a very generic one. Depending on the nature of resources and services provided on the Internet like Gopher, Usenet, Telnet, Ftp and Web, the server computers will have different server application programmes such as Gopher Server, Usenet Server etc. Thus, Webserver is the software application for managing web resources on a server computer. As we know, today majority of internet resources are on webservers.

**Web Browser:** Earlier we have learnt that the computers using which we access the Intern is called Client Computer. In fact, in order to access the web content stored on the web servers on the Internet, the computer needs to have a software application called Web browser. Thus, a web browser is the software application for accessing the web. E.g. Google Chrome, Mozilla Firefox, Internet Explorer (now replaced by Microsoft Edge) etc.

**Web Pages:** In web servers, the resources and services are organized in the form of specialized computer files called web pages. The major characteristic feature of the web pages is that they can be linked to other web pages in the same web server or to other page(s) located in servers elsewhere in the world. Webpages are made using a very simple computer coding language known as hypertext mark-up language or in short, html. The web was invented by Mr. Tim Berners-Lee, a British computer scientist in 1993 as a part of his research project.

**Website Address**: The location of a particular website on the Internet is uniquely identified by its address called as website address. e.g. [www.riemysore.ac.in](http://www.riemysore.ac.in) is the official website address of the Regional Institute of Education, Mysuru. A website address is online equivalent of our postal address.

Domain Name: The Website address is technically known as domain name. Usually, an Internet server computer is identified by a series of unique numbers assigned to it known as IP address. An IP address is like 203.164.168.22. It is difficult for a human being to remember an IP address of a site which is in the form of a string of numbers and access it. To resolve this issue the domain name system was developed. The domain name has to be registered before you using it. Also, it should be unique as two websites cannot have the same domain name.

**Uniform Resource Locator or URL**: A Uniform Resource Locator is used to locate a resource on the internet. Sometimes, it is used as synonymous to a web address. A URL consist of multiple parts.

**Homepage**: The default first page that visitors see when they access a website is **homepage** **page**. Usually, this will be the main page of the website where visitors can find links to other **pages** on the site.

**Internet Service Provider:** We are visiting a number of websites in a day. In order to access the Internet and use a website we need Internet connection. The Internet Service provider is the agency or organization providing access to the Internet. **In India**

The first Internet Service Provider in India was Videsh Sanchar Nigam Limited (VSNL) which launched its service on 15 August 1995. Now, the leadeding players are BSNL, Reliance and Airtel.

**How to develop a Website?**

Normally, every website is made up of three components.

* HTML: this markup language is used to structure the web page. It provides tags like <li> for list, <div> for division, <p> for paragraph etc..
* CSS: This is used to add styling to the page. So basically CSS is used to build presentation layer of your page. You can set background color, font size etc.. by using CSS
* Javascript: JS is used to make your web page interactive so that your web page can respond to the user actions