

# EMERGING TECHNOLOGIES IN LIBRARIES & INFORMATION CENTERS

LISC-01403  
(Foundation –IV)



# INTERNET AND WWW



## History of Internet

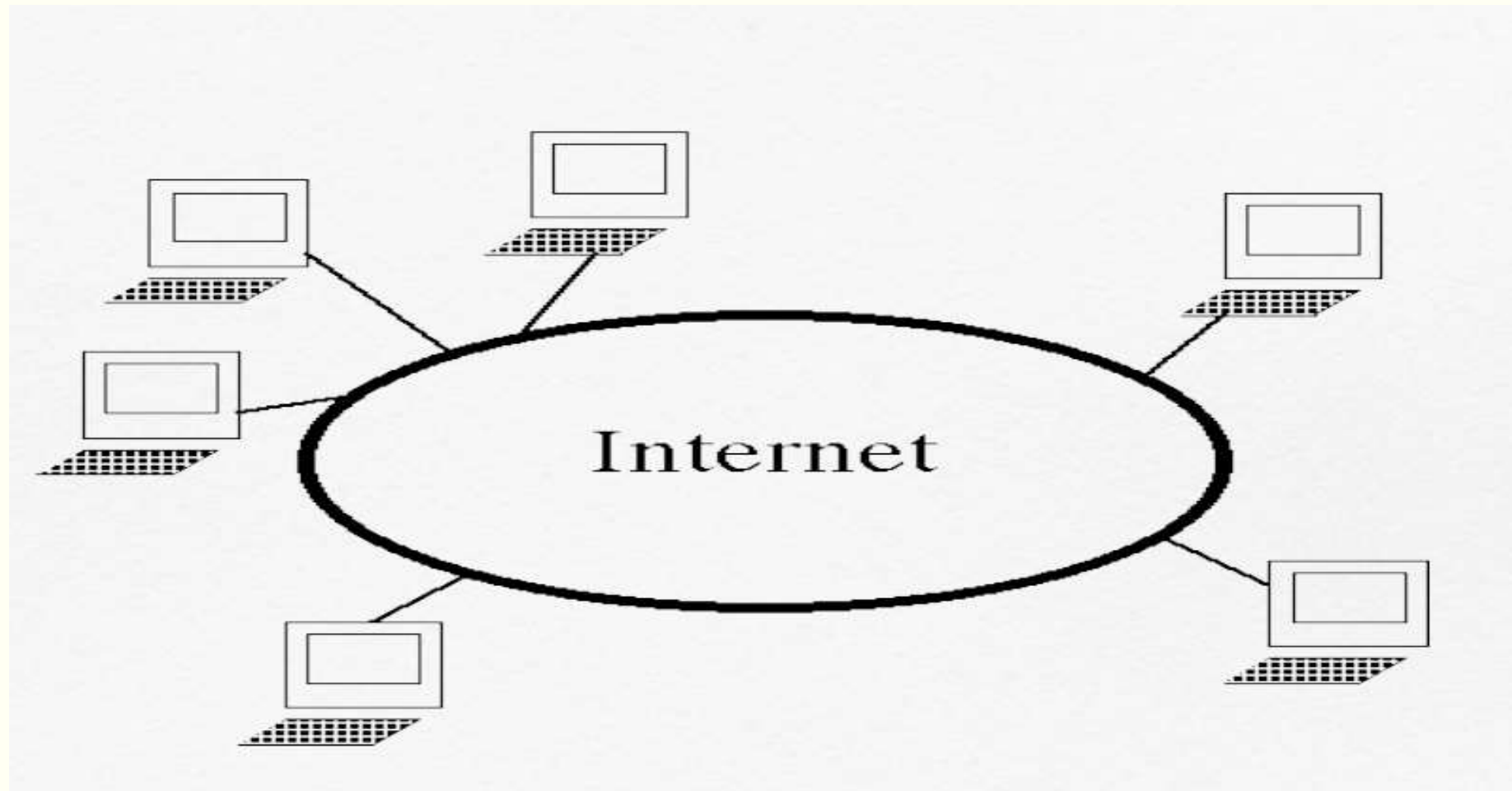
<b>1972</b>	<b>Telnet developed as a way to connect to remote computer</b>
<b>1973</b>	<b>Email introduced, ARPANET goes international and File Transfer Protocol (FTP) established.</b>
<b>1984</b>	<b>Domain Name Server introduced which allows naming of hosts, no longer numeric</b>
<b>1986</b>	<b>NSFNET created</b>
<b>1991</b>	<b>Tim Berners-Lee releases World Wide Web</b>
<b>1993</b>	<b>Mosaic (becomes Netscape) designed by graduate students at University of Illinois</b>

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# The Internet

- ❑ **Internet is an massive network of networks. It is essentially an interconnection between millions of smaller computer networks scattered around the globe. These networks are connected with each other by the means of over ground cables, underground cables, satellite links and sub-oceanic cables etc.,**
- ❑ **The word “ Internet” actually refers to all the hardware infrastructure present in the network. Such hardware include computer systems, routers, cables, bridges, servers, cellular towers, satellites and other pieces.**
- ❑ **All these pieces of hardware operated under the Internet Protocol(IP).**



# Vint Cerf

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- Vinton Gray Cerf ForMemRS, also known as Vint Cerf, is an American Internet pioneer and is recognized as one of "the fathers of the Internet".
- Co-designer of the TCP/IP networking protocol.



## WWW (World Wide Web)

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- ☐ **The WWW is the collection of all the information that is available in the Internet. So all the text, images, audio, videos online- all this forms the WWW.**
- ☐ **Most of these information is accessed through websites and we identify websites by their domain names.**
- ☐ **There is huge amount of information available in the WWW.**
- ☐ **Only a tiny part of this information is searchable through popular search engines like Google.**
- ☐ **WWW uses http protocol to access the information from various servers.**

# Tim Berners Lee

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- ❑ **Father of W W W.**
- ❑ **The inventor of HTML.**
- ❑ **Invented WWW while working at CERN, the European Particle Physics Laboratory.**

# Difference Between Internet and WWW

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Internet	WWW
Internet originated sometimes in late 1960's	English scientist Tim Berners-Lee invented the WWW in 1989
Nature of Internet is hardware	Nature of WWW is software
Internet consists of Computers, Routers, Cables, Bridges, Servers, Cellular towers.	WWW consist of information like text, image, audio, video.
The first version of Internet was known as ARPANET	In the beginning the WWW was know as NSFNET
Internet works on basis of Internet Protocol(IP).	WWW works on basis of Hyper Text Transfer Protocol(HTTP).
Internet is independent of WWW.	WWW requires internet to exist.
Internet is superset of WWW.	WWW is subset of the Internet. Apart from supporting WWW, the Internet infrastructure is used for other things as well(eg. FTP, SMTP).

## How to access the Internet?

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- ❑ **To access the Internet, an existing network need to pay a small registration fee and agree to certain standards based on the TCP/IP (Transmission Control Protocol/Internet Protocol) reference model.**
- ❑ **Each organization pays for its own networks and its own telephone bills, but those costs usually exist independent of the internet.**
- ❑ **The regional Internet companies route and forward all traffic, and the cost is still only that of a local telephone call.**

## How to access the Web?

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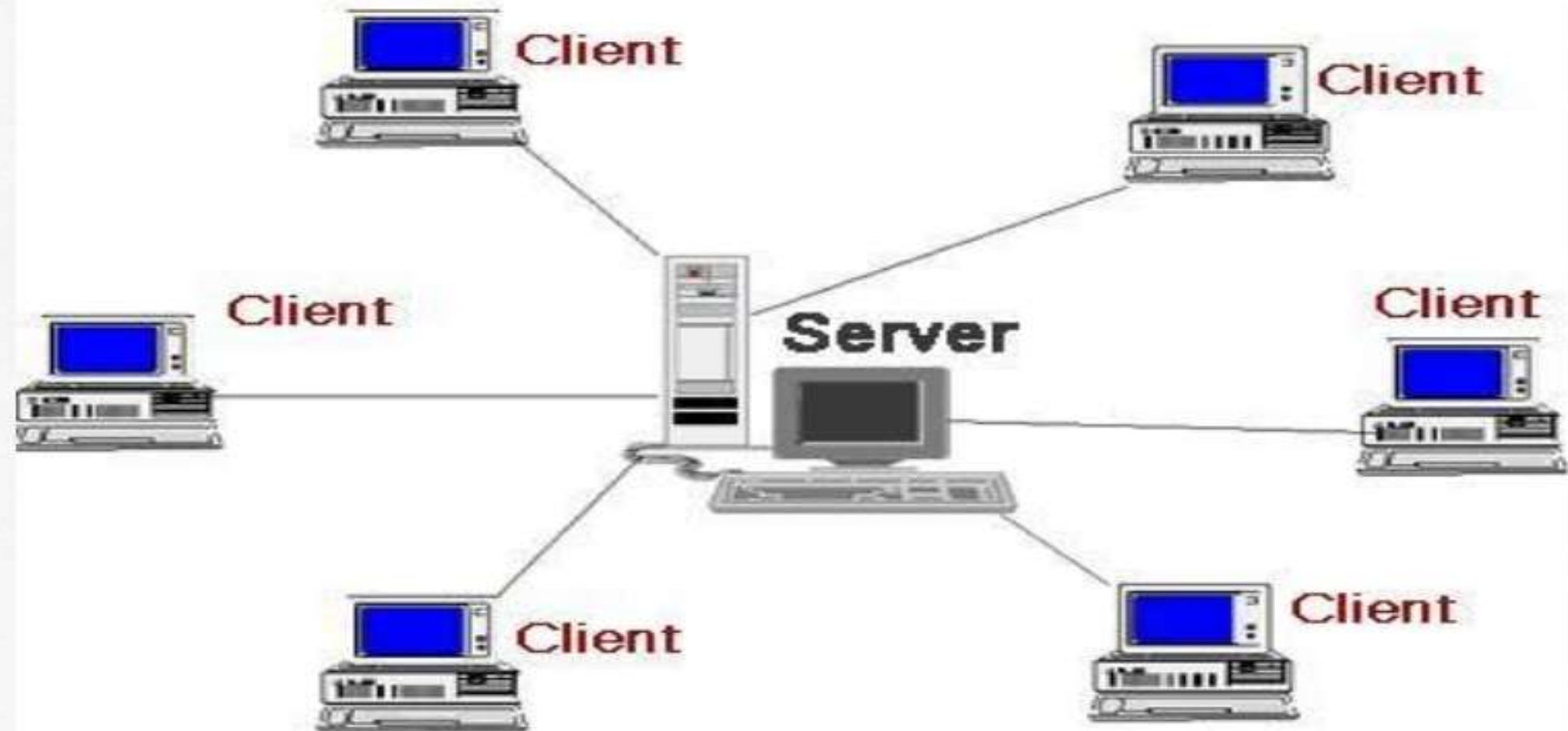
- ☐ **Once you have your Internet connection, then you need special software called a browser to access the Web.**
- ☐ **Web browsers are used to connect you to remote computers, open and transfer files, display text and images.**
- ☐ **Web browsers are specialized programs.**
- ☐ **Examples of Web browser: Netscape Navigator (Navigator) and Internet Explorer.**

# **Client/Server Structure of the Web**

- ❑ Web is a collection of files that reside on computers, called Web servers, that are located all over the world and are connected to each other through the Internet.**
- ❑ When you use your Internet connection to become part of the Web, your computer becomes a Web client in a worldwide client/server network.**
- ❑ A Web browser is the software that you run on your computer to make it work as a web client.**

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## The Client-Server Model



## Web Browser

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- ❑ **A web browser is a software application used to locate, retrieve and display content on the world wide web including web pages, images, video and other files.**
- ❑ **As a client/server model the browser is the client run on a computer that contacts the web server and requests information,**
- ❑ **The Web Server sends the information back to the browser which displays the results on the computer or other Internet enabled device that supports a browser.**

## Web Page

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- ❑ A document which can be displayed in a web browser such as Google Chrome, firefox. These are also called as “Web pages” or “pages”.
- ❑ A Web page is accessed by entering a URL address and may contain text, graphics and hyperlinks to other Web pages and files.
- ❑ Once in a browser, you can open a webpage by entering the URL in the address bar.
- ❑ For example, typing <http://www.computerhope.com/esd.html> opens the Computer hope’s esd page.

## Website

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- ❑ **A collection of Web pages which are grouped together and usually connected together in various ways. Often called a “Web site” or simply a “site”.**
- ❑ **A Website is a central location of various web pages that are all related and can be accessed by visiting the home page using a browser.**
- ❑ **For example, our college website [spcputtur.org](http://spcputtur.org) which contains number of WebPages.**