

THE INTERNET

- ◉ The **Internet** is a global system of interconnected computer networks that use the standard internet protocol suite to serve billions of users worldwide.
- ◉ It is a *network of networks* that consists of millions of private, public, academic, business, and government networks, of local to global scope, that are linked by a broad array of electronic, wireless and optical networking technologies.

BACKBONE NETWORK

- ◉ The internet uses a central high speed network, called backbone to connect smaller independent networks.

- ◉ Examples:

NSFNet: is a backbone used in USA for internet connections.

GIAS(Gateway Internet Access Services):
is being employed for the internet connection in India.

INet: is being used for the high speed connectivity to internet & email.

INET OFFERS THE FOLLOWING CONNECTIONS

- ◉ **X.25 connection:** With the help of x.25 compatible software & hardware, the user can send or receive several simultaneous calls.
- ◉ **X.32 connection:** It enables the x.32 users to have a backup access to INET. It uses dialup mode for communication at speeds 2400, 4800 or 9600 bps.
- ◉ **X.28 connection:** A user of x.28 can use any computer with a suitable communication software such as: Procomm, Xtalk etc. The calls can be sent or received through dialup at speeds 300, 1200, 2400, 4800, or 9600 bps.
- ◉ **Frame Relay:** The users of this connection can have PVC's (Permanent virtual circuits). It provides high speed connectivity between LANs situated 100 kms apart.

HYPertext DOCUMENT

- ◉ A hypertext document can be created with the help of HTML(hypertext markup language).
- ◉ It helps in embedding the text in document wherein some words have links to other sources of information.
- ◉ HYPertext:- Electronically annotated documents that are linked to other documents or graphics or sound that may help clarify the parent document. This is helpful in cross referencing & accessing related documents.
- ◉ HTML offered a platform independent means of marking data for inter-change. The concept was that servers would store & supply data and clients would retrieve & display it.

STRUCTURE OF HTML DOCUMENT

<html>

<head>

<title>hello</title>

</head>

<body>

Hello how are you?

</body>

</html>

STRUCTURE OF HTML DOCUMENT (CONT...)

- ◉ To separate HTML instructions from text to be displayed, each instruction consists of characters surrounded by `< & >`. The resultant group of characters is known as a TAG.
- ◉ Each HTML document is divided into two main parts: Head and a body.
- ◉ The HEAD contains information to identify the page.
- ◉ The BODY contains the actual information to be displayed.

WHAT IS HTTP?

- ◉ Hypertext transfer protocol is an application protocol for distributed, collaborative, hypermedia information systems.
- ◉ This protocol is used to transfer hypertext documents over the internet.
- ◉ A client makes a request for a particular document. The URL of the document is sent to the HTTP server.
- ◉ The HTTP server uses the http protocol to deliver the required document to the client.

FEATURES OF HTTP

- ◉ It is object oriented protocol that follows client server model of internet.
- ◉ It is a stateless protocol i.e. no continuous connection between client & server. Thus, it does not relate information about a client.
- ◉ A search & retrieve protocol.
- ◉ It uses port number 80.

HTTP METHODS

⦿ Methods

■ POST

- Used to transfer a file from the client to the server

■ GET

- requests URLs status header only
- used for conditional URL handling for performance enhancement schemes
 - retrieve URL only if not in local cache or date is more recent than cached copy

DIFFERENCE B/W HTTP & HTTPS

- ◉ If you visit a website or webpage, and look at the address in the web browser, it will likely begin with the following: **http://**. This means that the website is talking to your browser using the regular 'unsecure' language. In other words, it is *possible* for someone to "eavesdrop" on your computer's conversation with the website. If you fill out a form on the website, someone might see the information you send to that site.
- ◉ But if the web address begins with **https://**, that basically means your computer is talking to the website in a secure code that no one can eavesdrop on.
- ◉ Example: If a website *ever* asks you to enter your credit card information, you should *automatically* look to see if the web address begins with **https://**. If it *doesn't*, there's no way you're going to enter sensitive information like a credit card number!

ASSIGNMENT

- ◉ What do you mean by internet? Explain whether internet is a boon or a bane for a society.