Basic Concept of Web

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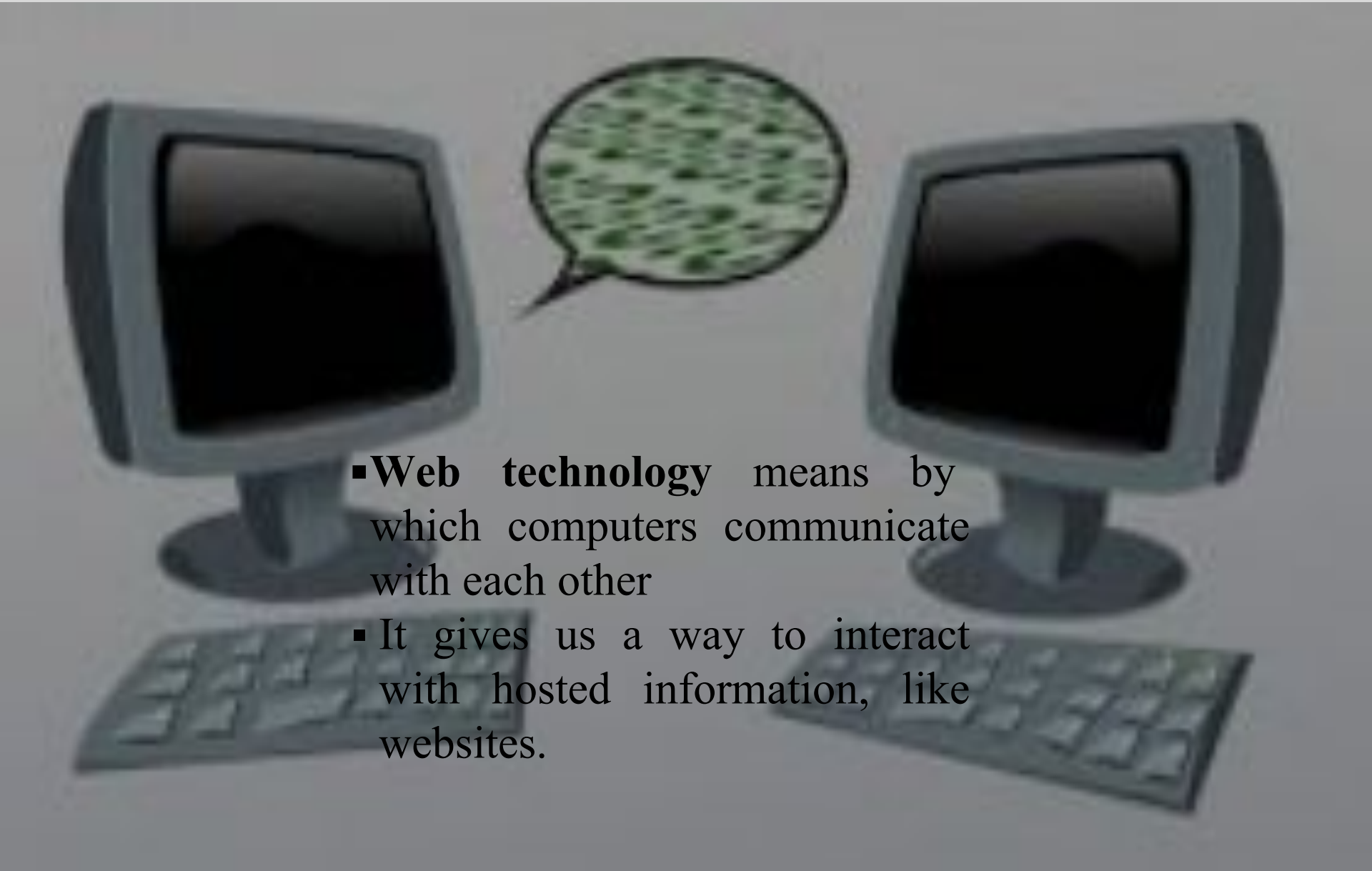
What is Web Technology?



- **Web technology** means by which computers communicate with each other
- It gives us a way to interact with hosted information, like websites.

Internet

- Internet is Network of Netwok
- Global system
- consist of million of public, private, academic, govt, business network of local to global scope
- Exchange the information with one another

Application of the Internet

- Send e-mail messages.
- upload or down load files between computers.
- Participate in discussion groups, such as mailing lists and newsgroups.
- Surfing the web.
- Electronic shopping
- Online banking
- Video and audio conferencing
- Education
- Cloud computing
- Search engine

- WWW stands for World Wide Web
- WWW was proposed by Timorthy Berners Lee in 1989 at CERN
- It is universe of network, accessible information
- Individual document pages on world wide web are called web pages and are acessed with browser
- It contains hypertext links, or highlighted keywords and images that lead to related information.
- WWW is way of exchanging Information
- Internet and Web is not same thing. Web uses internet to pass over the information

Web terminologies

- **Web (World Wide Web)** :consists of information organized into Web pages containing text and graphic images.
- **Web Page:** Any page that is hosted on Internet. It can be designed with HTML, XML, Javascript
- **Web site :**A collection of interlinked Web pages .It is accessed through URL (Uniform Resource Allocator). It is categorized according to their function

1 personal website

2 commercial website

3 Govt. websites

There are two types of websites

Static and Dynamic

Web terminologies

- **Home page :**The main page that all of the pages on a particular Web site are organized around and link back to is called the site's.
- **Web Development**: The process of creating, modifying web pages
- **Web browser:** A program that receives information from web e.g Google Chrome, Mozila etc

- **URL:** Global Address of web document on www. URL's are unique in nature. Developed by Berner Lee. There are twoparts in URL

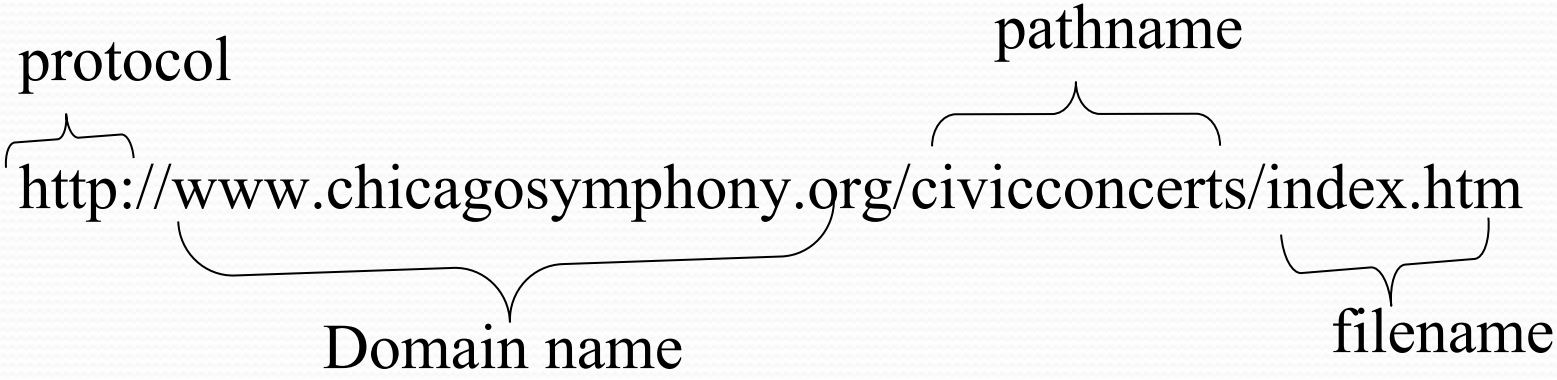
  1. Protocol
  2. Resource Name

  E.g. http:// www.google.com

Uniform Resource Locators

- The IP address and the domain name each identify a particular computer on the Internet.
- However, they do not indicate where a Web page's HTML document resides on that computer.
- To identify a Web pages exact location, Web browsers rely on Uniform Resource Locator (URL).
- URL is a four-part addressing scheme that tells the Web browser:
  - What transfer protocol to use for transporting the file
  - The domain name of the computer on which the file resides
  - The pathname of the folder or directory on the computer on which the file resides
  - The name of the file

Structure of a Uniform Resource Locators

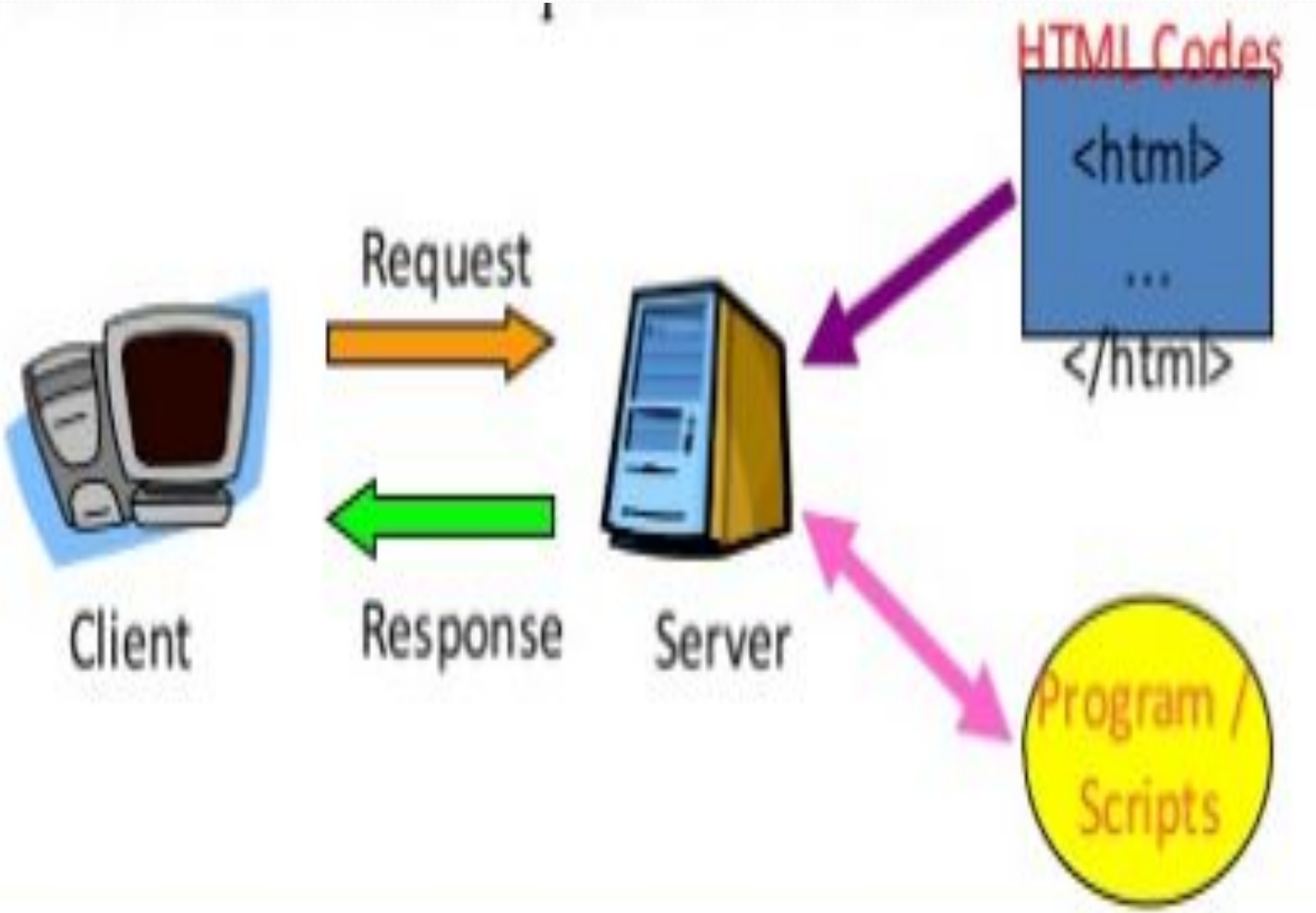


http => Hypertext Transfer Protocol

Architecture of the Web

- **Architecture of web consist of following components**
- **Web Client:** any computer on network that requests services from another computer on the network
- **Web servers:** It is software which maintain the web application. Server receives requests from client computers, process and send the output. It respond the client request and also accept client data. It runs on port 80
- Once you have your Internet connection, then you need special software called a browser to access the Web.
- A **Web browser** is the software to display HTML document

Architecture of the Web

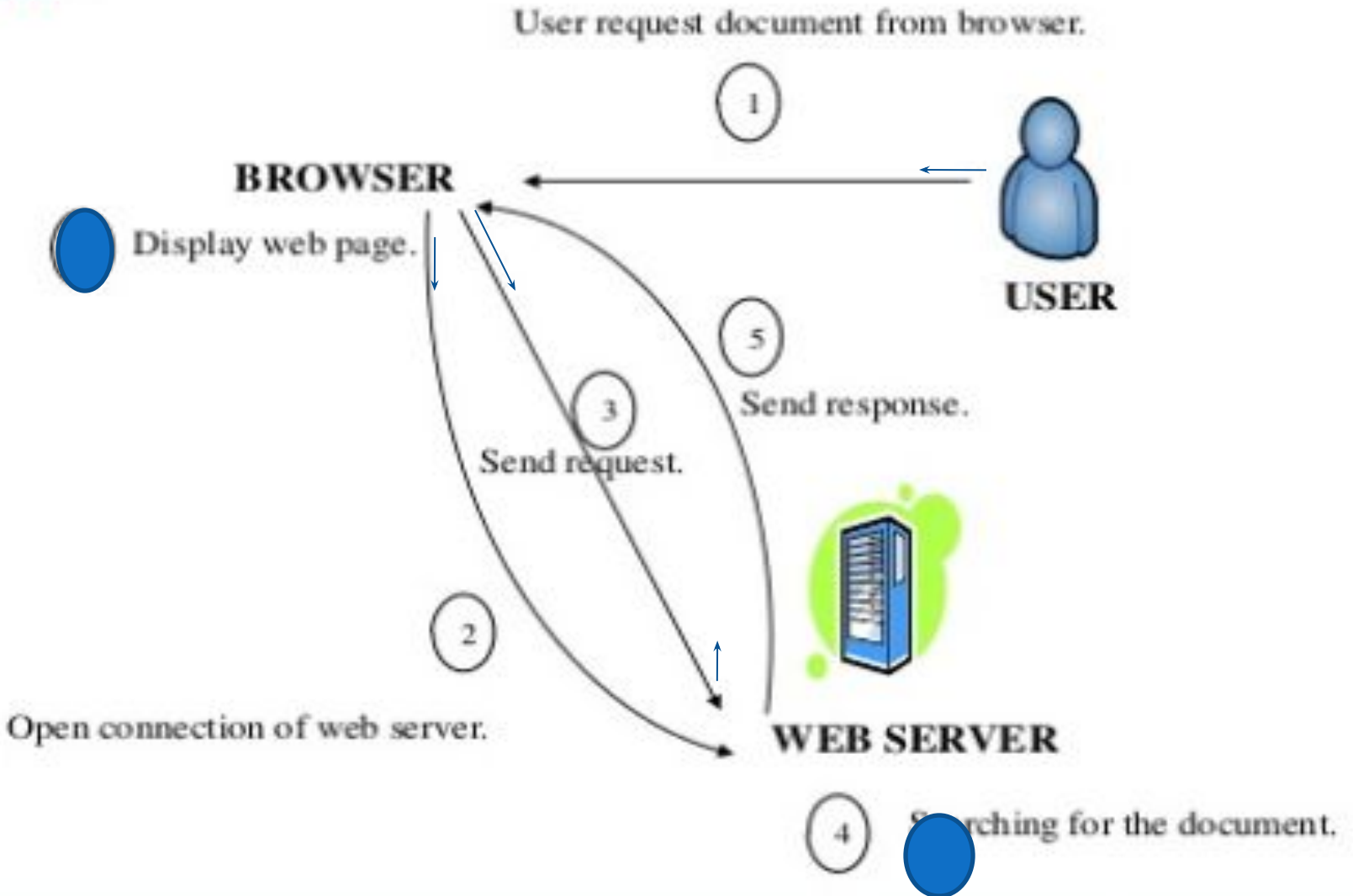


How to access the Web?

- Steps for WWW works on client / server approach

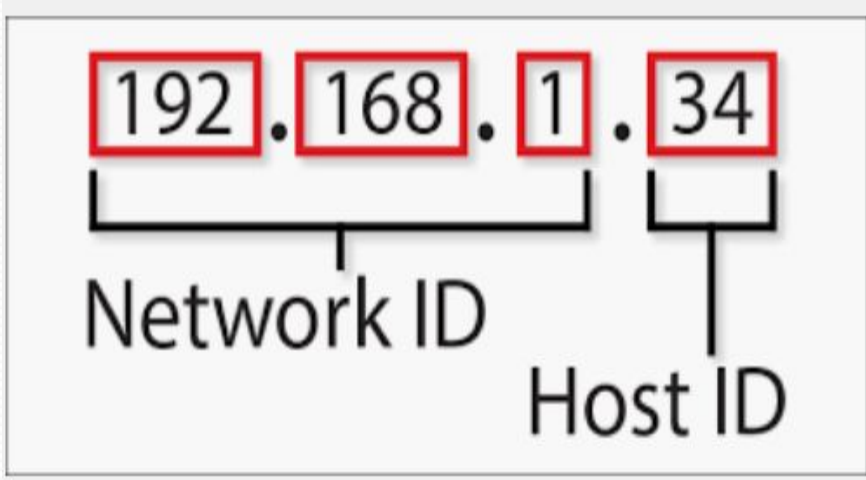
1. User enters the Url e.g http://www.google.com
2. of the web page in the address bar of web browser.
3. Then browser requests the Domain Name Server for IP address curresponding to www.google.com
4. After receiving the IP address browser sends the request for the web page to web server using HTTP protocol which specifies the way the browser and web server communicates

How to access the Web?



Addresses on the Web:IP Addressing

- Each computer on the internet does have a unique identification number, called an IP (Internet Protocol) address.
- The IP addressing system currently in use on the Internet uses a four-part number.
- Each part of the address is a number ranging from 0 to 255, and each part is separated from the previous part by period,
- For example, 106.29.242.17

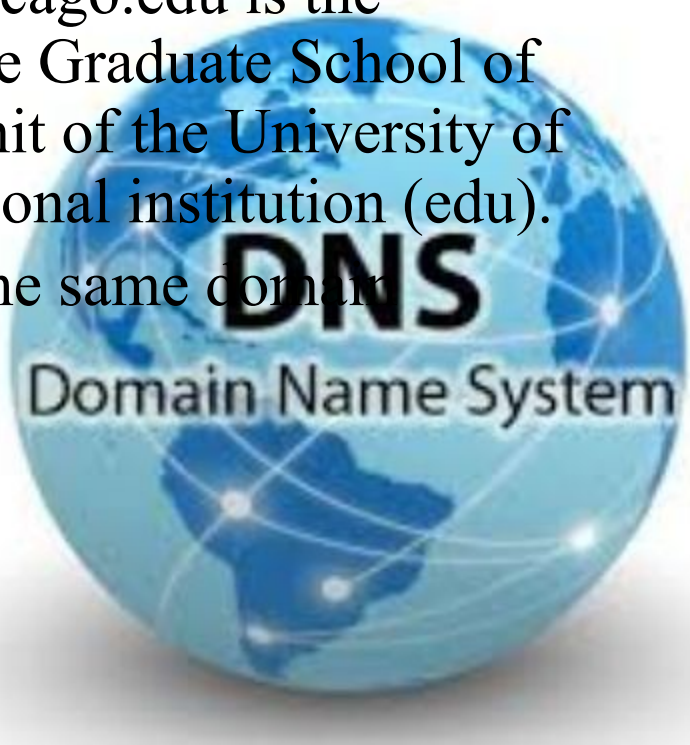


Domain Name Addressing

- Most web browsers do not use the IP address to locate Web sites and individual pages.
- They use domain name addressing.
- A **domain name** is a unique name associated with a specific IP address by a program that runs on an Internet host computer.
- This program, which coordinates the IP addresses and domain names for all computers attached to it, is called **DNS (Domain Name System) software**.
- The host computer that runs this software is called a **domain name server.**

Domain Name Addressing

- Domain names can include any number of parts separated by periods, however most domain names currently in use have only three or four parts.
- Domain names follow hierarchical model that you can follow from top to bottom if you read the name from the right to the left.
- For example, the domain name gsb.uchicago.edu is the computer connected to the Internet at the Graduate School of Business (gsb), which is an academic unit of the University of Chicago (uchicago), which is an educational institution (edu).
- No other computer on the Internet has the same domain name.



HTTP

The transfer protocol is the set of rules that the computers use to move files from one computer to another on the Internet

The most common transfer protocol used on the Internet is the Hypertext Transfer Protocol (HTTP).

Two other protocols that you can use on the Internet are the File Transfer Protocol (FTP) and the Telnet Protocol