Web Design using Dreamweaver

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Fundamentals of Web and Dreamweaver

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Webpage:

A webpage is an electronic document written in HTML (Hypertext Markup Language) and accessible via the internet using a web browser.

- **Structure:**
  Typically includes:
  - **Textual Content**
  - **Hyperlinks** (connecting to other pages or resources)
  - **Multimedia Elements** (images, videos, audio)
  - **Interactive Elements** (forms, buttons)

Accessing Webpages:

Each webpage is accessed through a unique URL (Uniform Resource Locator).

Introdution to Web Design

Webpage, as the name suggests, is a document or a single page of the website.

It is displayed in a web browser and makeup the WWW.

It is part of website that includes information and content and is displayed on the browser to user or visitor.

Process of Accessing a Webpage:

HTTP: A protocol used for transferring data between a web server and a web client (browser).

HTML: A markup language used to create and structure the content of web pages.

Request and Response: The browser sends an HTTP request to a server; the server responds with an HTML document.

Data Transfer: HTTP transmits HTML documents (and other resources) from the server to the browser.

Rendering: The browser uses HTML to display and structure the content received via HTTP.

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Introdution to Web Design

Website is a collection of webpages displayed on the web with a client-like browser.

It contains more than one web webpages that contain information.

It is a combination of webpages created using HTML and CSS.

World Wide Web (Graphical interface to access hypertext documents)

- Tim Berners-Lee at European lab proposed the Web in 1989
- 1989 – WWW concept
- 1990 – first browser/editor program
- It was called WorldWideWeb (no spaces) and was later renamed Nexus (connection or link between different elements).

WWW - World Wide Web:

WWW which is also called the "web", is a system of interlinked hypertext documents and multimedia content that is accessed via the Internet.

Internet provides the technical foundation and connectivity for the World Wide Web to exist and function.

Introduction to Web Design

HTTP

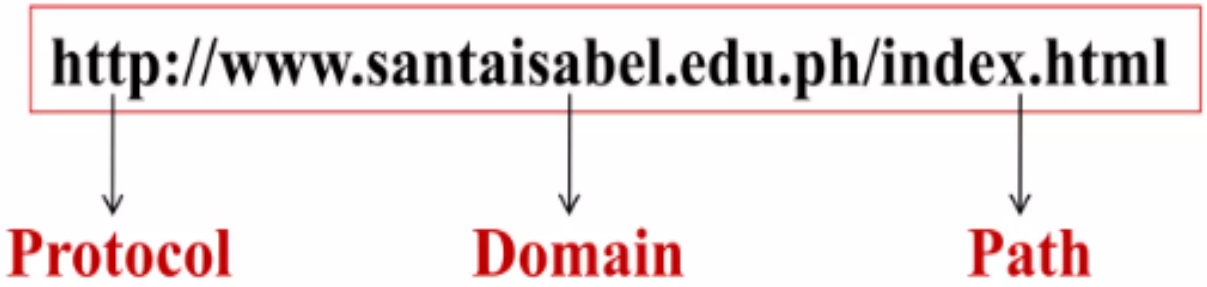
- A set of communication rules used to transfer data on the Internet
- Data communication protocol

HTML

- Standardized *markup language* for creating web pages
- Developed by *W3C*
- Uses *hyperlinks*

HTTP is the protocol used to transfer HTML documents over the Internet, and HTML provides the content and structure that HTTP delivers to web browsers.

- URL – tells where the file is located in the Internet



URL (Uniform Resource Locator) is the address used to access resources on the Internet.

It provides a way to locate and retrieve web pages, files, and other resources.

- Both the sender and receiver should follow the same protocols in order to communicate the data.

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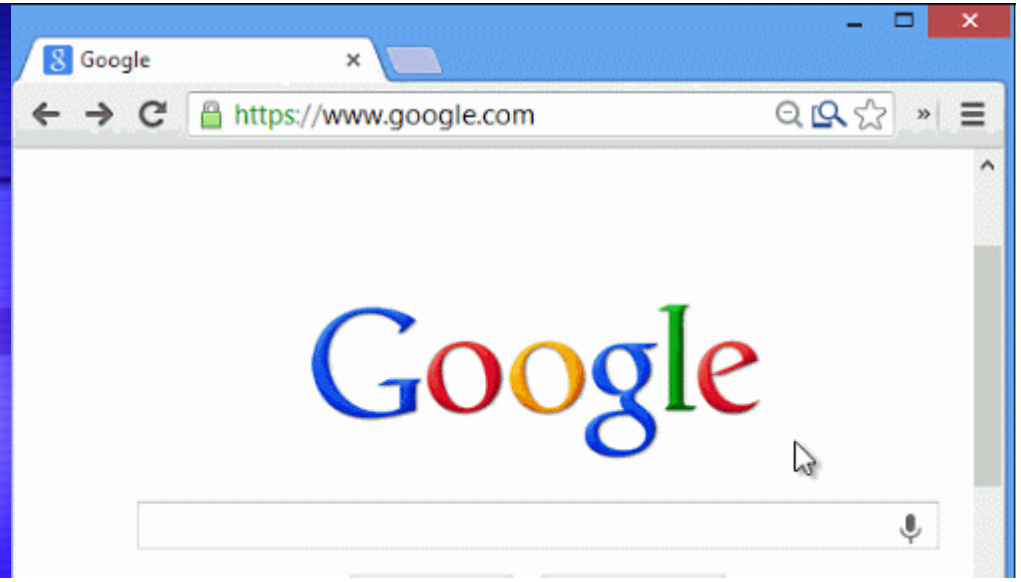
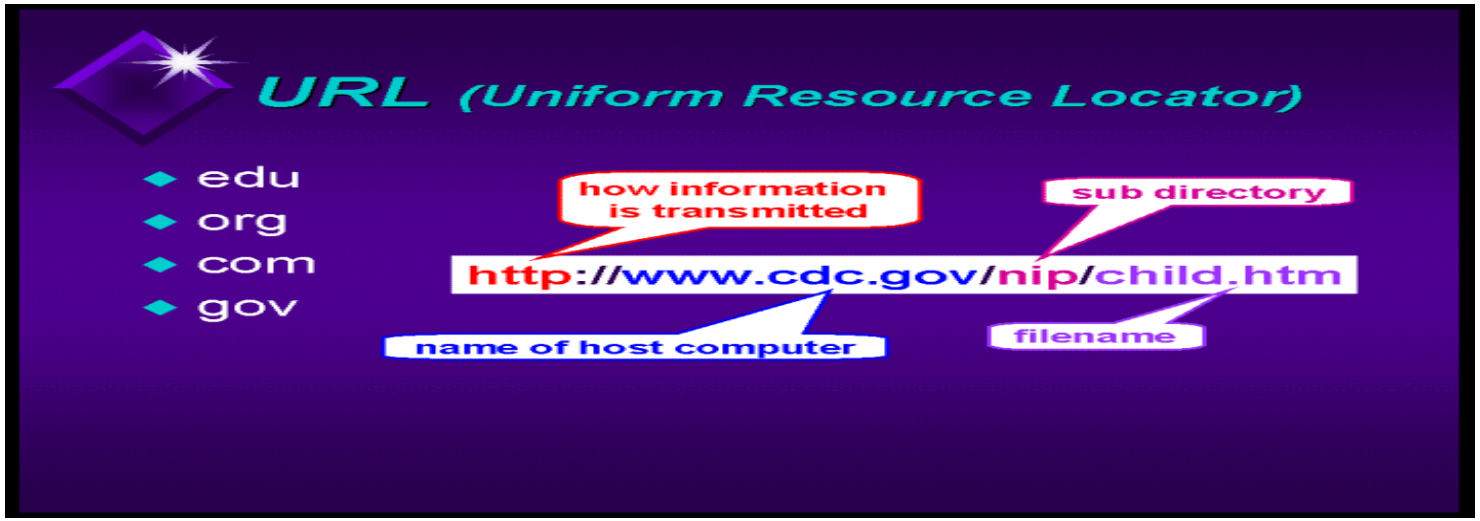
Introduction to Web Design





Domain Name Server (DNS):

The **Domain Name System** (**DNS**) is used to resolve human-readable hostnames like **www.google.com** into machine-readable IP addresses like **8.8.8.8** . **DNS** also provides other information about domain names, such as mail services

that computers use to identify each other on the network.

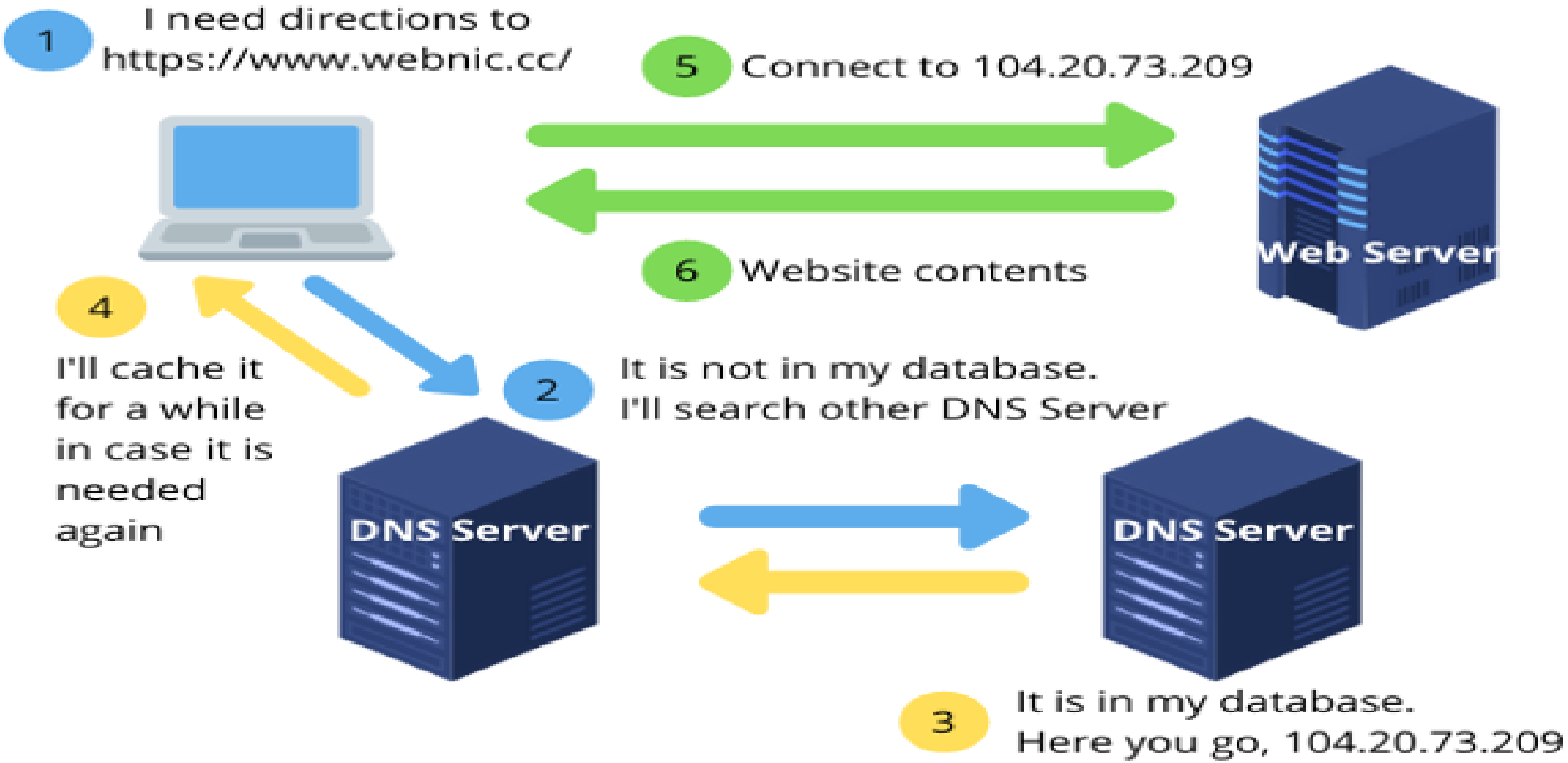
DNS servers look up the corresponding IP address so your computer can connect to the correct server and load the website.

Why DNS is important?

- DNS is like a phone book for the Internet. If we know a person's name but don't know their telephone number, we can simply look it up in a phone book. DNS provides this same service to the Internet.

- When you visit **http://www.google.com** in a browser, your computer uses DNS to retrieve the website's IP address of **8.8.8.8**. Without DNS, you would only be able to visit the website (or any website) by visiting its IP address directly, such as **8.8.8.8**.

Working of DNS:



Working steps of DNS:

User Request: When enter a URL into browser, a DNS query is initiated to find the IP address of the domain.

DNS Server: If the server doesn't have the IP address, it will perform a recursive search.
This involves querying multiple DNS servers until it finds the IP address or determines that the domain does not exist.

Response: The DNS Server then sends the IP address back to your browser,

allowing it to connect to the appropriate web server and retrieve the website.

IP (Internet Protocol) **Address:**

IP address is a unique address that is used to identify computers or nodes on the internet.
is a unique numerical label assigned to each device connected to a network that uses the Internet Protocol for communication.

This address is just a string of numbers written in a certain format. It is expressed in a set of numbers. example 192.155.12.1.

Here each number in the set is from 0 to 255 range. Or we can say that a full IP address ranges from 0.0.0.0 to 255.255.255.255.

IPv4 (Internet Protocol version 4)

- **Format**: four octets separated by periods (e.g., 192.0.2.1).
- **Address Space**: IPv4 addresses are 32-bit numbers
- **Example**: 192.168.1.1
- the 32 bits are grouped into 4 sets of 8 bits each. Each of these sets is called an octet.

IPv6 (Internet Protocol version 6)

- **Format**: eight groups of four hexadecimal digits separated by colons

Pv6 addresses are 128-bit numbers.

8 blocks of 16 bits each.

Example: 2001:0db8:85a3:0000:0000:8a2e:0370:7334

FTP :

File transfer protocol (FTP) is an Internet tool provided by TCP/IP.

It helps to transfer files from one computer to another by providing access to directories or folders on remote computers and allows software, data, text file to be transferred between different kinds of computers.

The end-user in the connection is known as localhost and

the server which provides data is known as the remote host.

FTP can transfer ASCII, EBCDIC, or image files.

HTML5 - New Attribute Syntax

FTP :

The ASCII is the default file share format.

EBCDIC (Extended Binary Coded Decimal Interchange Code) character encoding.

When transferring files in EBCDIC mode, the FTP server and client convert between ASCII and EBCDIC encodings as necessary.

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