

www [World Wide Web]

- 1) www stand for world wide web.
- 2) It is a way of exchanging information b/w computers on the internet.
- 3) It is a way accessing information all the madden of the internet.
- 4) It is an information sharing moddle that is on top of the internet.
- 5) www is the collection of all the information [text, images, audio, video]
- 6) Most of this information is accessed through web -site.
- 7) www uses http protocol to access the information from various server.

Evolution of www

- 1) The invention of www can be credited to sir Tim Berners lee. During this work european organisation for nucleus research in 1989. He had develop basis idea of www.

Web 1.0 [1990-2000]

- 1.) It remains limited to static websites.
- 2.) Mostly publishing
- 3.) Limited for reading only
- 4.) Closed access
- 5.) Corporation mostly
- 6.) HTTP, HTML

Web 2.0 [2000-2010]

- 1.) Publishing as well as participation
- 2.) Social media
- 3.) Blogging
- 4.) Wikis
- 5.) Keyword search
- 6.) Ajax, Jquery, XML

Web 3.0 [2010 - Onwards]

- 1.) Mostly drag and drop
- 2.) Mobile oriented
- 3.) Micro blogging
- 4.) Cloud computing

- 5) Grid computing
- 6) Semantic search

Different between www and Internet

Internet	WWW
1) Internet is a global network of networks	Its stand for world wide web
2) Internet is a mean of connecting a computer to any other computer any where in the world.	It is a collection of information which is accessed by via.
3) Nature of internet is hardware.	Nature of www is software.
4) Internet consists of computer, routers, cables, modem, firewall server etc.	WWW consists of information text like images, audio, video.
5) Internet works on the basis of internet protocol	WWW uses HTTP

Internet	WWW
6) Internet is super set of WWW.	WWW is sub set of internet
7) The first version of internet uses Arpanet.	In the begning it was none as NSFNET
8) Computing devices are identified by IP address	Information pieces are identified by URL
9) Internet is originated in 1960	It was invented in 1989

- HTTP [Hyper Text Transfer Protocol]

- 1) HTTP is an application protocol that allow users to transfer data on WWW
- 2) It is a set of rules for transferring file such as text file, images, sound, video and other files over the internet.

- 3) It gives users a way to interact with web resources such as html file
- 4) As soon as user open their browser they are directly using http

• Working of HTTP

- 1) Using the http protocol resources are exchanged b/w client device and server over the internet.
- 2) Client and server connected by exchanging messages
- 3) The message send, by client [web browser] are called request and the messages sent by server as an answer are called response
- 4) Client devices send request to server for the resources needed to load a web page and this server sent response that to the client to full fill the request.

• Features of http

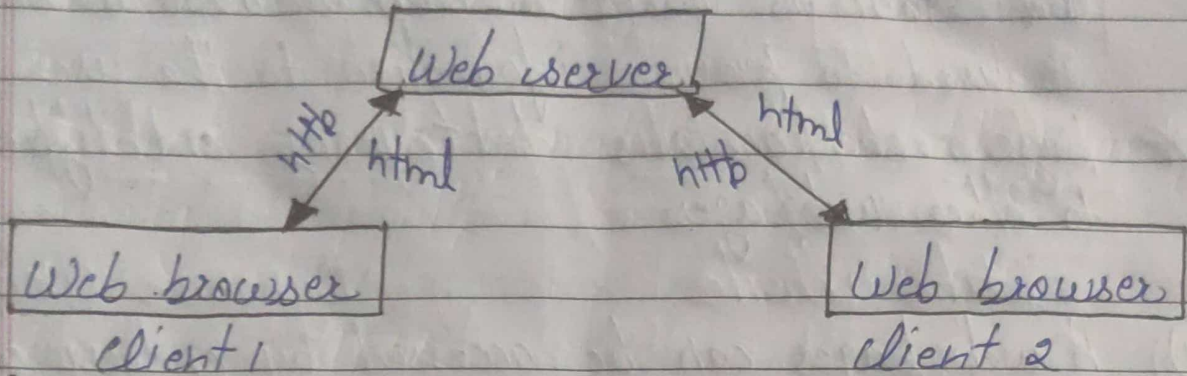
- 1) Connection less protocol
- 2) Media independent
- 3) Stateless

Web server :-

web server stores and deliver the contents for a website such as text image, audio or video. A web server is the software and hardware that uses the http, protocols to respond to client request.

- 1) The main job of a web server is to display website content.
- 2) Web server hardware is connected to the internet and allows data to be exchange with other connected devices.
- 3) Web server software controls how a user access hosted files.
- 4) Web server process is an example of client server model.
- 5) The most common types of client program is a web browser.

Working of a web server :-



- 1) Web browser request the data from the web server
- 2) The client program request the web servers for some data.
- 3) web server accepts the request and process it response the web browser by providing request data. A web server host.

Example of web server

- 1) Apache web server
- 2) Microsoft Internet information service (IIS)
- 3) Sun Java system web server
- 4) Nginx lighttpd

* web page

Web page is a document that is written in HTML and that is viewed in web browser. A web page is used to provide information to the user. A web page may contain text, image and hyperlinks to other web pages.

- 1) A web page can be accessed by entering a URL address into a browser address bar.

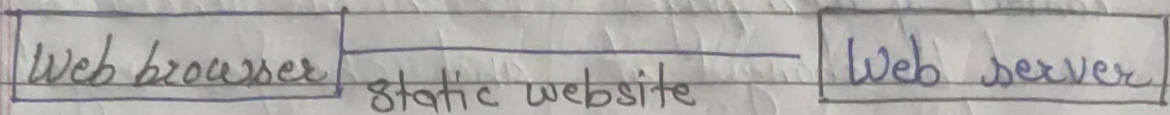
Web site :-

- 1) It is a collection of related web pages that may contain text, images, audio, and video.
- 2) The first page of a web page is called the home page.

* Static web site

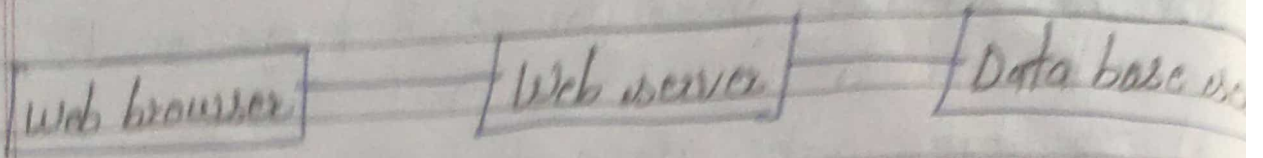
- 1) Static web site is the basic type of web site that is easy to create.
- 2) Static website elements are fixed.
- 3) A static web site content never changes.
- 4) A static web site does not require web programming or database design.

- 5) The codes are fixed for each page so the information in the page does not change.
- 6) In static web site web pages are returned which are pre built source code file using simple language html, CSS, Javascript.
- 7) There are no processing of the content on the sources.



* Dynamic web site

- 1) In dynamic web site web pages are return by the webserver which are passed during run time.
- 2) Dynamic web site is a collection of dynamic web pages how contents changes dynamical.
- 3) In dynamic web site web page are built during run time with the help of server side scripting languages like PHP, Node.js
- 4) Dynamic web site uses client side scripting and server side scripting to generate dynamic contents.



* Difference b/w static and dynamic website.

Static Website	Dynamic Website
1) Content of web page cannot be changed at run time.	Content is generated quickly and changes regularly.
2) No interaction with data base.	Content of web page can be changed.
3) Cheaper development cost.	Most development cost.
4) It sends the same response for every request.	It may generate different HTML for each of request.
5) HTML, CSS, Javascript is used for development website.	HTML, CSS, Java script and server side scripting language PHP, JSP, ASP, .Net, Node.js.

Static Website

6) Same content is delivered every time the page is loaded.

7) No user interactivity

8) No features of content management.

Dynamic Website

Content may change every time the page is loaded.

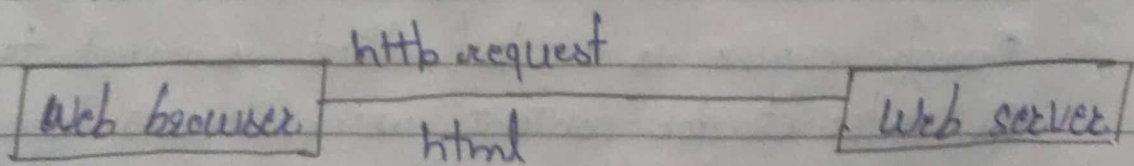
User interactivity

Features of content management system [CMS]

Web browser :-

A web browser is a type of software that allows you to find and visit web site on internet.

A web browser is an application software for accessing WWW. When a user type URL into the browser address bar. The web browser fetch the contents from the web server and display on the user devices.



The information is transpate using http protocol which, define how, text, image and video are transported on the web.

Web browser Example :-

- 1) Google :- It is the most popular web browser with 70% of global market share.
- 2) Microsoft edge :- It is microsoft new web browser.
- 3) Mozilla firefox :- It is the most popular web browser application in US.
- 4) Safari :- It is the default web browser for all apple devices.

Search engine :-

Search engine is a tool that is used to search the internet for content using keywords.

It is a software program that helps people to find the information using keyword.

When a user enters the query into a search engine. A search engine result page is returned.

A search engine is a service that allows internet user to search for content via WWW.

Example - Google, Bing, Duck Duck go.

Working of search engine -

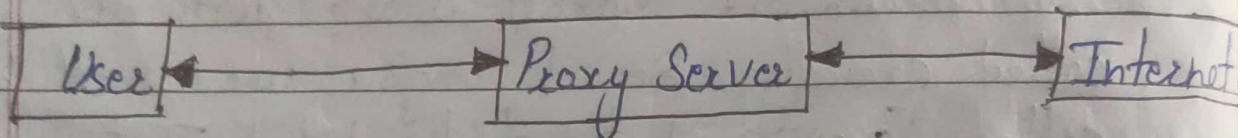
- 1) Crawling - The actual discovery of new web page on the internet starts with the process called crawling. Search engine use small program called [crawler, bots, spider bots]. That follows links from known pages to new pages.
- 2) Indexing - The search engine will try to understand and categorize the contents on a web page. The web page through keyboard. After crawling it is time for index. The process of validating and storing content from the web page in the search engine database called index.
- 3) Ranking - In the last step include picking the best result and creating a list of pages that will appear of result page.

Proxy Server :-

Proxy server works as a gateway b/w user and internet.

The proxy server is a computer on the internet that accepts the incoming request from the client and forwards the request to the server.

It separates the client system and web server from the global network.



Working Proxy Server :-

A proxy server is a machine that translates traffic b/w networks. It is a server that separates users from the internet. A proxy server has its own address.

- 1) When a user sends a web request to proxy server.
- 2) The proxy server then makes your web request on your behalf.
- 3) It collects the response from the web server and forwards the web page data to the user.

* Proxy server following function :-

- 1) Firewall
- 2) Network data filtering
- 3) Network connection sharing
- 4) Data caching
- 5) Proxy server hide your IP address
- 6) Using of Proxy server
- 7) Monitoring and filtering network traffic
- 8) Content filter
- 9) Security
- 10) Logging

Unit-2

HTML Tag

<HTML> :- <HTML> it represent the root of the document it is the container for all HTML elements.

Example :- <Html>

```
<html>
  <head>
    <title> web pages </title>
  </head>
  <body>
    <p> some text here </p>
  </body>
</html>
```

<Head> elements :- It is a container for meta data and is b/w <html> and <body>. Meta data define document title, character set, style and other information.

i) <title> :- Title elements defined the title of the documents. Title must be text only and it is shown in the browser, title bar or in the pages tab.

2) <style> :- The style of elements is used to define style information for a html page.

3) <meta> :- <Meta> defines meta data about about html document.

<Meta> always go inside <head> elements and are used to define character set, keywords, authorised and view port setting

Example :- `<meta character set = "Utf. 8">`
`<meta name = "author" content = "A-Shubhan">`

1) Meta data is used by browser and search engine.

2) Meta data will not be displayed on the page.

4) <Link> :- The link element defines the relationship between the current document and external document. This tag is used to link to external style sheet.

Example :- `<link rel = "stylesheet" href = "file.css">`

rel attribute :- It specified the relationship b/w the current document and external documents.

Href :- It specified the location of external file.

The link elements is a empty elements.

<body> ÷ The <body> defines the documents body. The body element contains all the contents of html document. such as heading, paragraph, image, tables, list etc.

Body elements

<Heading>

HTML <h1> to <h6> are used to define html heading

<h1> ÷ <h1> define it is most popular heading and <h6> define the least impoeting heading

example ÷ <body>

<h1> This is a heading </h1>

<h2> heading 2 </h2>

<h3> Heading 3 </h3>

<h4> heading 4 </h4>

<h5> heading 5 </h5>

<hr> ÷ <hr> stands for horizontal rule. It is used to insert a horizontal rule in a page

This tag is used defined thematic change in the content. It is also an empty tag.

Semantic Elements in HTML

A semantic elements clearly ~~disc~~ describe its meaning to both browser and the developer.

Example of non semantic elements are - `<div>` and `<span>`

Example of semantic elements are - `<table>`, `<form>`, `<article>`, `<header>`, `<footer>`, `<section>`, `<main>`

Header	
Na	
Section	a side
article	
Footer	

① <Section> elements :- This section element define in a document.

A section is a thematic grouping of content typically with a heading. A home page can be split in a section for Introduction, content, and contact information.

② <Article> elements :- It specify independent, itself contain content. An article have its own meaning and it should be possible to read it independently from the rest of web site.

Example of where article elements used Blog post, newspaper article, Forum post, User comment

<article>

<h1> google chrome </h1>

<p> google chrome is a web browser developed by google </p>

<h1> Mozilla firefox </h1>

<p> Firefox is also a web browser </p>

</article>

It is required to using heading tag with

<h1> — <h6> with article and <section>

tag

③ <Header> element :- Header element specify a header for a document or a section.

Header element should be use has a container for introductive content.

It contain logo, navigation link.

You can have many header elements in one document

`<header>`

`<h1> google chrome </h1>`

`</header>`

④ <Footer> element :- Footer elements defines a footer for a documents or a web page

A Footer tipikly change author of the content copy write information, contact information etc.

`<footer>`

`<p> @ copyright </p>`

`</footer>`

⑤ <aside> :- It is use to identife the content that is related to the primary content of a web page

This elements defines a section with additional information or highlighting parts of the information that can be interesting to user.

```
<body>
  <aside>
    <h1> Java </h1>
    <p> Java is a programming language </p>
  </aside>
</body>
```

The content in this ~~or~~ elements should be related to the surrounding content

<nav> ÷ nav element define a set of navigation links

```
<nav>
  <a href = "/html"> HTML </a>
  <a href = "/css"> CSS </a>
  <a href = "Span.html"> Span </a>
</nav>
```

<Figure> and <figcaption> ÷ <Figure> elements is used to handle the group of diagram, photo etc.

This tag is used to markup a photo in a document

<figcaption> ÷ This is used to define a caption

for a photo this is used to fig caption for a photo as image.

Image element define the image can figcaption define the caption.

<details> ÷ This tag detail specified additional detail that user can open and close on demand.

This tage is used to create a visit wiget that the user can open and close by default wiget is closed when open it expends and display the content within.

<details>

<summary>

click to see details

</summary>

 detail content

</details>

<summary> ÷ This tag define a visible heading for the detail element. The heading can be click to view or head a detail.

<Main> ÷ This tag specify the main contain document

The content inside the main element should be unique to the document. It should not contain any content that is repeated across document.

```
<main>
  <h1>most input web browser </h1>
  <p>Google chrome, firefox </p>
</article>
```

There must not be more than one main element in a document.

<Mark> :- The <mark> define the text that should be highlighted.

<p> do not forget to bring <mark> practice files </mark> today </p>

<Time> :- <Time> define a specific time.

The date time attribute of this element is used to translate the time into a machine-readable format.

<p> College open at <time> 9:00 AM </time> </p>

HTML Attributes :-

HTML Attributes provide additional information about HTML elements. Or HTML elements had attributes. Attributes come in name/value/pair.

<href> :- A tag defines a hyper link whose attribute specifies the URL of the page the link goes to.

<Access Key> :- This attribute specifies a shortcut key to activate or focus an element. Its value must be a single character.

<Style> :- Style attributes are used to add style to an element such as colour, size, font etc.

class :- A class attribute specifies a one or more class names for an element.

ID :- It is used to specify a unique id for an element. The value of id attributes must be unique b/w HTML documents.

RANKA
DATE / /
PAGE

tabindex :- The tab index specify the tag order of an elements.

`
google `

title :- A title attribute specify extra information about an element.

data-* :- This attribute is used to make custom data.

This is used to store custom data private to the page.

HTML Coding Conventions :-

1) Always declare document type as first line in your document.

`<!DOCTYPE html>`

2) Use lower case element name.

3) Close all html element.

4) Use lower case attributes name.

5) Always ~~use~~ quote attribute value.

6) Always specify alt, width, height for images.

- 7) Do not add blank line, spaces or indentation without a reason.
- 8) Never skip the title element.

Comments in HTML :- HTML comments are not displayed in the browser. You can add comments like this :-

<!-- write comment here --> like this :-