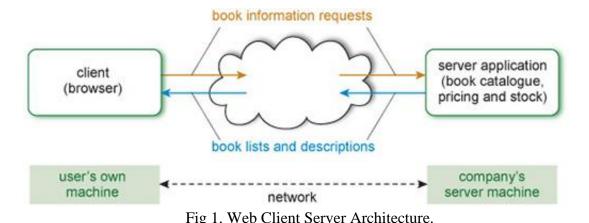**World Wide Web**

World Wide Web (WWW), byname the Web, the leading information retrieval service of the Internet (the worldwide computer network). The Web gives users access to a vast array of documents that are connected to each other by means of hypertext or hypermedia links—i.e., hyperlinks, electronic connections that link related pieces of information in order to allow a user easy access to them. Hypertext allows the user to select a word or phrase from text and thereby access other documents that contain additional information pertaining to that word or phrase. Hypermedia documents feature links to images, sounds, animations, and movies. The Web operates within the Internet's basic client-server format; servers are computer programs that store and transmit documents to other computers on the network when asked to, while clients are programs that request documents from a server as the user asks for them. Browser software allows users to view the retrieved documents.

A hypertext document with its corresponding text and hyperlinks is written in HyperText Markup Language (HTML) and is assigned an online address called a Uniform Resource Locator (URL). The development of the World Wide Web was begun in 1989 by Tim Berners-Lee and his colleagues at CERN, an international scientific organization based in Geneva, Switzerland. They created a protocol, HyperText Transfer Protocol (HTTP), which standardized communication between servers and clients. Their text-based Web browser was made available for general release in January 1992.

Client–Server Architecture:

Fig 1. Web Client Server Architecture.

A client–server architecture (Figure 1) divides an application into two parts, 'client' and 'server'. Such an application is implemented on a computer network, which connects the client to the server. The server part of that architecture provides the central functionality: i.e., any number of clients can connect to the server and request that it performs a task. The server accepts these requests, performs the required task and returns any results to the client, as appropriate.

Consider an online bookstore as an example. The application allows a user to search and look at the details of a large range of books, and then to order a book. The application software provides an interface and a means of selecting or finding a book's details, as well as displaying book information and allowing a book order to be generated.

DOCTYPE:

A Document Type Declaration, or DOCTYPE for short, is an instruction to the web browser about the version of markup language in which a web page is written. Syntax as follows:

<!DOCTYPE html>

What is HTML?

HTML is the language in which most websites are written. HTML is used to create pages and make them functional. Hypertext means machine-readable text and Markup means to structure it in a specific format.

Where to write HTML script?

Any ASCII editors like notepad, notepad++, etc.

How to save HTML Script.

A HTML file can be saved as .html extension.

The History of HTML

HTML was first created by Tim Berners-Lee, Robert Cailliau, and others starting in 1989. It stands for Hyper Text Markup Language.

Hypertext means that the document contains links that allow the reader to jump to other places in the document or to another document altogether. The latest version is known as HTML5. A Markup Language is a way that computers speak to each other to control how text is processed and presented. To do this HTML uses two things: tags and attributes.

What Are HTML Tags?

Tags are used to mark up the start of an HTML element and they are usually enclosed in angle brackets. An example of a tag is: <body>.

Most tags must be opened <body> and closed </body> in order to function.

What are HTML Attributes?

Attributes contain additional pieces of information. Attributes take the form of an opening tag and additional info is placed inside. An example of an attribute is:

<body bgcolor = #ff0000> // here bgcolor is attribute of <body>

Golden Rules To Remember

The vast majority of tags must be opened (<tag>) and closed (</tag>) with the element information such as a title or text resting between the tags.

When using multiple tags, the tags must be closed in the order in which they were opened. For example:

<i>Hello World </i>

Here <b> is bold tag that makes text as bold and <i>used for italic style.

Basic Construction of an HTML Page

These tags should be placed underneath each other at the top of every HTML page that you create.

<!DOCTYPE html> This tag specifies the language you will write on the page. In this case, the language is HTML 5.

<html> This tag signals that from here on we are going to write in HTML code.

<mark><head></mark> This is where all the metadata for the page goes — stuff mostly meant for search engines and other computer programs.

<mark><body></mark> This is where the content of the page goes.

Further Tags

Inside the <mark><head></mark> tag, there is one tag that is always included: <title>, but there are others that are just as important:

<mark><title></mark>

This is where we insert the page name as it will appear at the top of the browser window or tab.

<mark><meta></mark>

This is where information about the document is stored: character encoding, name (page context), description.

Let's try out a basic <mark><head></mark> section:

<mark><head></mark>

<mark><title>My First Webpage</title></mark>

<mark><meta charset="UTF-8"></mark>

<mark><meta name="author" content="Online education is now very helpful during this lockdown"></mark>

<mark></head></mark>

Next, we will make <mark><body></mark> tag.

The HTML <mark><body></mark> is where we add the content which is designed for viewing by human eyes.

This includes text, images, tables, forms and everything else that we see on the internet each day.

HTML Comment Tags

You can add comments to your HTML source by using the following syntax:

<mark><!-- Write your comments here --></mark>

A simple html Script as given below:

```
1   <!DOCTYPE HTML>
2   <html>
3   <head>
4   <title>My first Webpage</title>
5   </head>
6   <body background="flower.jpeg">
7   <!--color code: RGB (Red Green Blue)
8   min: 0; max: f
9   pure red:#ff0000
10  pure Green:#00ff00
11  pure Blue: #0000ff
12  ffffff : color name?? white
13  000000 : Black
14  #98f038
15  -->
16  <center>Hello World</center>
17  </body>
18  </html>
19
```

A snapshot from online class.

Note: Save the above code as filename.html you can see "Hello World" will print at top center of your screen. If you don't want print at center omit <center tag. In that case it will print at top left corner. The default text style is Times New Roman and Default font size is 12.

Other Key Elements (Slectives)

Element	Meaning	Purpose
<b>	Bold	Highlight important information
<strong>	Strong	Similarly to bold, to highlight key text

Element	Meaning	Purpose
\<i>	Italic	To denote text
\<em>	Emphasised Text	Usually used as image captions
\<mark>	Marked Text	Highlight the background of the text
\<small>	Small Text	To shrink the text
\<strike>	Striked Out Text	To place a horizontal line across the text
\<u>	Underlined Text	Used for links or text highlights
\<ins>	Inserted Text	Displayed with an underline to show an inserted text
\<sub>	Subscript Text	Typographical stylistic choice
\<sup>	Superscript Text	Another typographical presentation style
\<h1> to \<h6>	Heading	Use give heading
\<p>	Paragraph	Used for paragraph
\<font>	Font properties	Used for change font style, size, color etc

Element	Meaning	Purpose
\<img\>	Image	To import image from local machine to web
\<file\>	File upload	To upload file (any file) from local machine to web
\<ul\>	Unordered list	To create unordered list
\<ol\>	Ordered list	To create ordered list
\<li\>	List index	Used for list indexing
\<a\>	Anchor	Used to create hyperlink

Online Resources:

1. https://html.com/
2. https://www.w3schools.com/
3. https://www.britannica.com/
4. https://www.open.edu/