

Introduction to Web and HTML

Introduction to Web

What is the Internet?

The Internet is a network of computers all over the world. All the computers in the Internet can communicate with each other. Internet included Web, Email, Chat, File Transfer, Telnet, Newsgroup & etc. All the computers use a communication standard called HTTP, FTP, SMTP, POP3 & etc.

How does the Web work?

Web information is stored in documents called web pages. These files stored on computers called web servers. Computers reading the web pages are called web clients. Web clients view the pages with a program called a web browser. Popular browsers are Internet Explorer, Netscape Navigator and Mozilla Firefox.

How does the browser fetch the pages?

A browser fetches a web page from a server by a request. A request is a standard HTTP request containing a page address. A page address looks like this: <http://www.nselva.com>

How does the browser display the pages?

All web pages contain instructions for display. The browser displays the page by reading these instructions. The most common display instructions are called HTML tags. HTML tags look like this `Welcome to Jaffna`

How to create your own web site?

1. Domain Name Registration (.com, .org, .net, .lk, .edu, ...)
2. Web Hosting
3. Web Design and Development
4. Upload files to web server

Step 1 - Domain Name Registration

A domain name is the web address people will use to find your web site. Some examples are nselva.com, slt.lk, uoctamil.com, ucsc.cmb.ac.lk, cse.lk, idm.edu, hindu.org & etc. It is always best to choose a domain name which is either your company name or a similar memorable word, e.g. uthayan.com (Uthayan news paper web site). It is always good to choose a short and memorable domain name rather than a longer and more complicated domain name.

You can have as many domain names. (.com, .org, .net, .lk, .edu, .in, .ca, &)

Check availability domain name: www.whois.sc, www.whois-search.com & www.register.com

Step 2 - Web Hosting

Choose a web hosting service that meets your web site design requirements. Web host comparisons, Windows or Linux server, ASP or PHP or JSP support?

In order for people to see your website it has to be stored or 'hosted' on a computer that's connected to the Internet 24 hours a day. There are companies that specialize in this - they have massive computers with huge hard disk capacity, high speed Processor, high capacity memory that are permanently connected to the Internet. You can either option for free hosting that is usually supported with banners and pop ups, or may option to get paid web hosting, which gives you complete control over your site contents.

How to choose a Web hosting place?

- Reliability and speed of access
- Data Transfer (Traffic/ Bandwidth)
- Disk space
- Technical support
- ASP/ PHP/ JSP/ Perl support

After get space they will give to you FTP address, FTP user name & FTP password.

Domain servers in listed order:

ns1.mcc-sys.com 209.34.110.3

ns2.mcc-sys.com 209.34.110.4

Step 3 - Web Design and Development

Web Design: What will your web site look like and what features will it contain? Write it down on paper using a stepwise approach:

- Features List
- Layout & Navigation
- Contents
- Artistic Preferences - Proper use of graphic images, colors, web site fonts.

Web Development: Build the web pages. Expert guides to coding, testing, validating, uploading, and performance concerns.

Web Site Promotion & Maintenance: Get your web site indexed. Search engine promotion and submission strategies. Proper keyword selection. Search engine ranking and web site optimization rules. Ongoing web site promotion, traffic analysis, web site performance, links testing, popularity testing, host performance.

What are sub domains? Consider sub domains as an extension of your domain. For example, your site is example.com. A sub domain would be test.example.com, and another would be webhosting.example.com. Sub domains are usually treated as separate sites from the main domain site. In yahoo.com site, there are more sub domains. Eg: mail.yahoo.com, finance.yahoo.com & etc sub domains.

Step 4 - How do I upload my site online?

Uploading your site can be done in many ways, but the most popular is FTP. When your hosting account was created, you should have been provided with a FTP account. Using software such as Cute FTP or WS FTP, you can log into your host. Then, using the program like a normal windows program, you can drag and drop files onto your web host. There are other ways to upload your site such as through your browser.

WEB PAGES

1. STATIC WEB PAGES

2. DYNAMIC WEB PAGES

1. STATIC WEB PAGES:

Static web pages allow a fast and simple establishment of your web presence. These types of web pages typically contain content that do not change frequently. To alter the content of static web pages would require knowledge of HTML and web page layout/ design concepts at a minimum. So if you/ your company's web, once created does not need frequent changes, this category suits you best. Key benefits of static web pages are fast implementation, low maintenance, and lowest cost.

Animated Web Pages: To give that little bit extra aliveness in your website, why not have some animations? While static web pages are quite sufficient to convey information and all details on a company, the use of Flash or GIF animation is eye-catching to the visitor and therefore has its own obvious benefits. We can also add music and sound effects on navigation buttons and/or throughout the site at your request.

2. DYNAMIC WEB PAGES:

The dynamic web site is ideal for any business or individual that requires more complex functionality than a static web site, such as dynamic pages and e-commerce pages. If you require constant updates to all or some pages within the site, you can do this online without the need for any technical knowledge. This gives you the ability to quickly and easily change your products, price lists, job vacancies, FAQ's, etc.

HTML (Hyper Text Markup Language)

What is a HTML File?

HTML stands for **H**yper **T**ext **M**arkup **L**anguage. HTML file is a text file containing markup tags & text. The markup tags tell the web browser how to display the page. HTML file must have a htm or html file extension. HTML file can be created using a simple text editor or special HTML editor Macromedia Dreamweaver, MS Front Page, MS Visual Interdev & etc.

Note on HTML Editors:

You can easily edit HTML files using a WYSIWYG (what you see is what you get) editor like Microsoft Front Page, Macromedia Dreamweaver instead of writing your markup tags in a plain text file. But if you want to be a skillful web designer/ developer, I strongly recommend that you use a plain text editor to learn your primer HTML.

How do you write HTML file?

If you are running Windows, start Notepad and type in the following text:

```
<html>
<head>
  <title>My First Home Page</title>
</head>
<body>
  This is my first home page. <b>This text is bold</b>
</body>
</html>
```

Example Explained

The first tag in your HTML document is `<html>`. This tag tells your browser that this is the start of a HTML document. The last tag in your document is `</html>`. This tag tells your browser that this is the end of the HTML document.

The text between the `<head>` tag and the `</head>` tag is header information. Header information is not displayed in the browser window.

The text between the `<title>` tags is the title of your document. The title is displayed in your browser's title bar.

The text between the `<body>` tags is the text that will be displayed in your browser. The text between the `` and `` tags will be displayed in a bold font.

HTML Elements: HTML documents are text files made up of HTML elements. HTML elements are defined using HTML tags.

HTML Tags

- HTML tags are used to mark-up HTML elements
- HTML tags are surrounded by the two characters `<` and `>` (angle brackets)
- HTML tags normally come in pairs like `` and `` (some tags are using start tag only)
- The first tag in a pair is the start tag, the second tag is the end tag
- The text between the start and end tags is the element content
- HTML tags are not case sensitive, `` means the same as ``

```
This is a HTML element:  <b> Jaffna </b>
```

The HTML element starts with a **start tag**: ``
The **content** of the HTML element Jaffna is bold
The HTML element ends with an **end tag**: ``

Tag Attributes: Tags can have attributes. Attributes can provide additional information about the HTML elements on your page. This tag defines the body element of your HTML page: `<body>` with an added `bgcolor` attribute, you can tell the browser that the background color of your page should be red, like this: `<body bgcolor="red">`.

Attributes always come in name/value pairs like this: `name="value"`. Attributes are always added to the start tag of a HTML element. Quote Styles, "red" or 'red' Attribute values should always be enclosed in quotes. Double style quotes are the most common, but single style quotes are also allowed.

HTML Tags

Basic Document Tags

Tag	Description	Attributes
<HTML>...</HTML>	Tag pair for the entire HTML document.	
<HEAD>...</HEAD>	Tag pair for the head section of the HTML document.	
<BODY>...</BODY>	Tag pair for the body section of the HTML document. The body section includes all of the text and markup tags in the document.	background=... bgcolor=... text=... link=... alink=... vlink=... leftmargin="0" topmargin="0" & more ...

For information about the properties of specific HEAD elements, see the following topics:

- Setting Title properties** - There is only one title property: the title of the page. The title appears in the title bar of the document window.
 Eg: <title>nselva.com</title>
- Setting Meta properties** - A meta tag is a head element that records information about the current page, such as the character encoding, author, copyright, or keywords. These tags can also be used to give information to the server, such as the expiration date, refresh interval.
 Eg: <meta name="description" content="This web site is a Selva's personal web site">
 <meta name="keywords" content="Selva, Selvakumar, Tamil, Jaffna, C++ Book">
 <meta http-equiv="refresh" content="30">
- Setting Link properties** - Use the Link element to define a relationship between the current document and another file. (CSS files & JavaScript files)
 Eg: <link rel="stylesheet" href="includefiles/general.css"> - include external css file
- Setting Script & Style properties** - Include CSS & JavaScript codes
 Eg: <script language="javascript"> </script> - include internal JavaScript
 <style type="text/css"> </style> - include internal Styles
 <script src="includefiles/jsfunctions.js"></script> - include external JavaScript file

Style/Formatting Tags

Tag	Description	Attributes
<A>...	When used with the HREF attribute, inserts a hyperlink into your HTML document. When used with the NAME attribute, inserts an anchor into your same HTML document.	href="url" name="..." href="#..."
<BIG>...</BIG> <SMALL>...</SMALL>	Displays the enclosed text in a larger or small font.	
... or ...	Displays the enclosed text in bold.	
<I>...</I> or ...	Displays the enclosed text in italics.	
...	This tag allows you to specify font attributes for the enclosed text.	color=... face="..." size=...
_{...}	Displays the enclosed text in subscript, placing it slightly below the current line.	
^{...}	Displays the enclosed text in superscript, placing it slightly above the current line.	

Block Elements

Tag	Description	Attributes
<BLOCKQUOTE>...</BLOCKQUOTE>	Used to mark a section (block) of text as a quote from another source.	
 & <NOBR>...</NOBR> - Non break	Inserts a line break at a specific point in the document.	
<P>...</P>	Places a paragraph inside the document. The closing </P> tag is optional.	align="center/ left/ right/ justify"
<CENTER>...</CENTER>	Everything between these tags is centered in the document.	
<H1> ... </H1> <H2> ... </H2> <H6> ... </H6>	Creates a headline. The number following the H can have a value from 1 to 6, with 1 creating the largest headline & 6 creating the smallest headline.	align="center/ left/ right/ justify"
<HR>	Places a horizontal rule across the document.	noshade, size=..., width=...
<BLINK>...</BLINK>	The enclosed text to blink repeatedly. (only support Netscape Browser)	
<MARQUEE>...</MARQUEE>	Inserts a scrolling text marquee in the document. (Only support IE Browser)	behavior="alternate/ slide" direction="left/right/up/down" bgcolor=... height=... width=,loop=,scrolldelay=
<PRE>...</PRE>	The enclosed text is preformatted. It is displayed in a mono spaced font exactly as it appears in the HTML source code.	

Image and Sound Tags

Tag	Description	Attributes
	Inserts an inline image into the HTML document.	src=... align=... alt=... border=... height=... width=... vspace=... hspace=...
<BGSOUND>	Instructs the browser to play a sound or music file (WAV or MIDI format) in the background.	src="...", loop=...

Table Elements

Tag	Description	Attributes
<TABLE>...</TABLE>	Inserts a table in the HTML document.	bgcolor=... border=... bordercolor=... width=... cellspacing=... cellpadding=... background=... align=... height= ... rules=...
<TR>...</TR>	Defines a table row. All of the <TD>.and <TH> tags enclosed will appear in the same row of the table.	bgcolor=...
<TH>...</TH>	Inserts a table header cell. The text contained inside is usually displayed in bold and is centered inside the cell.	bgcolor=... rowspan=... colspan=... align=... valign="top/middle/bottom", width=" ", height=" "
<TD>...</TD>	Inserts a table data cell.	bgcolor=... rowspan=... colspan=... align=... valign=... width="" height=""

Form Elements

Tag	Description	Attributes
<FORM>...</FORM>	Inserts an input form into the HTML document. Used to define an area containing input fields for user feedback. The two attributes, ACTION and METHOD, are required.	Action="url" method="get/ post" name=...
<INPUT>	Inserts an input field in the form. The type of input field is determined using the TYPE attribute. Acceptable values for TYPE are TEXT, CHECKBOX, RADIO, SUBMIT, RESET, PASSWORD, BUTTON, IMAGE, FILE and HIDDEN	type=... name=... maxlength=... size=... value=... checked
<SELECT>...</SELECT>	Inserts a selection input object, pop-up menu.	multiple, name=..., size=...
<OPTION>...</OPTION>	Defines an item for a SELECT input object.	selected, value=
<TEXTAREA>... </TEXTAREA>	Inserts a multi line text input field.	cols=..., name=..., rows=...

Map Elements

Tag	Description	Attributes
<AREA>	Defines a click able region inside a client-side image map.	coords=x,y,x,y href=...
<MAP>...</MAP>	Defines a client-side image map.	name=...

Example:

```

<map name="Map">
  <area shape="rect" coords="42,9,120,51" href="colombo.html">
  <area shape="circle" coords="221,79,61" href="#">
  <area shape="poly" coords="407,49,409,34,454,37" href="#">
</map>
```

List Elements

Tag	Description	Attributes
...	Ordered list. Creates a list with items presented in sequential order.	start=...type="1/ a/ i"
...	Unordered list. Creates a bulleted list of items presented in no particular order.	type="circle/ disc/ square"
...	List item. Used with both ordered and unordered lists. The closing tag is optional.	
<DL> ...</DL>	Definition List (<DT> ...</DT> & <DD> ... </DD>)	

Character Entities

©	copyright symbol	©
 	Non breaking space	

Other HTML Tags : <applet> ... </applet>, <div> ... </div>, ...

Frames

Frames pages are basically a HTML file which breaks the browser window up into separate parts or frames. In each frame a different HTML file can be loaded. Links in one frame can then be used to change the content in any frame on the page. If a frame is not re-loaded, changes to the others do not affect it.

Advantages to using frames include the following:

- A visitor's browser doesn't need to reload the navigation-related graphics for every page.
- Each frame has its own scrollbar (if the content is too large to fit in a window), so a visitor can scroll the frames independently. (For example, a visitor who has scrolled down to the bottom of a long page of content in a frame doesn't need to scroll back up to the top to use the navigation bar if the navigation bar is in a different frame)

Disadvantages to using frames include the following:

- Precise graphical alignment of elements in different frames can be difficult.
- The URLs of the individual framed pages aren't displayed in the browser, so it can be difficult for a visitor to bookmark a specific.

(1)

```
<frameset cols="80,*" frameborder="NO" border="0" framespacing="0">
  <frame src="menu.html" name="left" scrolling="NO" noresize>
  <frame src="main.html" name="main">
</frameset>
<noframes>
<body>
</body>
</noframes>
```

(2)

```
<frameset rows="*" cols="80,*" frameborder="NO" border="0" framespacing="0">
  <frame src="frame1.html" name="leftFrame" scrolling="NO" noresize>
  <frameset rows="80,*" frameborder="NO" border="0" framespacing="0">
    <frame src=" frame2.html " name="topFrame" scrolling="NO" noresize>
    <frame src=" frame3.html " name="mainFrame">
  </frameset>
</frameset>
```

IFRAME

IFRAME stands for **I**nline **F**RAME (also called "floating frames"). It's like a smaller version of regular frames. There is an individual window on the page instead of the entire current window being sectioned.

Example:

```
<iframe SRC="frame1.html" NAME="float1" WIDTH="100" HEIGHT="100" ALIGN="right"> </iframe>
```

Attributes: src, name, width, height, align, frameborder, scrolling, vspace, hspace, Etc.

You don't have to use ALL of these properties. Most of the time, you will use the first four: SRC, NAME, WIDTH, and HEIGHT.