Website Design (Manual) HTML

Developed by Alabian Solutions Ltd

Module 1

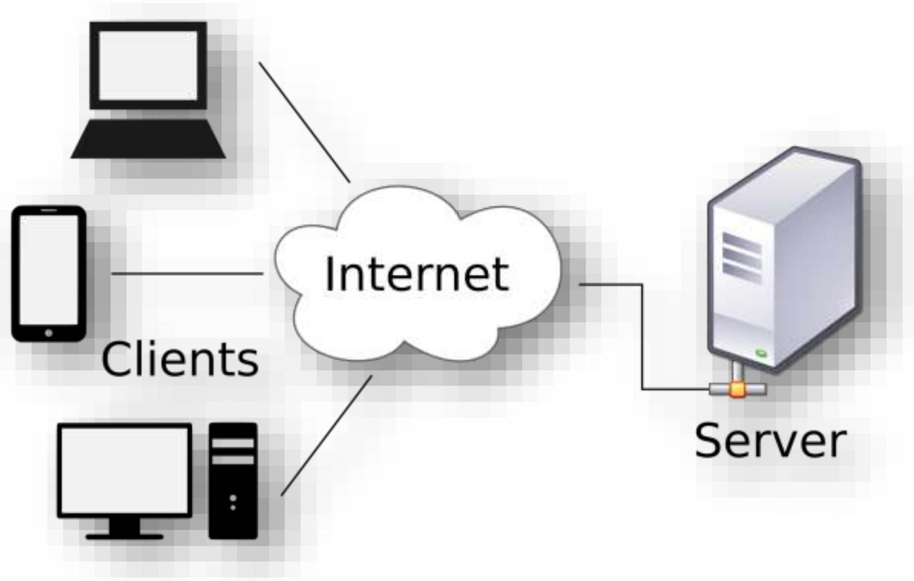
Chapter 1

Introduction to the web

The web is made up of computers that are connected together in order to share, receive and send information. These computers that are connected can be categorized into **Client** and **Server**.

Client

The **client** is a piece of computer hardware or software that accesses a service made available by a **server**. The server is often (but not always) on another computer system, in which case the client accesses the service by way of a network.
Examples of client computers are **Laptop, Desktop PC, Smart Phones, and Tablet** etc.



Server

A server is a computer that provides service to other computer **(Client)** over a local network or the internet. Any computer running a server software can function as a Server. Examples of server are ***Web Server***, **File Server, Print Server, DNS Server** etc.

Web Server

Web server is a computer where the web content is stored. Basically web server is used to host the web sites.
Web site is a collection of web pages while web server is a software that respond to the request for web resources.

Web Browsers

A Web Browser is a software that you need to install on your computer in order to visit a website. The browser is used to render (translate) HTML, CSS, javaScript which are the technologies used in building websites. When you are on a web page you can right click with your mouse and click on *view source* to see the HTML the browser is rendering (translating). Below are examples of a Web browser.

Mozilla Firefox
Google Chrome
Microsoft Internet Explorer
Apple Safari
Opera

Network Protocols

Network protocols refers to a set of rules or processes computers have to follow in order to transfer data between each order.

Examples of these protocols are **TCP/IP, DNS, HTTP, HTTPS, FTP** etc for more of these protocols visit the website http://www.realifewebdesigns.com/web-resources/web-protocols.html

TCP/IP

TCP/IP (Transmission Control Protocol/Internet Protocol) is the basic communication language or protocol of the Internet. It can also be used as a communications protocol in a private network.

DNS

DNS (Domain Name System), is a protocol that translates domain names (web address) into IP addresses. Because domain names are alphabetic, they're easier to remember. The Internet however, is really based on IP addresses.

HTTP

HTTP stands for Hypertext Transfer Protocol. It is the standard protocol for transferring web pages (and their content) across the Internet. You may have noticed that when you browse a web page, the URL is preceded by ***"HTTP://"***. This is telling the web browser to use ***HTTP*** to transfer the data. Most browsers will default to ***HTTP*** if you don't specify it.

HTTPS

HTTPS stands for **Hypertext Transfer Protocol over Secure Socket Layer**. This is a secure version of HTTP. HTTPS is used primarily on web pages that ask you to provide personal or sensitive information (such as a password or your credit card details). When you browse a web page using HTTPS, you are using **SSL** (Secure Sockets Layer). For a website to use *HTTPS* it needs to have an *SSL* certificate installed on the server. These are usually issued by a trusted 3rd party, referred to as a Certificate Authority (CA).

FTP

FTP stands for File Transfer Protocol. It is used to transfer files across the Internet. FTP is commonly used by web developers to publish updates to a website (i.e. to upload a new version of the website). Where HTTP is used for displaying the file in your browser, FTP is used simply to transfer the file from one computer to a specified location on another computer. You can use FTP to transfer the files from your computer to a remote computer (such as a web server), or to transfer from the remote computer to your local computer.

FTP Clients

Where FTP is a protocol for transferring file over the internet FTP clients is a software that has to be installed on your computer to enable you transfer files over the internet. Examples of such software are **FileZilla**, **Coreftp**.

Overview of Client-Side Technologies

Client-Side Technologies are Technologies that are executed on the *Web Browser* examples are **HTML, CSS, and JavaScript.**

HTML

Just a as you can add images, Tables, paragraphs, bullet points etc in Microsoft Word. **HTML**, which stands for Hypertext Markup Language, is used to create content for the web. You can use HTML to add images, video, audios, tables, paragraph, bullet points, Multilevel List etc. to a web document or web page. A HTML file is made up of tags which needs to translated by the browser for people to read.

CSS

CSS which stands for **Cascading Style Sheets** is a set of rules you need to define to style tags in your HTML file. You can use CSS to add colors, background color, background images, and divide a web page into several sections etc.

JavaScript

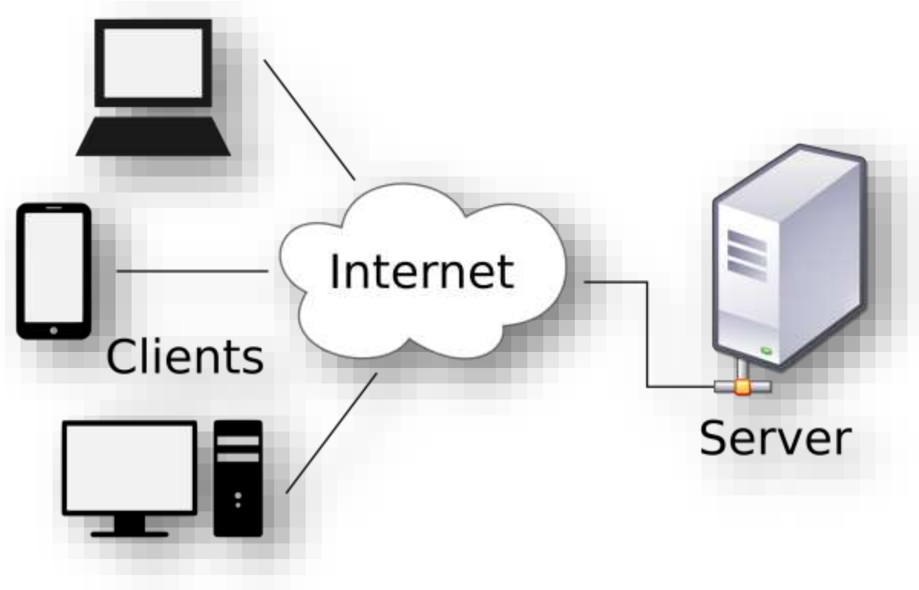
JavaScript is used to add interactivity or behavior to web pages, JavaScript is often referred to as the programing language for the web browser meaning that JavaScript codes are executed on the browser. JavaScript is used to create image slide shows, form validation, popups, animations etc.

Overview of Server –Side Technologies

Server-Side Technologies are Technologies that are executed on the **Web Server** such as **PHP, Ruby, Python, Java, C#** etc. These are sometimes referred to as Server-Side programing language, they are often used with Database systems like *MySQL*, *Oracle*, etc. You use these languages to store and retrieve data in a database.

Client-Server Relationship

When someone visits a website they enter a web address in their browser. Their browser sends off a *HTTP* request for a web page at that address. The Web Server then finds a corresponding HTML file. And then sends it back to the browser along with any other images and assets related to it. The browser then gets that HTML code and does the work to transform it into a beautiful web page. This is referred to as *Client-Server* relationship. The web browser is playing the part of the *Client* and the web server is playing the part of the *Server*.



Chapter 2

HTML

- HTML stands for **Hyper Text Markup Language**
- HTML file is a text file containing small markup tags
- These markup tags are used to describe the structure of a web page
- The markup tags tell the Web browser how to display the page.
- HTML file can be created using a simple text editor such as notepad or a WYSIWIG (what you see is what you get) editor like Dreamweaver.

HTML: Editors

Since HTML files are just text files, many programs can be used to create them. Some programs provide special assistance for handling HTML, like syntax - highlighting or autocompleting. Examples are Notepad++, Sublime Text, Aptana, etc.

Anatomy of an HTML tag

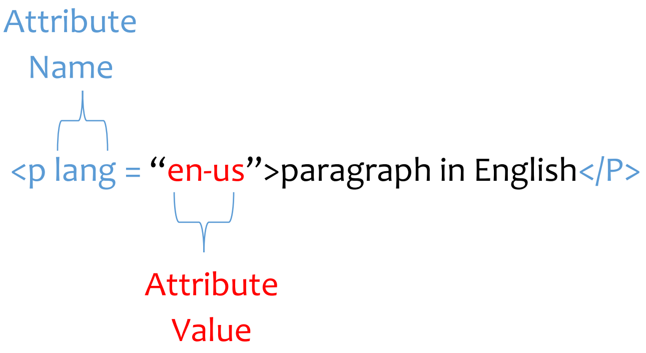
Each tag has an ***"opening tag"***, ***"closing tag"***, some content in between, and optional attributes. Tags acts like containers. They tell you something about the information that lies between their opening and closing tags.

```
<tagname atr1="val1" atr2="val2">content</tagname>
```

```
<tagname atr1="val1" atr2="val2">
```

Attribute

Attributes provide additional information about the contents of an element. They appear on the opening tag of the element and are made up of two parts: ***a name*** and ***a value***, separated by an ***equals sign***.



Attribute Name

<p lang = “en-us”>paragraph in English</P>

Attribute Value

Basic structure of HTML

```
<!DOCTYPE html>
<html lang="en">
      <head>
            <meta charset="utf-8" />
            <title>page Title</title>
      </head>

      <body>

      </body>
</html>
```

Doctype and HTML tag

The doctype isn't an actual tag, but it needs to be at start of every HTML page to tell browser which version of HTML you're using (HTML5, in example below). The **<!DOCTYPE>** declaration is not case sensitive.

The **HTML** tag is always the first tag in the page. The language attribute are usually added to the opening *HTML* tag as seen below. The language attribute is used to specify the language of a page or an element. This can help Google or Screen Readers to translate your page to other languages.

Code:

```
<!DOCTYPE html>
<html lang="en">

</html>
```

Various versions of HTML and their DOCTYPE

Version	DOCTYPE
HTML 5	<!DOCTYPE html>
HTML 4	<!DOCTYPE html PUBLIC " - //W3C//DTD HTML 4.01 Transitional//EN" "http://www.w3.org/TR/html4/loose.dtd">
Transitional XHTML 1. 0	<!DOCTYPE html PUBLIC " - //W 3C//DTD XHTML 1.0 Transitional//EN" "http://www. w3. org/TR/xhtml1/DTD/ xhtml1 - transitional. dtd">
Strict XHTML 1. 0	<!DOCTYPE html PUBLIC " - //W3C//DTD XHTML 1.0 Strict//EN" "http://www.w3.org/TR/xhtml1/DTD/ xhtml1-strict.dtd">
XML Declaration	<?xml version="1.0" ?>

Head

The head contains ***"meta"*** information about the page, information that the browser needs before rendering it.

This contains information about the page (rather than information that is shown within the main part of the browser window). You will usually find a <*title*> element inside the ***<head>*** element.

Meta tag

The meta tag is used to provide information about a page, these information could be short description about a page, author of a page, keywords in the page etc. there are lot meta tags out there.

Code:

```
<meta charset="utf-8" />
```

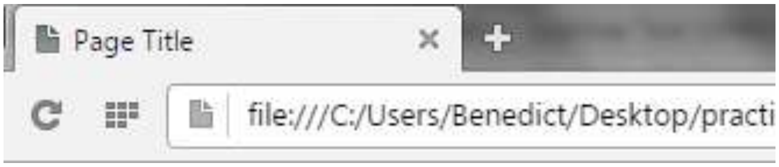
The meta above is used to specify the character encoding of your web page. There are many different character encoding. The ***Unicode*** character encoding is the most widely used character encoding. ***Unicode*** contains characters for most languages in the world and is supported on a large number of operating systems. This means Unicode can display multiple languages within a page.

Title tag

The contents of the ***<title>*** element are either shown in the top of the browser, above where you usually type in the URL of the page you want to visit, or on the tab for that page (if your browser uses tabs to allow you to view multiple pages at the same time).

Code:

```
<title>page Title</title>
```



Creating a HTML file

1. On your text editor go file and choose new or press *CTRL + N*
2. On the save as dialogue box that pops up enter the name of your file followed by the extension of the file ***.html***
3. If a file have more than one word separate them with hyphen **"--"** and not space.

Chapter 3

Adding text to your web page

Headings

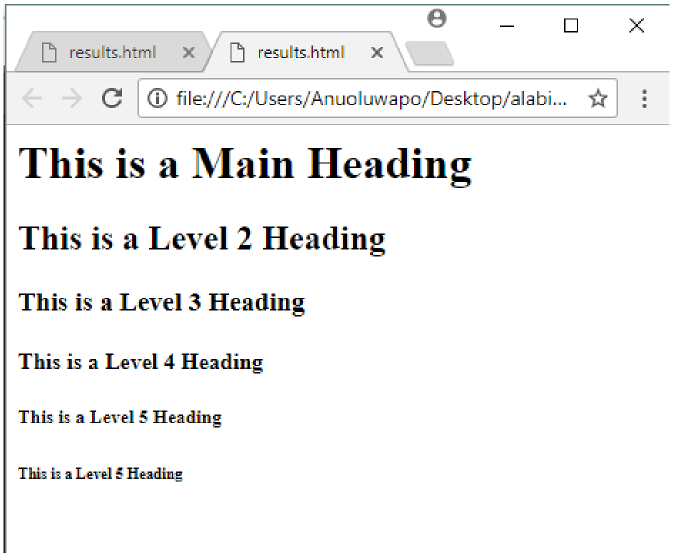
HTML has six *"levels"* of headings:
<h1> is used for main headings ***<h2>*** is used for subheadings if there are further sections under the subheadings then the ***<h3>*** element is used, and so on. . .

Browsers display the contents of headings at different sizes. The contents of an ***<h1>*** element is the largest, and the contents of an ***<h6>*** element is the smallest. The exact size at which each browser shows the headings can vary slightly.

html

```
<body>
      <h1>This is a Main Heading</h1>
      <h2>This is a Level 2 Heading</h2>
      <h3>This is a Level 3 Heading</h3>
      <h4>This is a Level 4 Heading</h4>
      <h5>This is a Level 5 Heading</h5>
      <h6>This is a Level 5 Heading</h6>
</body>
```

result



This is a Main Heading

This is a Level 2 Heading

This is a Level 3 Heading

This is a Level 4 Heading

This is a Level 5 Heading

This is a Level 5 Heading

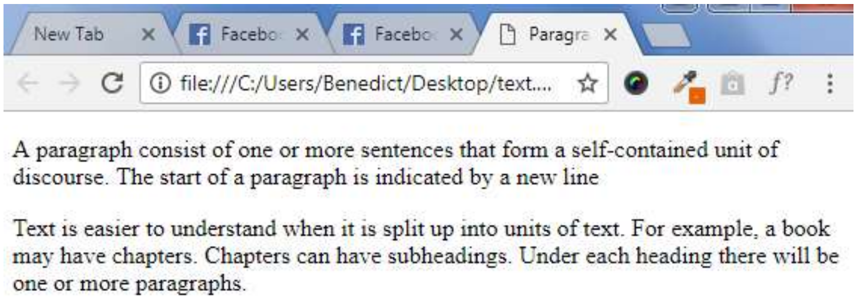
Paragraph

The ***<p>*** tag is use for creating a paragraph in HTML, to create a paragrph put your text inside the opening and closing tag of the paragraph tag. By default, a browser will show each paragraph on a new line with some space between it and any subsequent paragraphs.

html

```
<body>
      <p>
         A paragraph consist of one or more sentences that
         form a self-contained unit of discourse. The start
         of a paragraph is indicated by a new line
      </p>
      <p>
         Text is easier to understand when it is split
         up into units of text. For example, a book may have
         chapters. Chapters can have subheadings. Under
         each heading there will be one or more paragraphs.
      </p>
</body>
```

result



A paragraph consist of one or more sentences that form a self-contained unit of discourse. The start of a paragraph is indicated by a new line

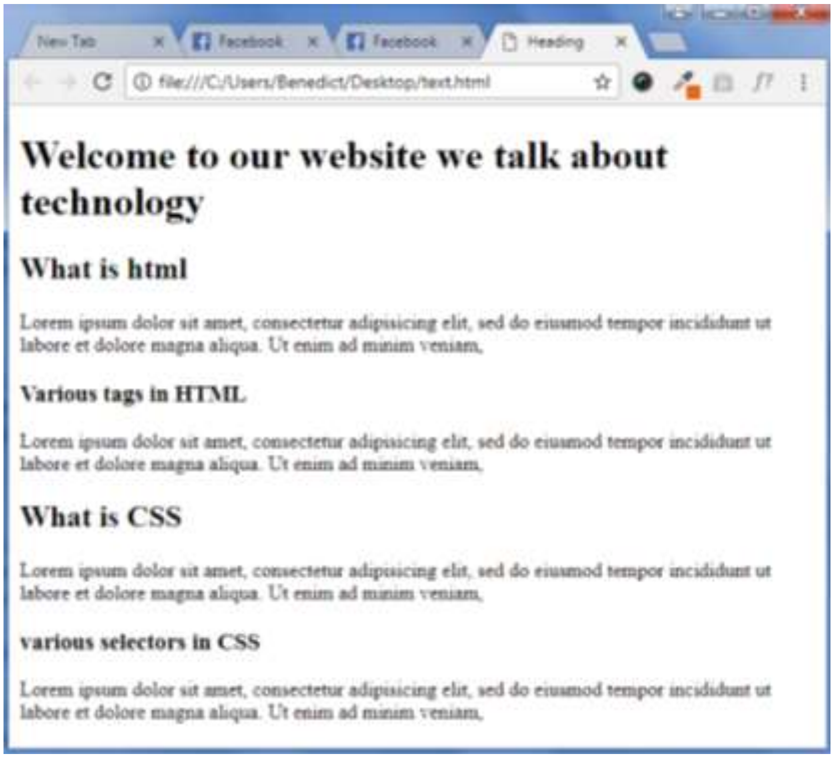
Text is easier to understand when it is split up into units of text. For example, a book may have chapters. Chapters can have subheadings. Under each heading there will be one or more paragraphs.

Example of Headings and Paragraph

html

```
<h1>Welcome to our website we talk about technology</h1>
<h2>What is html</h2>
<p>
      Lorem ipsum dolor sit amet, consectetur adipisicing
      elit, sed do eiusmod tempor incididunt ut labore et
      dolore magna aliqua. Ut enim ad minim veniam,
</p>
<h3>Various tags in HTML</h3>
<p>
      Lorem ipsum dolor sit amet, consectetur adipisicing
      elit, sed do eiusmod tempor incididunt ut labore et
      dolore magna aliqua. Ut enim ad minim veniam,
</p>
<h2>What is CSS</h2>
<p>
      Lorem ipsum dolor sit amet, consectetur adipisicing
      elit, sed do eiusmod tempor incididunt ut labore et
      dolore magna aliqua. Ut enim ad minim veniam,
</p>
<h3>various selectors in CSS</h3>
<p>
      Lorem ipsum dolor sit amet, consectetur adipisicing
      elit, sed do eiusmod tempor incididunt ut labore et
      dolore magna aliqua. Ut enim ad minim veniam,
</p>
```

result



Welcome to our website we talk about technology

What is html

Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam,

Various tags in HTML

Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam,

What is CSS

Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam,

various selectors in CSS

Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam,

White space

If you have more than one space on your text editor (sublime or aptana studio) the browser will treat it as one space. If it comes across a line break the browser treats it as a single line space too. This is known as white space collapsing.

html

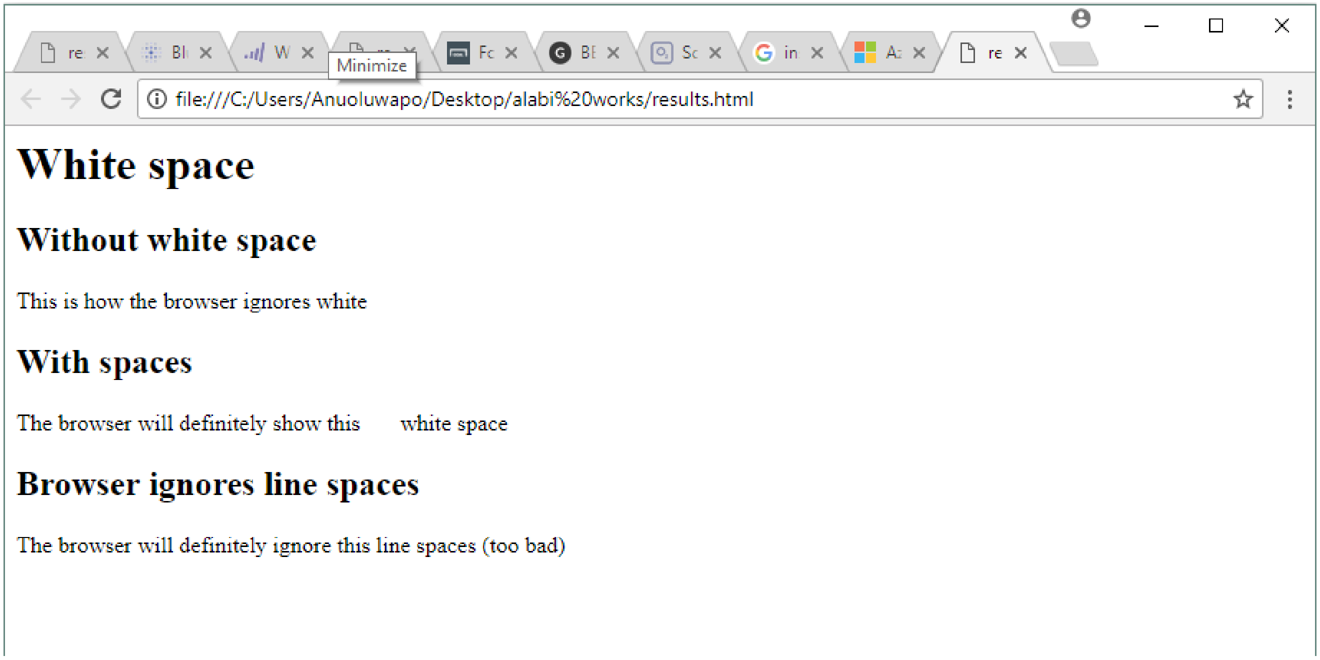
```
<body>
      <h1>White space</h1>

      <h2>Without white space</h2>
      <p>This is how     the browser ignores white</p>
```

```
        <h2>With spaces</h2>
        <p>The browser will definitely show this &nbsp; &nbsp; &nbsp; white
        space
        </p>

        <h2>Browser ignores line spaces</h2>
        <p>The browser will definitely ignore this
        line spaces (too bad)
        </p>
</body>
```

result


Minimize
file:///C:/Users/Anuoluwapo/Desktop/alabi%20works/results.html

White space

Without white space

This is how the browser ignores white

With spaces

The browser will definitely show this   white space

Browser ignores line spaces

The browser will definitely ignore this line spaces (too bad)

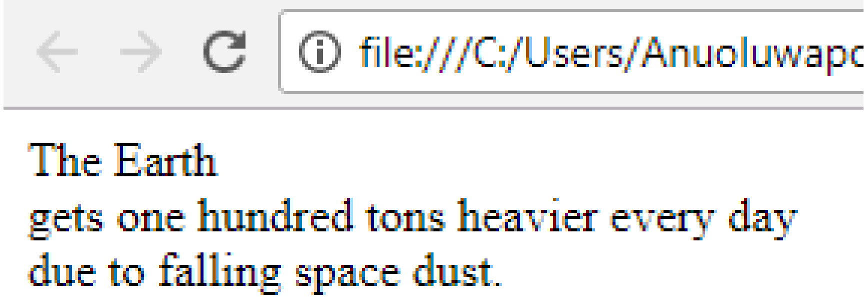
Line Breaks

The ***<br>*** tag is use to create a line break in HTML

html

```
<body>
        <p>The Earth<br>gets one hundred tons heavier
           every day<br>due to falling space dust.
        </p>
</body>
```

result



The Earth
gets one hundred tons heavier every day
due to falling space dust.

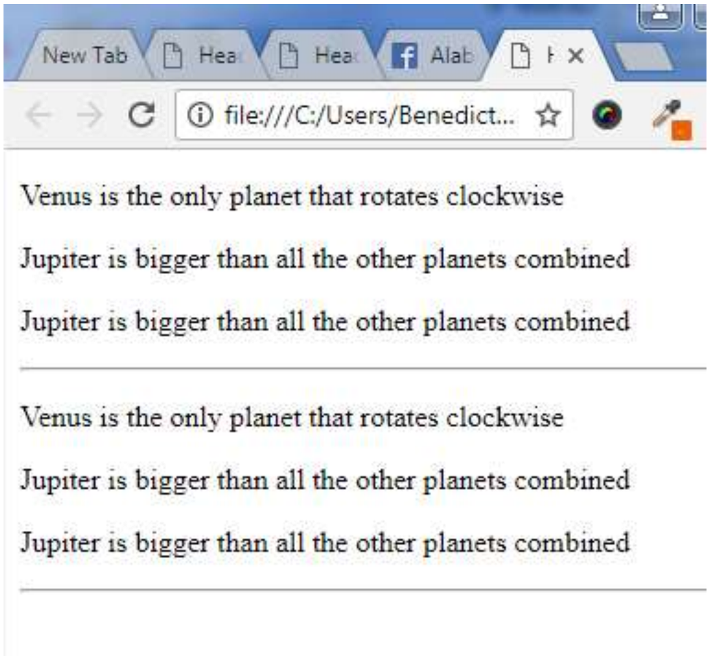
Horizontal Rule

The ***<hr>*** is use to create a long horizontal line

HTML

```
<p>Venus is the only planet that rotates clockwise</p>
<p>Jupiter is bigger than all the other planets combined</p>
<p>Jupiter is bigger than all the other planets combined</p>
<hr>
<p>Venus is the only planet that rotates clockwise</p>
<p>Jupiter is bigger than all the other planets combined</p>
<p>Jupiter is bigger than all the other planets combined</p>
```

RESULT



Venus is the only planet that rotates clockwise

Jupiter is bigger than all the other planets combined

Jupiter is bigger than all the other planets combined

Venus is the only planet that rotates clockwise

Jupiter is bigger than all the other planets combined

Jupiter is bigger than all the other planets combined

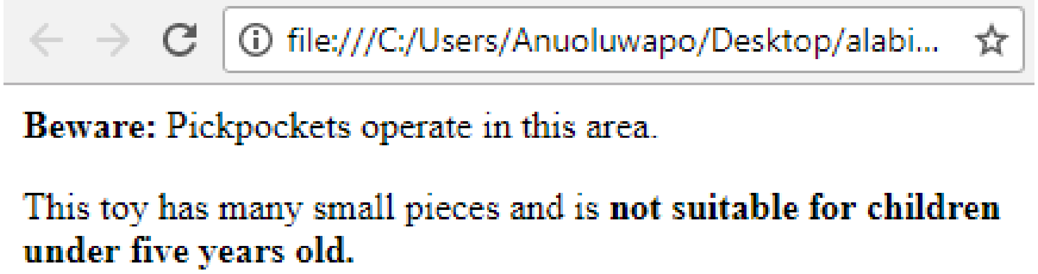
Strong tag

The use of the ***<strong>*** element indicates that its content has strong importance. For example, the words contained in this element might be said with strong emphasis. By default, browsers will show the contents of a ***<strong>*** element in bold.

HTML

```
<p>
      <strong>Beware:</strong> Pickpockets operate in this
      area.
</p>
<p>
      This toy has many small pieces and is <strong>
      not suitable for children under five years old.
      </strong>
</p>
```

Result



Beware: Pickpockets operate in this area.

This toy has many small pieces and is **not suitable for children under five years old.**

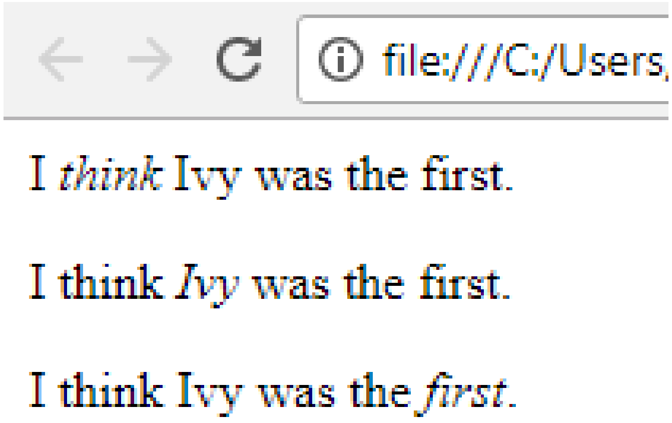
Emphasis tag

The ***<em>*** element indicates emphasis that subtly changes the meaning of a sentence. By default browsers will show the contents of an ***<em>*** element in italic.

html

```
<p>I <em>think</em> Ivy was the first.</p>
<p>I think <em>Ivy</em> was the first.</p>
<p>I think Ivy was the <em>first</em>.</p>
```

result



I *think* Ivy was the first.

I think *Ivy* was the first.

I think Ivy was the *first*.

Quotations

There are two elements commonly used for marking up quotations: The ***<blockquote>*** and ***<q>*** element.

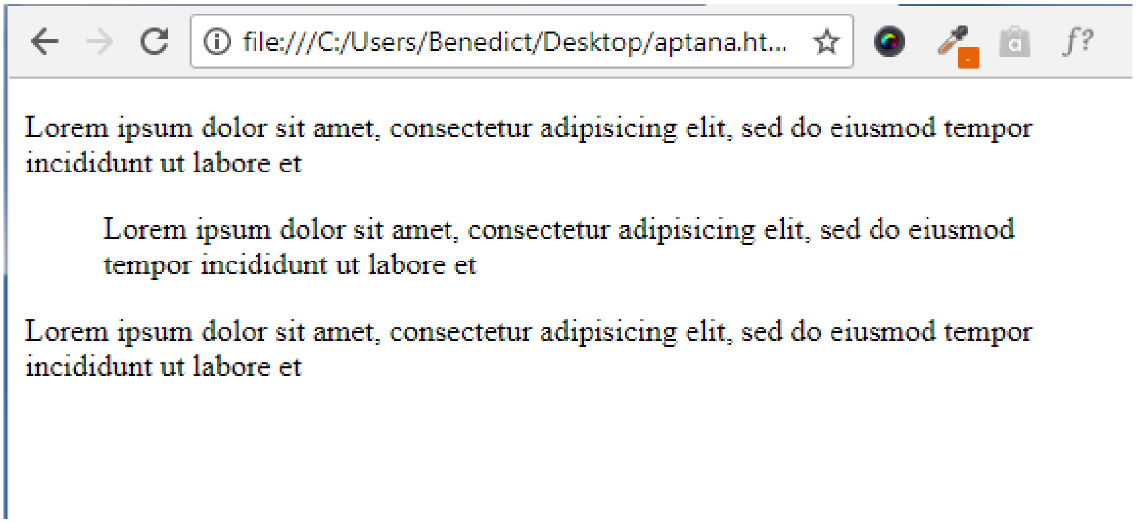
<blockquote>

The ***<blockquote>*** element is used for longer quotes that take up an entire paragraph. Browsers tend to indent the contents of the **<blockquote>** element, however you should not use this element just to indent a piece of text — rather you should achieve this effect using CSS.

html

```
<p>
      Lorem ipsum dolor sit amet, consectetur adipisicing
      elit, sed do eiusmod tempor incididunt ut labore et
</p>
<blockquote cite="http:/www.alabiansolutions.com/
onlinemarketing/">
      <p>
            Lorem ipsum dolor sit amet, consectetur adipisicing
            elit, sed do eiusmod tempor incididunt ut labore et
      </p>
</blockquote>
<p>
      Lorem ipsum dolor sit amet, consectetur adipisicing
      elit, sed do eiusmod tempor incididunt ut labore et
</p>
```

result



Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed do eiusmod tempor incididunt ut labore et

> Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed do eiusmod tempor incididunt ut labore et

Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed do eiusmod tempor incididunt ut labore et

<q>

The ***<q>*** element is used for shorter quotes that sit within a paragraph. Browsers are supposed to put quotes around the **<q>** element, however Internet Explorer does not — therefore many people avoid using the ***<q>*** element. Both elements may use the cite attribute to indicate where the quote is from. Its value should be a URL that will have more information about the source of the quotation.

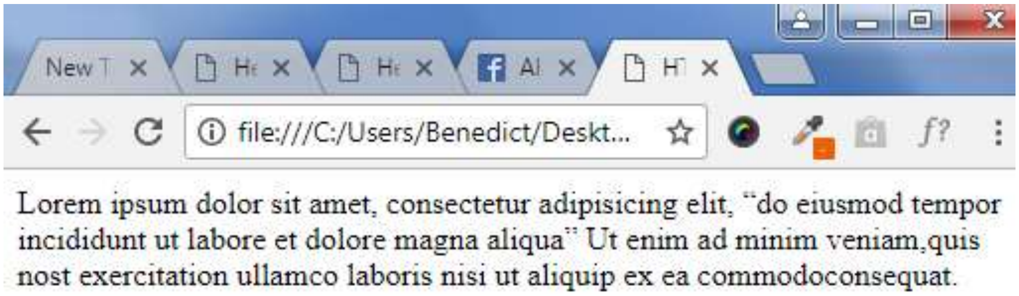
html

```
<body>

      Lorem ipsum dolor sit amet, consectetur adipisicing elit, <q>do eiusmod
      tempor incididunt ut labore et dolore magna aliqua</q> Ut enim ad minim
      veniam,quis nost exercitation ullamco laboris nisi ut aliquip ex ea
      commodoconsequat.

</body>
```

result



Lorem ipsum dolor sit amet, consectetur adipisicing elit, “do eiusmod tempor incididunt ut labore et dolore magna aliqua” Ut enim ad minim veniam,quis nost exercitation ullamco laboris nisi ut aliquip ex ea commodoconsequat.

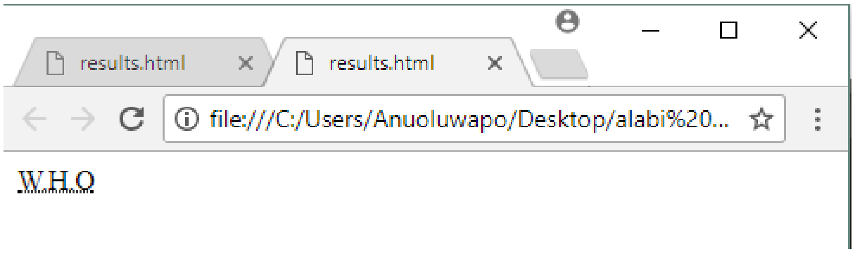
Abbreviation

The <*abbr*> element is use to create an abbreviation. A title attribute on the opening tag is used to specify the full term.

html

```
<abbr title="World Health Organization">W.H.O</abbr>
```

result



W.H.O

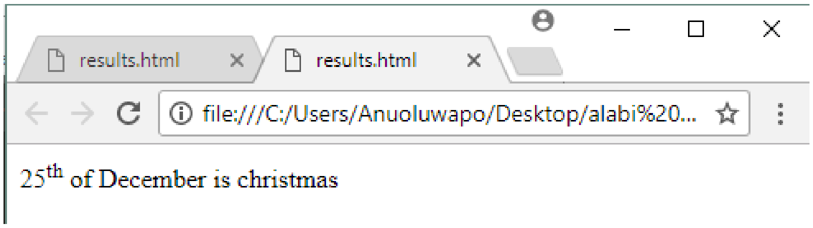
Superscript

The ***<sup>*** element is used to contain characters that should be superscript such as the suffixes of dates or mathematical concepts like raising a number to a power such as **2^2**.

html

```
<p>25<sup>th</sup> of December is christmas</p>
```

result



25th of December is christmas

Some useful HTML character entities

Result	Description	Entity Name	Entity Number
	Non-breaking space	&nbsp;	&#160;
<	Less than	&lt;	&#60;
>	Greater than	&gt;	&#62;
‘	Left single quote	&lsquo;	&#8216;
’	Right single quote	&rsquo;	&#8217;
“	Left double quote	&ldquo;	&#8220;
”	Right double quote	&rdquo;	&#8221;
`	Acute accent=spacing acute	&acute;	&#180;
»	Left pointing angle double quotation mark = right pointing guillemet	&laquo;	&#171;
&	Ampersand	&amp;	&#38;
₦	Naira		&#8358;
¢	Cent	&cent;	&#162;
£	Pound	&pound;	&#163;
¥	Yen	&yen;	&#165;

€	Euro	&euro;	&#8364;
©	Copyright	&copy;	&#169;
®	Registered trademark	&reg;	&#174;
™	Trademark	&trade;	&#8482;
X	Multiplication	&times;	&#215;
÷	Division sign	&divide;	&#247;

EXERCISE

Mr. Shahid Hussain
H.R Manager,
ASM Association

Subject: Letter for Job Transfer

On the Insert tab, the galleries include items that are designed to coordinate with the overall look of your document. You can use these galleries to insert tables, headers, footers, lists, cover pages, and other document building blocks. When you create pictures, charts, or diagrams, they also coordinate with your current document look.

You can easily change the formatting of selected text in the document text by choosing a look for the selected text from the Quick Styles gallery on the Home tab. You can also format text directly by using the other controls on the Home tab. Most controls offer a choice of using the look from the current theme or using a format that you specify directly.

To change the overall look of your document, choose new Theme elements on the Page Layout tab. To change the looks available in the Quick Style gallery, use the Change Current Quick Style Set command. Both the Themes gallery and the Quick Styles gallery provide reset commands so that you can always restore the look of your document to the original contained in your current template.

Regards,

Director,
ASM Association

Chapter 4

List

There are many reasons you might want to add a list to your pages, from putting your five favorite albums on your homepage to including a numbered set of instructions for visitors to follow.

You can create three types of lists in HTML:

- Ordered list
- Unordered list
- Definition list

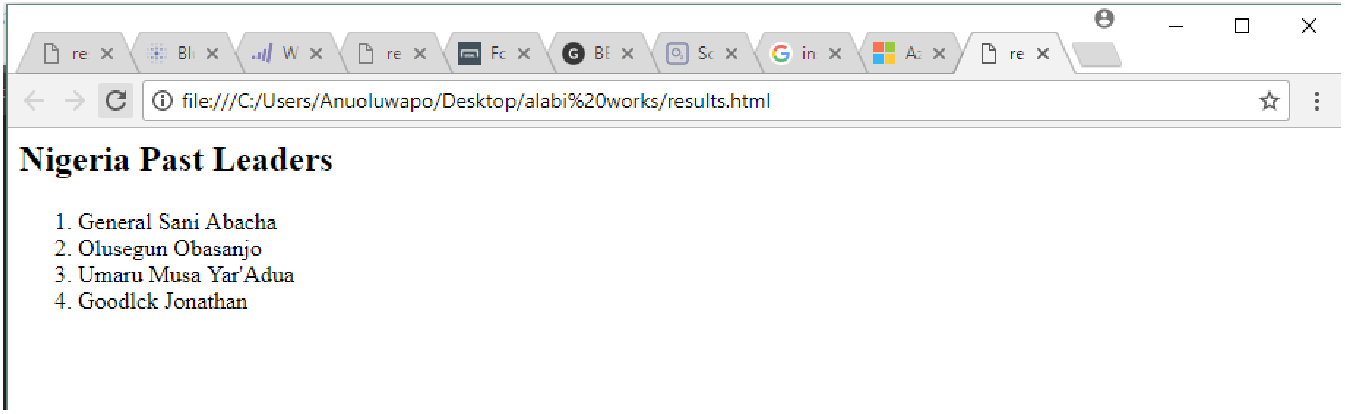
Ordered list

The HTML ***<ol>*** element represents an ordered list of items, typically rendered as a numbered list. Sometimes, you want your lists to be ordered. In an ordered list, rather than prefixing each point with a, bullet point, you can use either numbers ***(1, 2, 3)***, letters ***(A, B, C)***, or Roman numerals ***(i, ii, iii)*** to prefix the list item.

html

```
<h2>Nigeria Past Leaders</h2>
<ol>
      <li>General Sani Abacha</li>
      <li>Olusegun Obasanjo</li>
      <li>Umaru Musa Yar'Adua</li>
      <li>Goodlck Jonathan</li>
</ol>
```

result:


re
Bl
W
re
Fc
BE
Sc
in
A:
re
file:///C:/Users/Anuoluwapo/Desktop/alabi%20works/results.html

Nigeria Past Leaders

1. General Sani Abacha
2. Olusegun Obasanjo
3. Umaru Musa Yar'Adua
4. Goodlck Jonathan

Unordered list

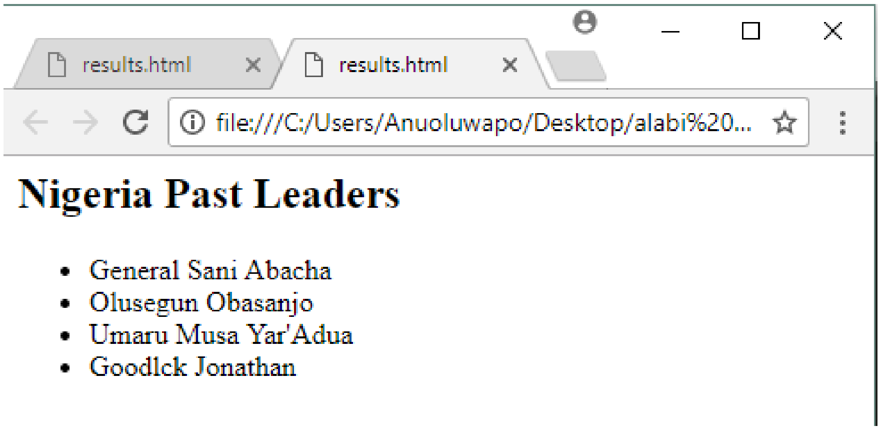
An unordered list is a collection of related items that have no special order or sequence. This list is created by using HTML ***<ul>*** tag. Each item in the list is marked with a bullet.

If you want to make a list of bullet points, you write the list within the ***<ul>*** element (which stands for unordered list). Each bullet point or line you want to write should then be contained between opening ***<li>*** tags and closing ***</li>*** tags (the *li* stands for list item).

html

```
<h2>Nigeria Past Leaders</h2>
<ul>
        <li>General Sani Abacha</li>
        <li>Olusegun Obasanjo</li>
        <li>Umaru Musa Yar'Adua</li>
        <li>Goodlck Jonathan</li>
</ul>
```

result



Nigeria Past Leaders

- General Sani Abacha
- Olusegun Obasanjo
- Umaru Musa Yar'Adua
- Goodlck Jonathan

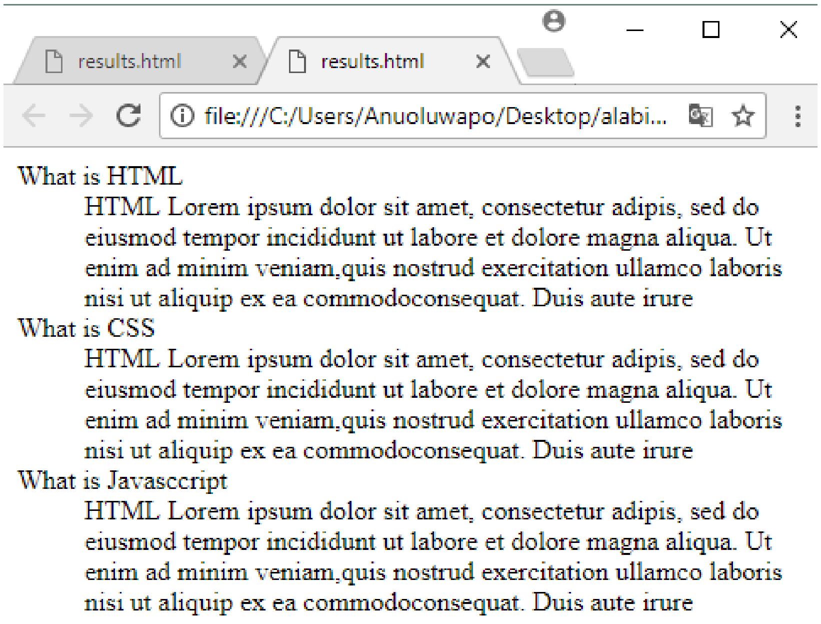
Description list

The description list is a special kind of list for providing terms followed by a short text definition or description for them. Description lists are contained inside the ***<dl>*** element. The ***<dl>*** element then contains alternating ***<dt>*** description term and ***<dd>*** description elements. The content of the ***<dt>*** element is the term you will be defining. The ***<dd>*** element contains the description of the previous ***<dt>*** element.

html

```
<dl>
      <dt>What is HTML</dt>
      <dd>
            HTML Lorem ipsum dolor sit amet, consectetur adipis,
          sed do eiusmod tempor incididunt ut labore et dolore
          magna aliqua. Ut enim ad minim veniam,quis nostrud
          exercitation ullamco laboris nisi ut aliquip ex ea
          commodoconsequat. Duis aute irure
      </dd>
      <dt>What is CSS</dt>
      <dd>
          HTML Lorem ipsum dolor sit amet, consectetur adipis,
          sed do eiusmod tempor incididunt ut labore et dolore
          magna aliqua. Ut enim ad minim veniam,quis nostrud
          exercitation ullamco laboris nisi ut aliquip ex ea
          commodoconsequat. Duis aute irure
      </dd>
      <dt>What is Javasccript</dt>
      <dd>
            HTML Lorem ipsum dolor sit amet, consectetur adipis,
          sed do eiusmod tempor incididunt ut labore et dolore
          magna aliqua. Ut enim ad minim veniam,quis nostrud
          exercitation ullamco laboris nisi ut aliquip ex ea
          commodoconsequat. Duis aute irure
      </dd>
</dl>
```

result



What is HTML

HTML Lorem ipsum dolor sit amet, consectetur adipis, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam,quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodoconsequat. Duis aute irure

What is CSS

HTML Lorem ipsum dolor sit amet, consectetur adipis, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam,quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodoconsequat. Duis aute irure

What is Javasccript

HTML Lorem ipsum dolor sit amet, consectetur adipis, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam,quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodoconsequat. Duis aute irure

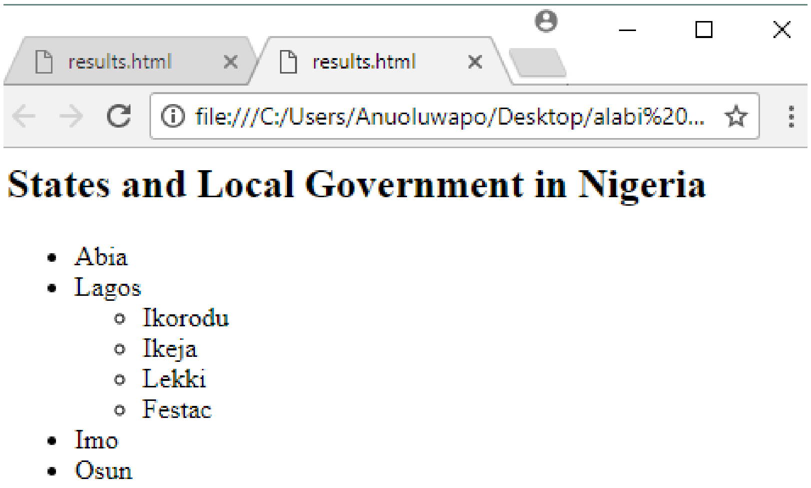
Nested list

You can put a second list inside an *<li>* element to create a sublist or nested list. Browsers display nested lists indented further than the parent list . In nested unordered lists, the browser will usually change the style of the bullet point too.

html

```
<h2>States and Local Government in Nigeria </h2>
<ul>
      <li>Abia</li>
      <li>Lagos
            <ul>
                  <li>Ikorodu</li>
                  <li>Ikeja</li>
                  <li>Lekki</li>
                  <li>Festac</li>
            </ul>
      </li>
      <li>Imo</li>
      <li>Osun</li>
</ul>
```

result



States and Local Government in Nigeria

- Abia
- Lagos
  - Ikorodu
  - Ikeja
  - Lekki
  - Festac
- Imo
- Osun

Module 2

CHAPTER 1

Links

Links are the defining feature of the web because they allow you to move from one web page to another enabling the very idea of browsing or surfing.
Links are created using the ***<a>*** element. Users can click on anything between the opening ***<a>*** tag and the closing ***</a>*** tag. You specify which page you want to link to using the ***href*** attribute.

Linking to other site

Linking in *HTML* code is done with the anchor tag, the ***<a>*** tag. The letter ***"a"*** in the tag is then followed by an attribute. For a link to another web page, the **"a"** is followed by ***"href".***

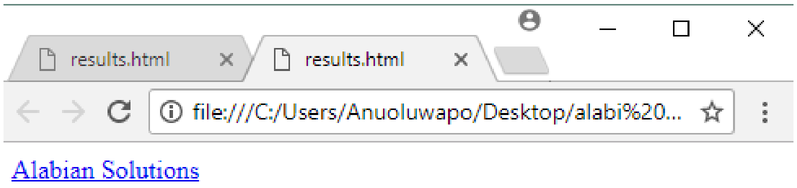
When you link to a different website, the value of the ***href*** attribute will be the full web address for the site, which is known as an ***absolute URL.***

Browsers show links in blue with an underline by default.

html

```
<a href="http://alabiansolutions.com">Alabian Solutions</a>
```

result



Alabian Solutions

Links that open a new tab

You want a link to open in a new window, you can use the ***target*** attribute on the opening ***<a>*** tag. The value of this attribute should be ***_blank***.

html

```
<a href="http://alabiansolutions.com" target="_blank">Alabian Solutions</a>
```

Linking to other pages on the same site

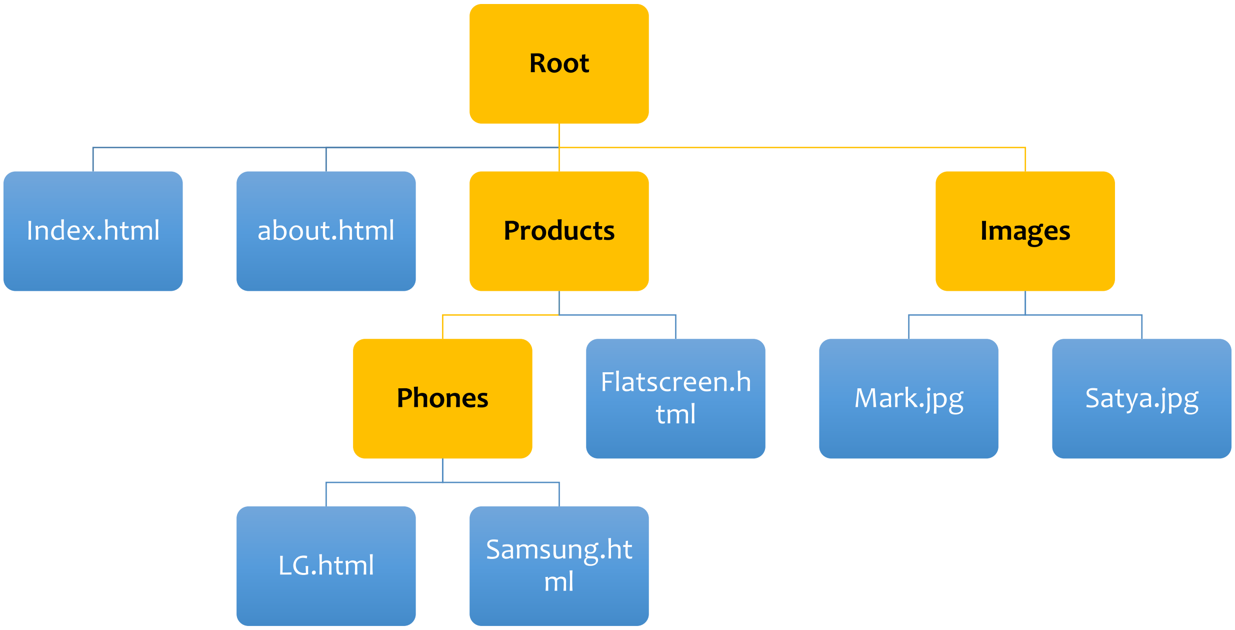
To link to another web page, the opening ***<a>*** tag must carry an attribute called ***href;*** the value of the ***href*** attribute is the name of the file you are linking to.

html

```
<a href="index.html">Home</a>
```

Directory structure

On larger websites it's a good idea to organize your code by placing the pages for each different section of the site into a new folder. Folders on a website are sometimes referred to as directories.



Examples

1. Index.html = “about.html”
2. Index.html = “products/flatscreen.html”
3. Flatscreen.html = “../index.html”
4. Lg.html = “../../index.html”
5. Flatscreen.html = ../images/mark.jpg

Linking to a specific part of the same page

If you have a long web page, you might want to link to a specific part of that page in order to save the user from having to scroll up and down the page to find the relevant part. The ***destination*** *anchor* allows the page author to mark specific points in a page that a source anchor can point to.

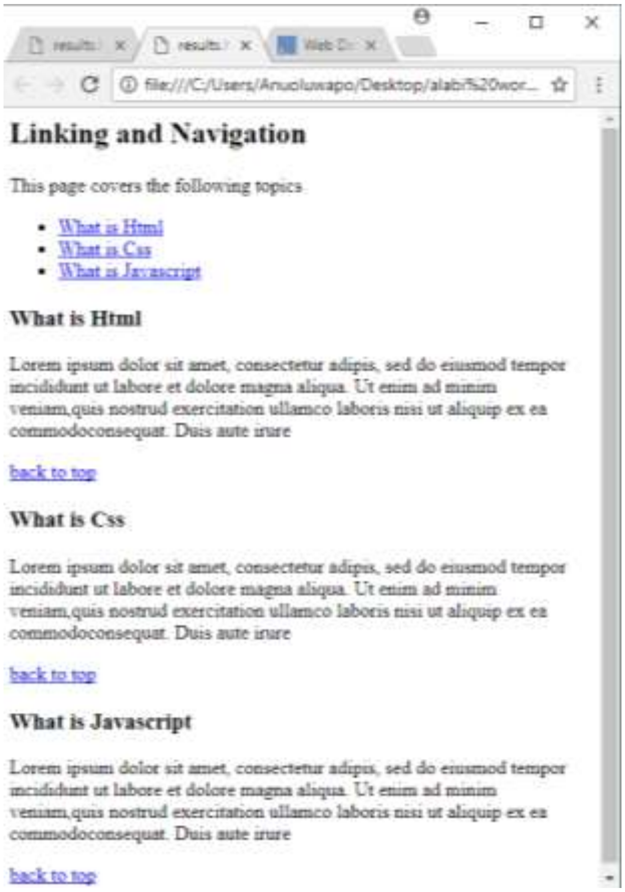
Common examples of linking to a specific part of a page that you might have seen used on web pages include:

"Back to top" links at the bottom of a long page

html

```
<body>
      <h2>Linking and Navigation</h2>
      <p>This page covers the following topics</p>
      <ul>
            <li><a href="#html">What is Html</a></li>
            <li><a href="#css">What is Css</a></li>
            <li><a href="#javascript">What is Javascript</a></li>
      </ul>
      <h3 id="html">What is Html</h3>
      <p>Lorem ipsum dolor sit amet, consectetur adipis,
          sed do eiusmod tempor incididunt ut labore et dolore
          magna aliqua. Ut enim ad minim veniam,quis nostrud
          exercitation ullamco laboris nisi ut aliquip ex ea
          commodoconsequat. Duis aute irure
    </p>
    <a href="#top">back to top</a>
    <h3 id="css">What is Css</h3>
      <p>Lorem ipsum dolor sit amet, consectetur adipis,
          sed do eiusmod tempor incididunt ut labore et dolore
          magna aliqua. Ut enim ad minim veniam,quis nostrud
          exercitation ullamco laboris nisi ut aliquip ex ea
          commodoconsequat. Duis aute irure
    </p>
    <a href="#top">back to top</a>
    <h3 id="javascript">What is Javascript</h3>
      <p>Lorem ipsum dolor sit amet, consectetur adipis,
          sed do eiusmod tempor incididunt ut labore et dolore
          magna aliqua. Ut enim ad minim veniam,quis nostrud
          exercitation ullamco laboris nisi ut aliquip ex ea
          commodoconsequat. Duis aute irure
    </p>
    <a href="#top">back to top</a>
</body>
```

result



Linking and Navigation

This page covers the following topics

- What is Html
- What is Css
- What is Javascript

What is Html

Lorem ipsum dolor sit amet, consectetur adipis, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam,quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodoconsequat. Duis aute irure

back to top

What is Css

Lorem ipsum dolor sit amet, consectetur adipis, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam,quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodoconsequat. Duis aute irure

back to top

What is Javascript

Lorem ipsum dolor sit amet, consectetur adipis, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam,quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodoconsequat. Duis aute irure

back to top

Linking to specific part of another page

If you want to link to a specific part of a different page (whether on your own site or a different website) you can use a similar technique.

As long as the page you are linking to has ***id*** attributes that identify specific parts of the page, you can simply add the same syntax to the end of the link for that page. Therefore, the ***href*** attribute will contain the address for the page (either an absolute URL or a relative URL), followed by the **#** symbol, and followed by the value of the *id* attribute that is used on the element you are linking to.

For example, to link to the bottom of the homepage of the website that accompanies this book, you would write: ***<a href="http:/www. htmlandcssbookcom#bottom">***

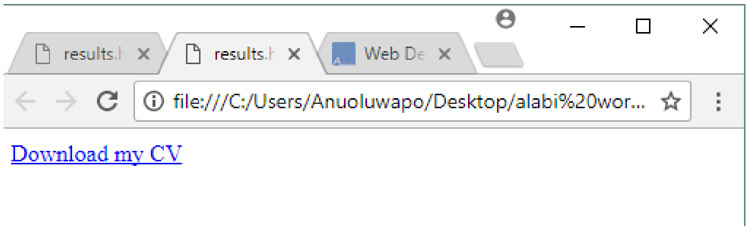
Links to other files (Word documents, ZIP files, PDFs, etc)

You can place a link on your web page to files other than images and web pages. A link can be made to all sorts of different file types. For example, if you have PDF file that you want to share with others, the code would be this:

html

```
<a href="html.docx">Download my CV</a>
```

result



Download my CV

Chapter 2

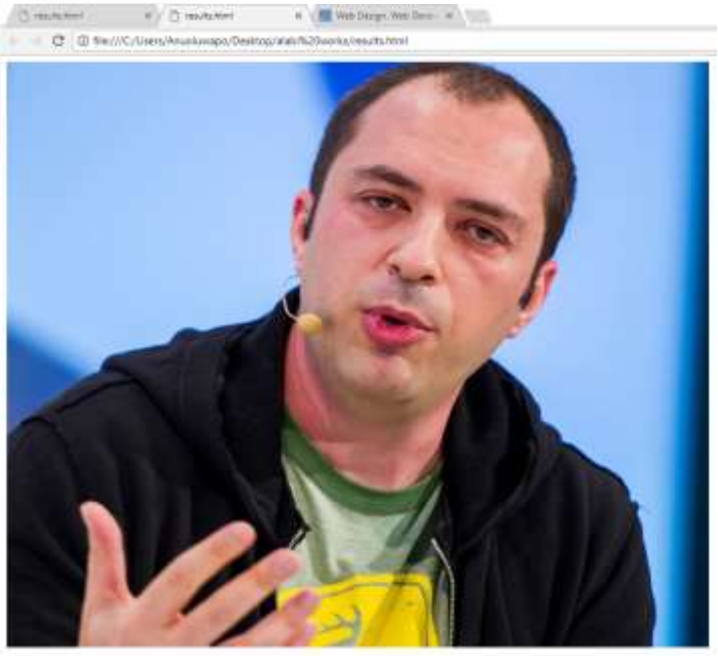
Images

Images are added to a site using the < *img*> element, which has to carry at least two attributes: the *src* attribute, indicating the source of the image, and an *alt* attribute, which provides a description of the image. For example, the following line would add the image called *logo.png* into the page.

html

```
<img src="images/jan-koum.jpg"/>
```

result


results.html
results.html
Web Design, Web Deve...
file:///C:/Users/Anuoluwapo/Desktop/alab%20works/results.html

The various attribute <*img*> can carry

src

This tells the browser where it can find the image file. This will usually be a relative URL pointing to an image on your own site.

alt

This provides a text description of the image which describ es the image if you cannot see it.

title

You can also use the ***title*** attribute with the ***<img>*** element to provide additional information about the image. Most browsers will display the content of this attribute in a tootip when the user hovers over the image.

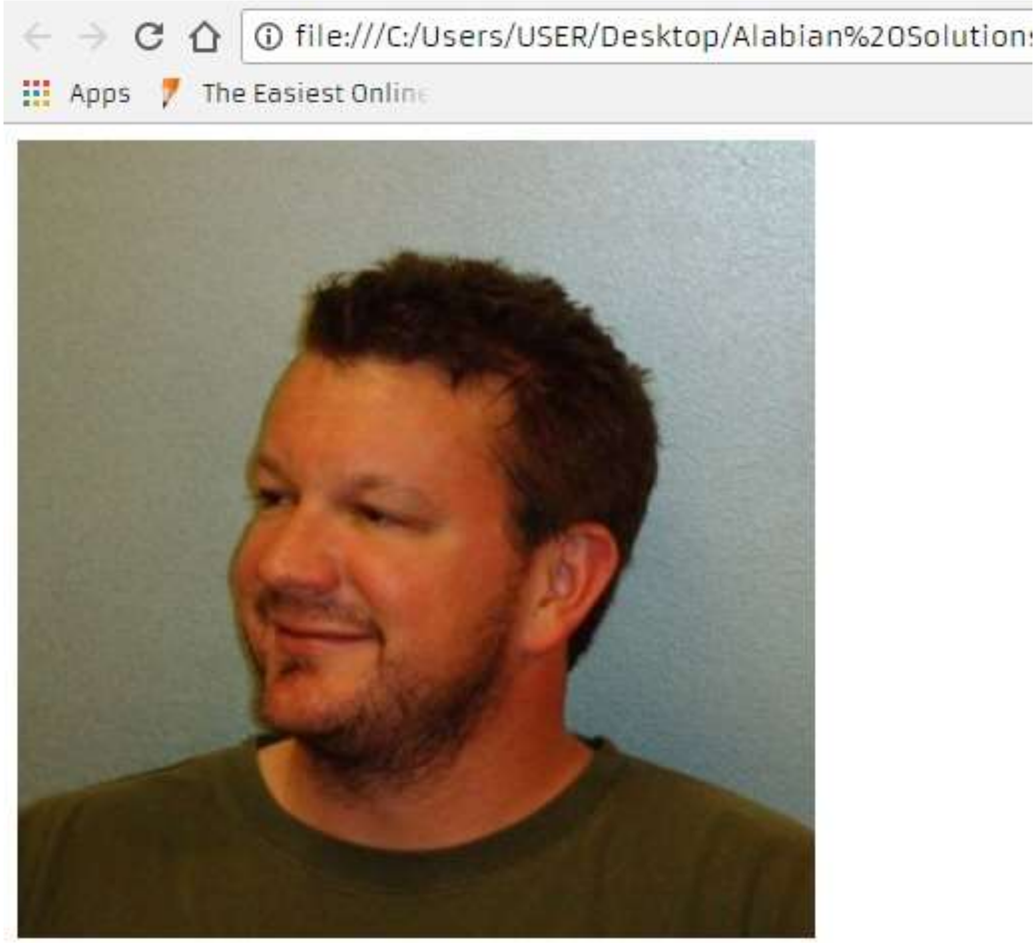
The text used in the ***alt*** attribute is often referred to as alt text. It should give an accurate description of the image content so it can be understood by screen reader software (used by people with visual impairments) and search engines.

The align attribute is use to align an image to the ***left*** or to the ***right***, the align attribute has been removed from ***html5*** and new websites should use ***CSS*** to control the alignment of images.

html

```
<body>
      <img src= "brian-acton.jpg"alt="Brian Acton" title="
Brian Acton"/>
</body>
```

Result



HTML 5: Figure and Figure Caption

<figure>

Use a <figure> element to mark up a photo in a document:.

<figcaption>

The <figcaption> tag defines a caption for a <figure> element.

The <figcaption> element can be placed as the first or last child of the <figure> element.

html

```
<figure>
        <img src="kiyosaki.jpg" alt="kiyosaki" style="width:100%">
        <figcaption>Fig.1 kiyosaki</figcaption>
</figure>
```

Result:

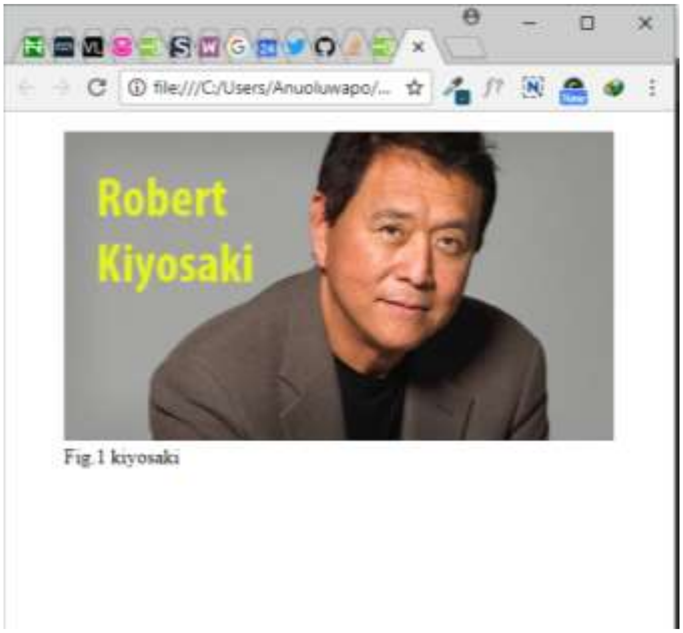


Fig.1 kiyosaki

result

Images as link

You can turn images into hyperlinks. The only thing you need to do is surround your image with an ***anchor*** tag Like this:

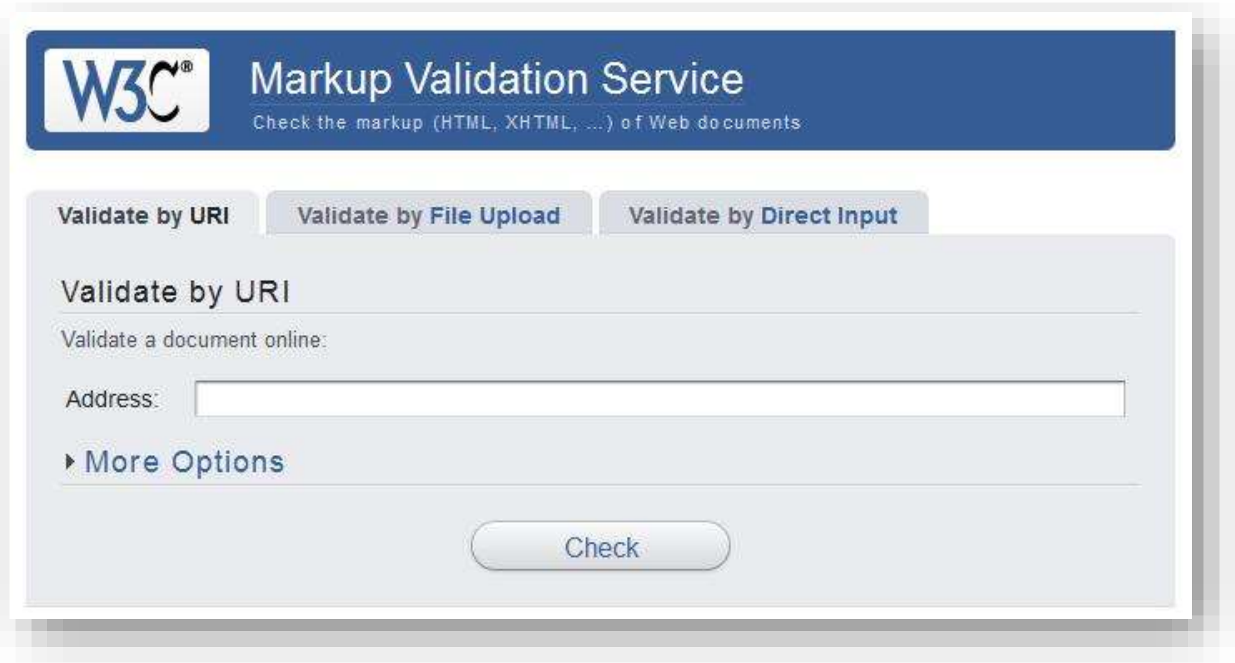
html

```
<a href="service.html"><img src="images/jan-koum.jpg"></a>
```

result

HTML Validators

HTML validator is a quality assurance program used to check Hypertext Markup Language (*HTML*) markup elements for syntax errors. A *validator* can be a useful tool for an *HTML* user who receives data electronically from a variety of input sources.

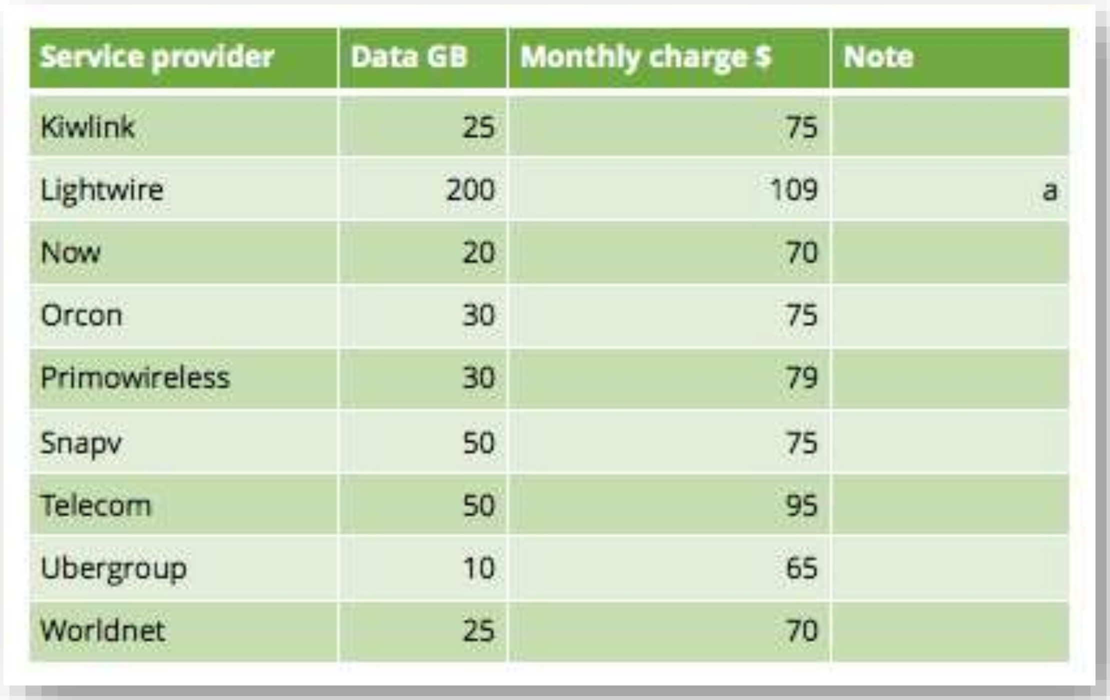


Module 3

CHAPTER 1

Tables

The ***HTML tables*** allow web authors to arrange data like text, images, links, other **tables**, etc. into rows and columns of cells. The ***HTML** tables* are created using the *<table>* tag in which the ***<tr>*** tag is used to create *table* rows and ***<td>*** tag is used to create data cells.



Service provider	Data GB	Monthly charge $	Note
Kiwlink	25	75	
Lightwire	200	109	a
Now	20	70	
Orcon	30	75	
Primowireless	30	79	
Snapv	50	75	
Telecom	50	95	
Ubergroup	10	65	
Worldnet	25	70	

Table element

The **<table>** element is used to create a table. The contents of the table are written out row by row.

Table row

You indicate the start of each row using the opening **<tr>** tag. (The tr stands for table row) It is followed by one or more **<td>** elements (one for each cell in that row). At the end of the row you use a closing **</tr>** tag.

Table data

The **<td>** tag defines a standard cell in an HTML table. An HTML table has two kinds of cells: Header cells - contains header information (created with the **<th>** element) Standard cells - contains *data* (created with the *<td>* element).

Table heading

Table heading can be defined using **<th>** tag. This tag will be put to replace *<td>* tag, which is used to represent actual data cell. Normally you will put your top row as table heading as shown below, otherwise you can use **<th>** element in any row.

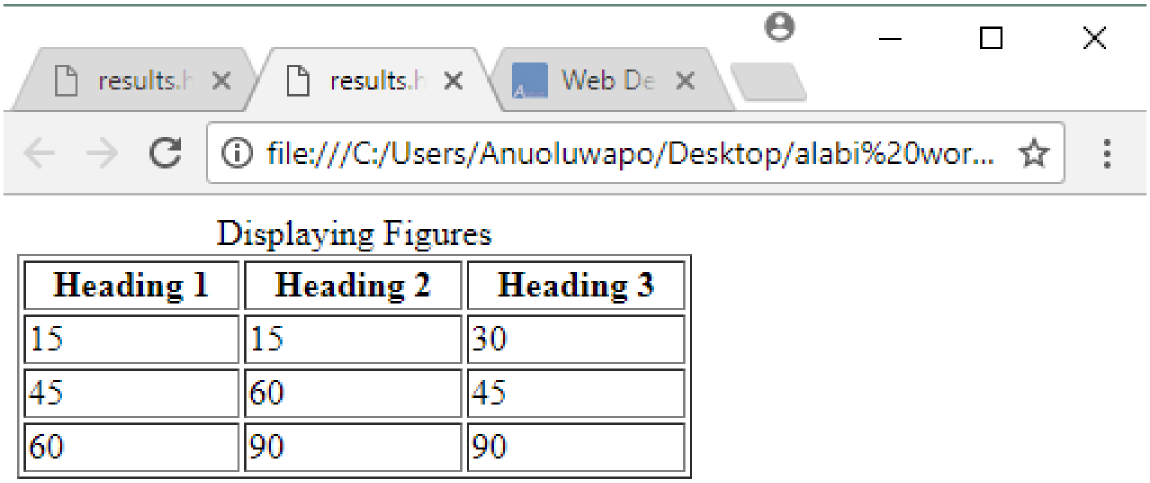
Table caption

HTML **<caption>** element represents the title of a table. Though it is always the first descendant of a **<table>**, its styling, using CSS, may place it elsewhere, relative to the table.

html

```
<body>
      <table border="1" width="300">
            <caption>Displaying Figures</caption>
            <tr>
                  <th>Heading 1</th>
                  <th>Heading 2</th>
                  <th>Heading 3</th>
            </tr>
            <tr>
                  <td>15</td>
                  <td>15</td>
                  <td>30</td>
            </tr>
            <tr>
                  <td>45</td>
                  <td>60</td>
                  <td>45</td>
            </tr>
            <tr>
                  <td>60</td>
                  <td>90</td>
                  <td>90</td>
            </tr>
      </table>
 </body>
```

result



Displaying Figures

Heading 1	Heading 2	Heading 3
15	15	30
45	60	45
60	90	90

Merging cells in a table

There are various ways of merging cells in a table, you can group a table by;

- Spanning rows
- Spanning the columns

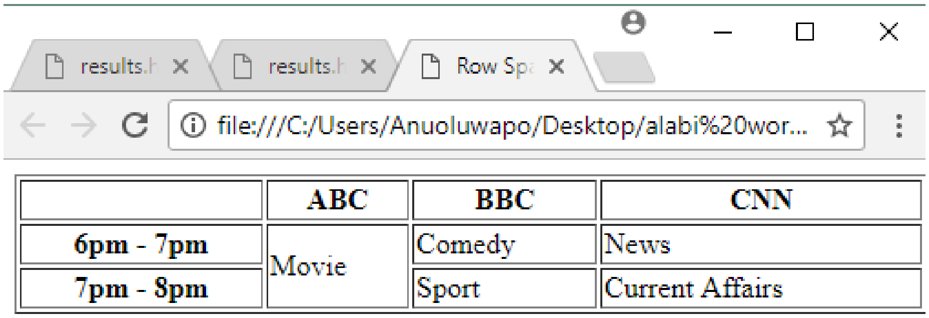
Spanning rows

You can span rows of a table using the **rowspan** attribute. The **rowspan** attribute can be used on a **<th>** or **<td>** element to indicate how many rows a cell should span down the table.

html

```
<table width="500" border="1">
            <tr>
                  <th></th>
                  <th>ABC</th>
                  <th>BBC</th>
                  <th>CNN</th>
            </tr>
            <tr>
                  <th>6pm - 7pm</th>
                  <td rowspan="2">Movie</td>
                  <td>Comedy</td>
                  <td>News</td>
            </tr>
            <tr>
                  <th>7pm - 8pm</th>
                  <td>Sport</td>
                  <td>Current Affairs</td>
            </tr>
</table>
```

Result



	ABC	BBC	CNN
6pm - 7pm	Movie	Comedy	News
7pm - 8pm		Sport	Current Affairs

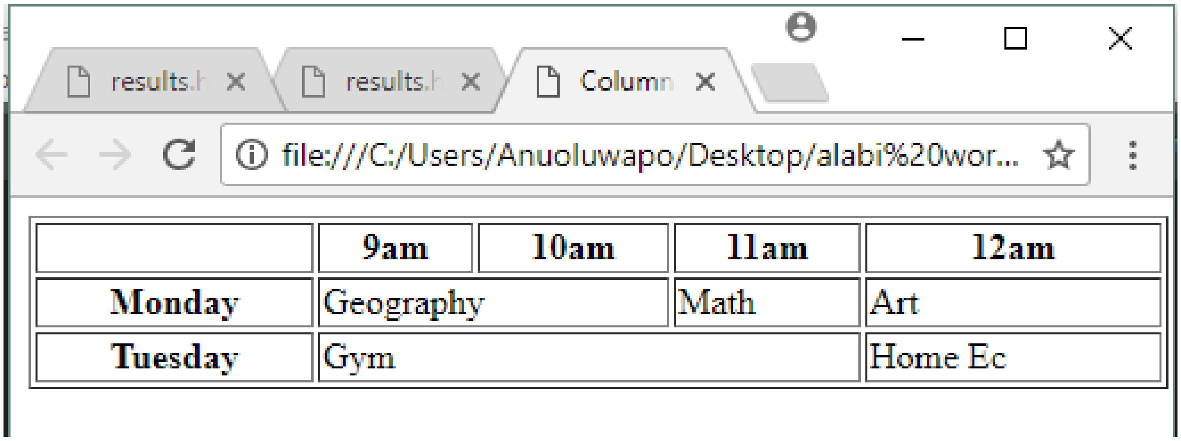
Spanning columns

You can span columns of a table using the **colspan** attribute. The **colspan** attribute is used when a cell should span across more than one column. The value of the attribute specifies how many columns of the table a cell will span across.

html

```
<table width="500" border="1">
            <tr>
                  <th></th>
                  <th>9am</th>
                  <th>10am</th>
                  <th>11am</th>
                  <th>12am</th>
            </tr>
            <tr>
                  <th>Monday</th>
                  <td colspan="2">Geography</td>
                  <td>Math</td>
                  <td>Art</td>
            </tr>
            <tr>
                  <th>Tuesday</th>
                  <td colspan="3">Gym</td>
                  <td>Home Ec</td>
            </tr>
</table
```

result



	9am	10am	11am	12am
Monday	Geography		Math	Art
Tuesday	Gym			Home Ec

Chapter 2

Form

Form enable users to interact on a website example when a user is registring as a member of a website, shopping online, or filling a job application form.

Form structure

<form>

Form controls live inside a *<form>* element. This element should always carry the *act ion* attribute and will usually have a *method* and *id* attribute too.

action

Every *<form>* element requires an action attribute. Its value is the URL for the page on the server that will receive the information in the form when it is submitted.

method

Forms can be sent using one of two methods: *get* or *post*.

get

With the get method, the values from the form are added to the end of the URL specified in the action attribute.

The get method is ideal for:

- Short forms (such as search boxes)
- When you are just retrieving data from the web server (not sending informat ion that should be added to or deleted from a database)

post

With the *post* method the values are sent in what are known as HTTP headers. As a rule of thumb you should use the *post* method if your form:

- allows users to upload a file
- is very long
- contains sensitive data (e.g. passwords)
- adds information to, or
- Deletes information from, a database.

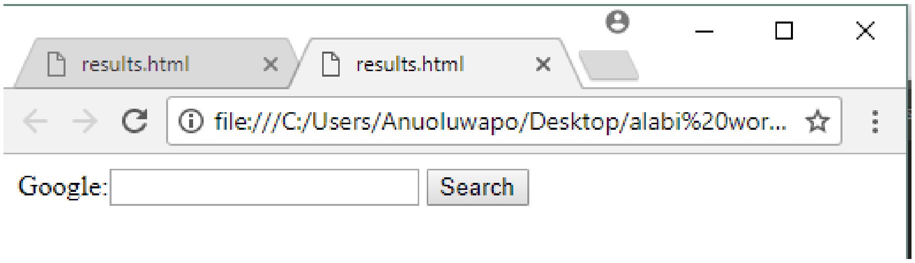
id

The value is used to identify the form distinctly from other elements on the page.

html

```
<body>
      <form action="process.php" method="get">
             <label>Google:<input type="search" name="search">
             <input type="submit" value="Search"> </label>
      </form>
 </body>
```

result



Google:

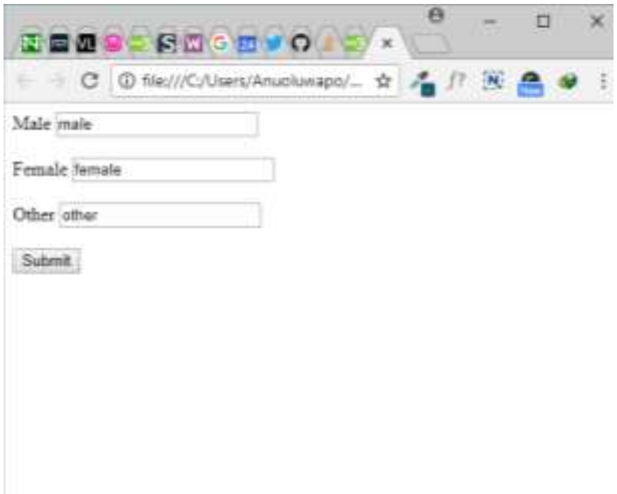
Label element

The **label** element is used to caption a form control, so users know what they should put in it.

html

```
<form >
      <label for="male">Male</label>
        <input type="text" name="gender" id="male" value="male"><br><br>
      <label for="female">Female</label>
        <input type="text" name="gender" id="female" value="female"><br><br>
      <label for="other">Other</label>
        <input type="text" name="gender" id="other" value="other"><br><br>
      <input type="submit" value="Submit">
</form>
```

result



Male male

Female female

Other other

The **for** attribute of the <label> tag should be equal to the **id** attribute of the related element to bind them together. **For** attribute specifies which form element a label is bound to especially when you clicked on the label

Text input

The *<input>* element is used to create several different form controls. The value of the type attribute determines what kind of input they will be creating.

type="text"

When the *type* attribute has a value of *text*, it creates a single line text input.

name

When users enter information into a form, the server needs to know which form control each piece of data was entered into.

(For example, in a login form, the server needs to know what has been entered as the username and what has been given as the password.) Therefore, each form control requires a name attribute. The value of this attribute identifies the form control and is sent along with the information they enter to the server..

maxlength

You can use the **maxlength** attribute to limit the number of characters a user may enter into the text field. Its value is the number of characters they may enter. For example, if you were asking for a year, the **maxlength** attribute could have a value of 4.

Password input

type="password"

<input> elements of type **"password"** provide a way for the user to securely enter a password. The element is presented as a one-line plain text editor control in which the text is obscured so that it cannot be read, usually by replacing each character with a symbol such as the asterisk **("*")** or a dot **(" • ").**

name

The **name** attribute indicates the name of the password input, which is sent to the server with the password the user enters.

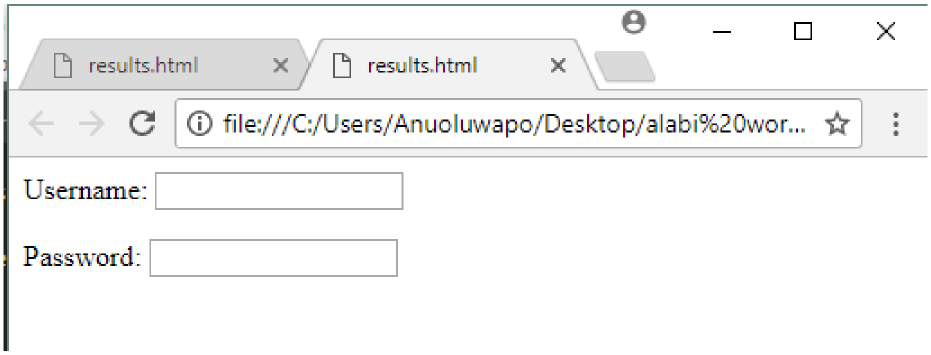
html

```
<body>
      <form action="http://www.alabiansolutions.com/login.php">
            <label for="user">Username: </label>
```

```
                        <input type="text" name="username" id=" user "
                        maxlength="30" />

                  <label for="password">Password: </label>
                        <input type="password" name="password" id="password"
                        maxlength="30" />
            </form>
      </body>
```

Result



Username:

Password:

Textarea

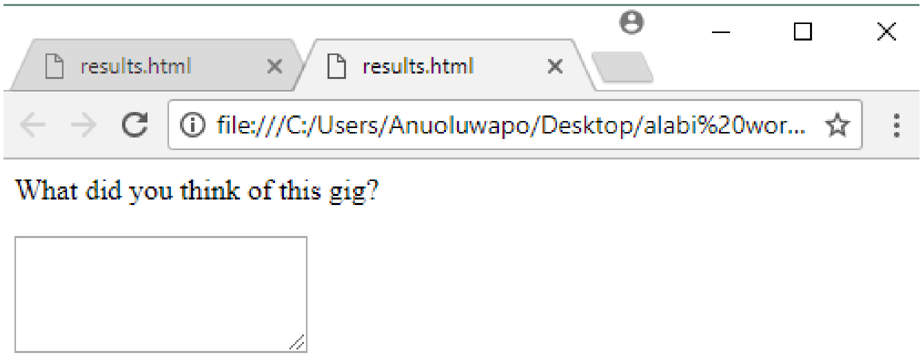
The **<textarea>** element is used to create a mutli-line text input. Unlike other input elements this is not an empty element. It should therefore have an opening and a closing tag.

Any text that appears between the opening **<textarea>** and closing **</textarea>** tags will appear in the text box when the page loads.

html

```
<form action="process.php">
      <label for="comment">What did you think of this gig?</label><br><br>
      <textarea name="comment" id="comment"></textarea>
</form>
```

Results



What did you think of this gig?

Radio button

Radio button is used when a user must select one of a number of options.

type="radio"

Radio buttons allow users to pick just one of a number of options.

name

The **name** attribute is sent to the server with the value of the option the user selects. When a question provides users with options for answers in the form of radio buttons, the value of the *name* attribute should be the same for all of the radio buttons used to answer that question.

value

The *value* attribute indicates the value that is sent to the server for the selected option. The value of each of the buttons in a group should be different (so that the server knows which option the user has selected).

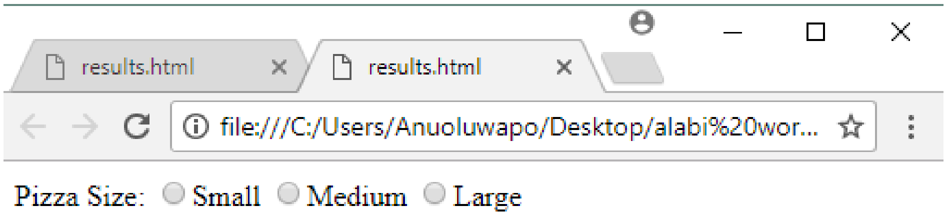
checked

The *checked* attribute can be used to indicate which value (if any) should be selected when the page loads. The value of this attribute is *checked*. Only one radio button in a group should use this attribute.

Html

```
<body>
      Pizza Size:
      <label>
            <input type="radio" name="size" value="small"/>Small
      </label>
      <label>
            <input type="radio" name="size" value="medium"/>Medium
      </label>
      <label>
            <input type="radio" name="size" value="large"/>Large
      </label>
 </body>
```

Result



Pizza Size: ○ Small ○ Medium ○ Large

Checkbox

You use the checkbox to select and unselect one or more options.

type="checkbox"

Checkboxes allow users to select (and unselect) one or more options in answer to a question.

name

The **name** attribute is sent to the server with the value of the option(s) the user selects. When a question provides users with options for answers in the form of checkboxes, the value of the *name* attribute should be the same for all of the buttons that answer that question.

value

The **value** attribute indicates the value sent to the server if this checkbox is checked.

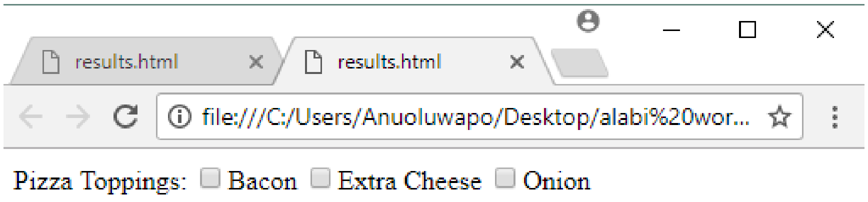
checked

The *checked* attribute indicates that this box should be checked when the page loads. If used, its value should be *checked*.

html

```
<body>
      Pizza Toppings:
      <label>
            <input type="checkbox" value="bacon" />Bacon
      </label>
      <label>
            <input type="checkbox" value="extra cheese" />Extra Cheese
      </label>
      <label>
            <input type="checkbox" value="extra cheese" />Onion
      </label>
 </body>
```

Result



Pizza Toppings: □ Bacon □ Extra Cheese □ Onion

Dropdown list box

A drop down list box (also known as a select box) allows users to select one option from a drop down list. The *<select>* element is used to create a drop down list box. It contains two or more *<option>* elements.

name

The *name* attribute indicates the name of the form cont rol being sent to the server, along with the value the user selected.

<option>

The **<option>** element is used to specify the options that the user can select from. The words between the opening *<option>* and closing **</option>** tags will be shown to the user in the drop down box.

value

The **<option>** element uses the value attribute to indicate the value that is sent to the server along with the name of the control if this option is selected.

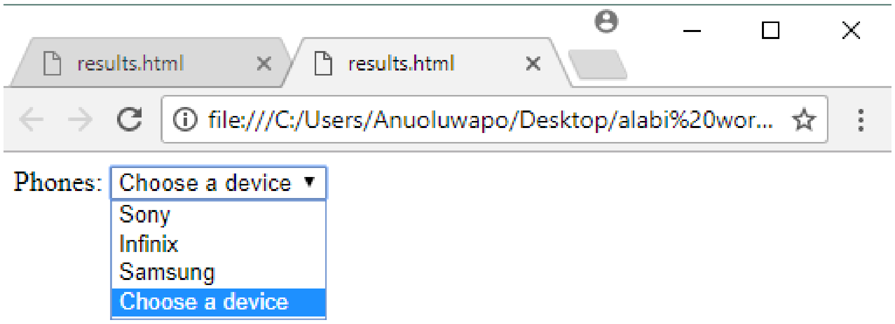
selected

The *selected* attribute can be used to indicate the opt ion that should be selected when the page loads. The value of this attribute should be *selected*.

html

```
<body>
      <label>Phones:
            <select name="devices">
              <option value="tecno">Sony</option>
              <option value="infinix">Infinix</option>
              <option value="samsung">Samsung</option>
              <option value="sony" selected>Choose a device</option>
            </select>
      </label>
 </body>
```

Result



File input box

If you want to allow users to upload a file (for example an image, video, mp3, or a PDF), you will need to use a file input box.

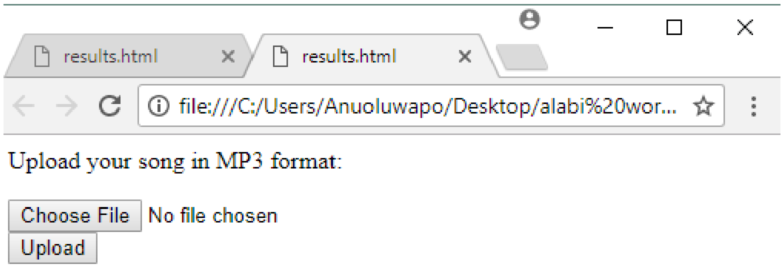
type="file"

This type of input creates a box that looks like a text input followed by a *browse* button. When the user clicks on the *browse* button, a window opens up that allows them to select a file from their computer to be uploaded to the website

html

```
<form action=”process.php” method="post">
      <p>Upload your song in MP3 format:</p>
      <input type="file" name="user-song" /><br />
      <input type="submit" value="Upload" />
</form>
```

result



Upload your song in MP3 format:

type="submit"

The submit button is used whenever you want to submit a form and the markup looks like this:

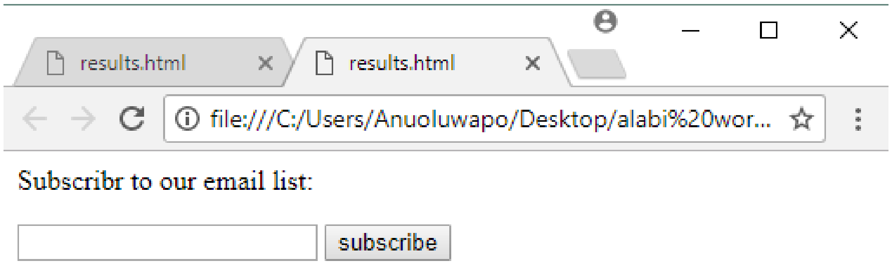
html

```
<body>

      <form action="process.php" method="post">
            <p>Subscribr to our email list:</p>
            <input type="text" name="email" value="email" />
            <input type="submit" value="subscribe" />
      </form>

</body>
```

result



Subscribr to our email list:

name

It can use a name attribute but it does not need to have one.

value

The value attribute is used to control the text that appears on a button. It is a good idea to specify the words you want to appear on a button because the default value of buttons on some browsers is *"Submit query"* and this might not be appropriate for all kinds of form.

Reset button

type="reset"

The reset button is used to clear al inputs by the user and the markup looks like this:

```
<input type="reset" value="Reset" />
```

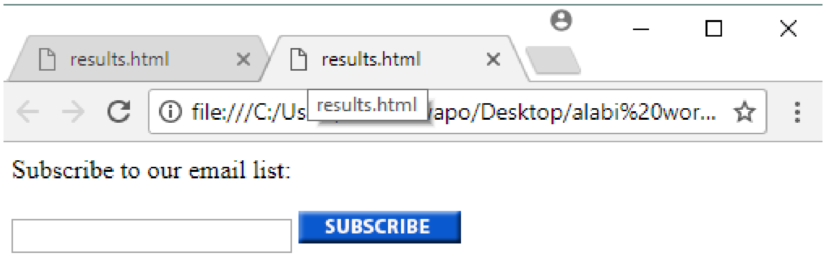
Image button

If you want to use an image for the submit button, you can give the **type** attribute a value of **image**. You can provide **src** attribute just as you would with **<img>** tag.

html

```
<form action="http://www.alabiansolutions.com/subscribe.php">
      <p>Subscribe to our email list:</p>
      <input type="text" name="email" />
      <input type="image" src="subscribe.png" width="100" height="20"
      alt="Subscribe" />
</form>
```

result



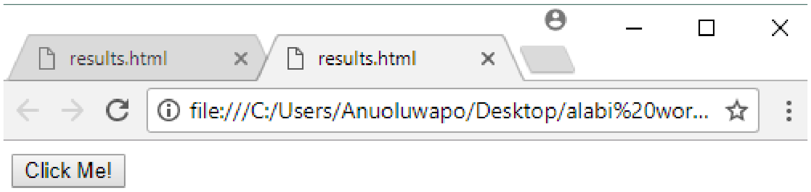
Subscribe to our email list:

Button Tag

The <**button**> **tag** defines a clickable **button**. Inside a <**button**> **element** you can put content, like text or images. This is the difference between this **element** and **buttons** created with the <input> **element**. Tip: Always specify the type attribute for a <**button**> **element**.

```
<button type="submit">Click Me!</button>
```

result



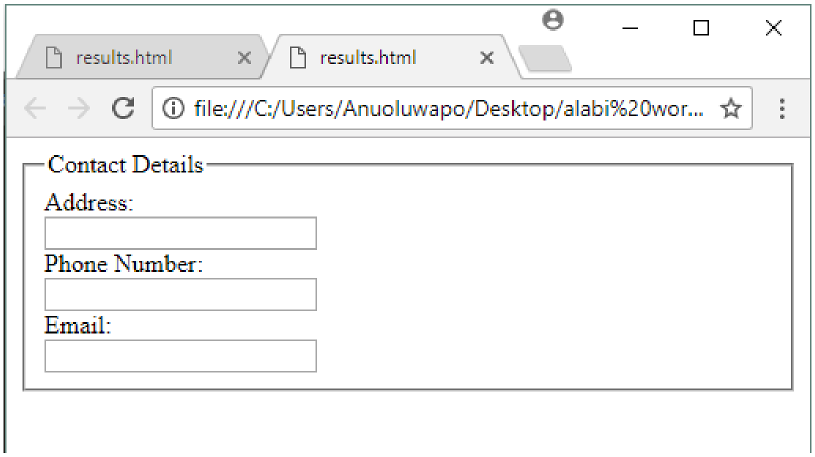
Fieldset element

The fieldset element is use to group related form controls together. This is very beneficial for longer forms.

html

```
<form method="post">
       <fieldset>
              <legend>Contact Details</legend>
              <label>Address:<br>
              <input type="text" name="text"><br>
              </label>
              <label>Phone Number:<br>
              <input type="number" name="number"><br>
              </label>
              <label>Email:<br>
              <input type="email" name="email"><br>
              </label>
       </fieldset>
</form>
```

result



Contact Details
Address:
Phone Number:
Email:

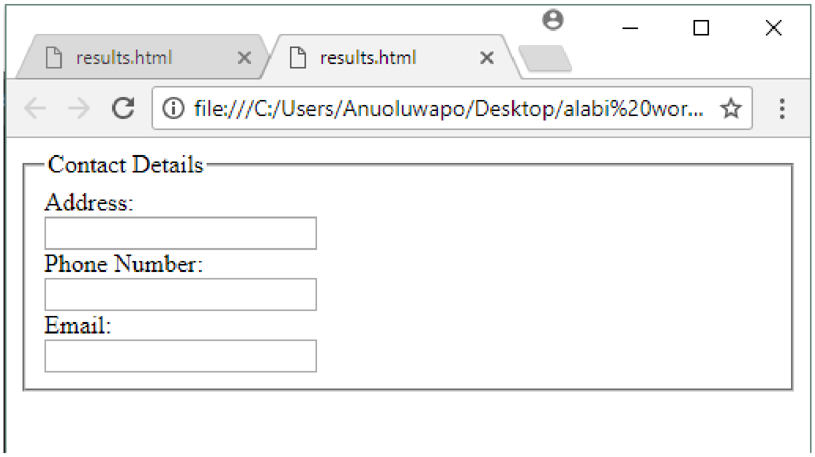
Legend element

The **<legend>** element can come directly after the opening <fieldset> tag and contains a caption which helps identify the purpose of that group of form controls.

html

```
<form method="post">
      <fieldset>
            <legend>Contact Details</legend>
            <label>Address:<br>
                  <input type="text" name="text"><br>
            </label>
            <label>Phone Number:<br>
                  <input type="number" name="number"><br>
            </label>
            <label>Email:<br>
                  <input type="email" name="email"><br>
            </label>
      </fieldset>
</form>
```

result



Contact Details

Address:

Phone Number:

Email:

New html5 input types

- Color
- Date
- Datetime
- Datetime - local
- Email
- Month
- Number
- Range
- Search
- Tel
- Time
- Url
- Week

New html5 attributes

- Autocomplete
- Autofocus
- Form
- Formaction
- Formenctype
- Formmethod
- Formnovalidate
- Formtarget

- Height and width
- List
- Min and max
- Multiple
- Pattern (regexp)
- Placeholder
- Required
- Step
- Readonly
- Number

Chapter 3

Iframe and Multimedia

Iframe

You can use HTML to embed other webpages in your own page using an *iframe* element
pointing at a URL:

Iframe embeds: Google Map

You use iframe to embede google map to your webpage.

Code:

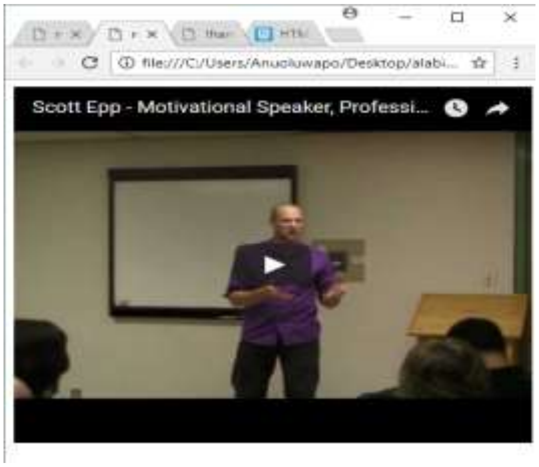
```
<iframe
src="https://www.google.com/maps/embed?pb=!1m18!1m12!1m3!1d3963.341775346873!
2d3.3422253148425853!3d6.604381995223933!2m3!1f0!2f0!3f0!3m2!1i1024!2i768!4f1
3.1!3m3!1m2!1s0x103b8d7c33eb87b3%3A0xfc23c9556f669273!2sAlabian+Solutions+Lim
ited!5e0!3m2!1sen!2sng!4v1516009132030" width="600" height="450"
frameborder="0" style="border:0" allowfullscreen></iframe>
```

Iframe embeds: Youtube

html:

```
<body>
      <iframe width="450" height="400"
      src="https://www.youtube.com/embed/MhPGaOTiK0A"
      frameborder="0" allowfullscreen></iframe>
</body>
```

result:


file:///C:/Users/Anuoluwapo/Desktop/alabi...
Scott Epp - Motivational Speaker, Professi...

Multimedia in HTML5

In HTML5, you can embed audio or video using native HTML tags, and if the browser supports the tags, it will give users cont rols to play the file. The audio and video tags are both very new, so they only work in the most recent versions of modern browsers. The most popular video formats are:

- MPEG4: *.mp4, .m4v*
- Flash Video: *.flv*
- Audio Video Inter leave: *.avi*
- Ogg: *.ogv*
- WebM: *.webm*

You can visit this website (www.mirovideoconverter.com) to convert a video file f romformat to the other.

The video element:

The video element embeds a video player for a particular video file.

You can use these attributes to customize the player: poster, preload, autoplay, loop, and controls.

Preload

This attribute tells the browser what to do when the page loads. It can have one of three values:

- ***none:***
  The browser should not load the video until the user presses play.
- ***auto:***
  The browser should download the video when the page loads.
- ***metadata:***
  The browser should just collect informat ion such as the size, first frame, track list, and duration.

src

This attribute specifies the path to the video.

poster

This attribute al lows you to specify an image to show whi le the video is downloading or until the user tel ls the video to play.

width, height

These attributes specify the size of the player

controls

When used, this attribute indicates that the browser should supply its own controls for playback.

autoplay

When used, this attribute specifies that the file should play automatically.

loop

When used, this attribute indicates that the video should start playing again once it has ended.

Multiple video format

As we saw, different browsers support different formats. Thankfully, HTML5 lets us specify multiple sources for the video and audio elements, so browsers can use whichever works for them.

html:

```
<video poster="images/calvin.jpg" controls preload="none"
width="450" height="420">
      <source src="calvin.mp4" type="video/mp4" />
      <source src="calvin.webm" type="video/webm" />
      <source src="calvin.ogv" type="video/ogv" />
      <p>Calvin Harris music video</p>
</video>
```

The audio element

The audio element is used for embedding an audio player inside a page for a particular audio flle. You can use various attributes to customize the player: **preload**, **autoplay**, **loop, and controls.**

autoplay

The autoplay attribute is a boolean attribute. When present, the audio will automatically start playing as soon as it can do so without stopping.

loop

The loop attribute is a boolean attribute. When present, it specifies that the audio will start over again, every time it is finished.

html:

```
<body>
      <audio src="avicii.mp3" controls="true"></audio> </body>
```

control

The controls attribute adds audio controls, like play, pause, and volume. The **<source>** element allows you to specify alternative audio files which the browser may choose from. The browser will use the first recognized format. The text between the **<audio>** and **</audio>** tags will only be displayed in browsers that do not support the **<audio>** element.

html:

```
<audio src="audio/test-audio.ogg" controls autoplay>
   <p>This browser does not support our audio format.</p>
</audio>
```

Multiple audio format

```
<audio controls autoplay>
      <source src="audio/test-audio.ogg" />
      <source src="audio/test-audio.mp3" />
      <p>This browser does not support our audio format.</p>
</audio>
```

You can upload your audio files to a hosted service like www.SoundCloud.com and www.MySpace.com this is the same way you host your videos on youtube.

Chapter 4

Meta tags, comments, block level and inline elements

Meta tags

The <meta> element lives inside the <head> element and contains information about that web page. Metadata will not be displayed on the page, but will be machine parsable. Meta elements are typically used to specify page description, keywords, author of the document, last modified and other metadata.

```
<head>
  <meta charset="utf-8">
  <meta name="description" content="free web tutorials">
  <meta name="keywords" content="html,css,xml,javascript">
  <meta name="author" content="john doe">
  <meta name="viewport" content="width=device-width, initialscale=1.0">
</head>
```

description

meta description **tag** in HTML is the 160 character snippet used to summarize a web page's content. Search engines sometimes use these snippets in search results to let visitors know what a page is about before they click on it.

```
<meta name="description" content="...summary of web page...">
```

keywords

A series of keywords you deem relevant to the page in question.

```
<meta name="keywords"  content="sex, drugs, rock & roll">
```

author

This defines the author of the web page.

```
<meta name="author" content="alabian solutions ">
```

pragma

This prevents the browser from caching the page. (That is, storing it locally to save time downloading it on subsequent visits.)

```
<meta http-equiv="pragma" content="no-cache">
```

expires

Because browsers often cache the content of a page, the expires option can be used to indicate when the page should expire (and no longer be cached). Note that the date must be specified in the format shown.

Comments

The comment tag is used to insert comments in the source code. Comments are not displayed in the browsers. You can use comments to explain your code, which can help you when you edit the source code at a later date. This is especially useful if you have a lot of code.

```
<!--This is a comment. Comments are not displayed in the browser-->
      <p>This is a paragraph.</p>
```

Block level

In general, HTML elements can be divided into two categories: block level and inline elements. HTML block level elements can appear in the body of an HTML page. It can contain another block level as well as inline elements. By default, block-level elements begin on new lines. Block level elements create larger structures (than inline elements).

List of block level elements

- p
- h1,
- h2,
- h3,
- h4,
- h5,
- h6.
- ol,
- ul.
- pre.
- blockquote.
- dl.
- div.

Inline elements

HTML inline level elements can appear in the body of an HTML page. It can contain data and other **inline** elements. By default, **inline elements** do not begin on new lines. **Inline elements** create shorter structures (than block level elements).

- b,
- big,
- i,
- abbr,
- em,
- strong,
- a,
- br,
- img,
- q,
- span,
- sub,
- sup
- button,
- input,
- label,
- select,
- textarea

Grouping Text & Elements in a Block

<div> (Division) tag

The div tag is a block level element it is used to group both inline element and block level element.

Grouping Text & Elements in a Inline

<span> tag

The span tag is an inline element it is mostly use to group inline element.

Examples

```
<img src="http://alabiansolutions.com/images/clock.gif" width="100px">
<span>You can be a Web Designer this Yea</span>
```