

INTRODUCTION TO HTML

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- DIGITAL DREAMS -

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Definition

HTML (Hypertext Markup Language) is the set of markup symbols or codes inserted in a file intended for display on a World Wide Web browser page.

The markup tells the Web browser how to display a Web page's words and images for the user.

Web browsers

The purpose of a web browser (Chrome, IE, Firefox, Safari) is to read HTML documents and display them.

The browser does not display the HTML tags, but uses them to determine how to display the document:

Web browsers can read HTML files and compose them into visible or audible web pages. Browsers do not display the HTML tags and scripts, but use them to interpret the content of the page. HTML describes the structure of a website semantically along with cues for presentation, making it a markup language, rather than a programming language.

HTML Versions

Version	Year
➤ HTML	1991
➤ HTML 2.0	1995
➤ HTML 3.2	1997
➤ HTML 4.01	1999
➤ XHTML	2000
➤ HTML5	2014

Tags and Elements

in HTML it is the tags that are the markup. The special meaning these tags give is a description of the structure of the document. For example the opening paragraph tag says “This is the beginning of a paragraph” and the closing tag says “This is the end of the paragraph.” Without the markup, the words in the middle would just be another bit of text; it would not be clear that they formed a paragraph.

HTML Tags

Tag	Description
<u><!--...--></u>	Defines a comment
<u><!DOCTYPE></u>	Defines the document type
<u><a></u>	Defines a hyperlink
<u><abbr></u>	Defines an abbreviation or an acronym
<u><acronym></u>	Not supported in HTML5. Use <u><abbr></u> instead. Defines an acronym
<u><address></u>	Defines contact information for the author/owner of a document
<u><applet></u>	Not supported in HTML5. Use <u><embed></u> or <u><object></u> instead. Defines an embedded applet
<u><area></u>	Defines an area inside an image-map
<u><article></u>	Defines an article

HTML Tags

<u><aside></u>	Defines content aside from the page content
<u><audio></u>	Defines sound content
<u></u>	Defines bold text
<u><base></u>	Specifies the base URL/target for all relative URLs in a document
<u><basefont></u>	Not supported in HTML5. Use CSS instead. Specifies a default color, size, and font for all text in a document
<u><bdi></u>	Isolates a part of text that might be formatted in a different direction from other text outside it
<u><bdo></u>	Overrides the current text direction
<u><big></u>	Not supported in HTML5. Use CSS instead. Defines big text
<u><blockquote></u>	Defines a section that is quoted from another source

HTML Tags

<u><body></u>	Defines the document's body
<u>
</u>	Defines a single line break
<u><button></u>	Defines a clickable button
<u><canvas></u>	Used to draw graphics, on the fly, via scripting (usually JavaScript)
<u><caption></u>	Defines a table caption
<u><center></u>	Not supported in HTML5. Use CSS instead. Defines centered text
<u><cite></u>	Defines the title of a work
<u><code></u>	Defines a piece of computer code
<u><col></u>	Specifies column properties for each column within a <colgroup> element
<u><colgroup></u>	Specifies a group of one or more columns in a table for formatting

HTML Tags

<u><datalist></u>	Specifies a list of pre-defined options for input controls
<u><dd></u>	Defines a description/value of a term in a description list
<u></u>	Defines text that has been deleted from a document
<u><details></u>	Defines additional details that the user can view or hide
<u><dfn></u>	Represents the defining instance of a term
<u><dialog></u>	Defines a dialog box or window
<u><dir></u>	Not supported in HTML5. Use <u></u> instead. Defines a directory list
<u><div></u>	Defines a section in a document
<u><dl></u>	Defines a description list
<u><dt></u>	Defines a term/name in a description list
<u></u>	Defines emphasized text

HTML Tags

<u><embed></u>	Defines a container for an external (non-HTML) application
<u><fieldset></u>	Groups related elements in a form
<u><figcaption></u>	Defines a caption for a <figure> element
<u><figure></u>	Specifies self-contained content
<u></u>	Not supported in HTML5. Use CSS instead. Defines font, color, and size for text
<u><footer></u>	Defines a footer for a document or section
<u><form></u>	Defines an HTML form for user input
<u><frame></u>	Not supported in HTML5. Defines a window (a frame) in a frameset
<u><frameset></u>	Not supported in HTML5. Defines a set of frames
<u><h1> to <h6></u>	Defines HTML headings

HTML Tags

<u><head></u>	Defines information about the document
<u><header></u>	Defines a header for a document or section
<u><hr></u>	Defines a thematic change in the content
<u><html></u>	Defines the root of an HTML document
<u><i></u>	Defines a part of text in an alternate voice or mood
<u><iframe></u>	Defines an inline frame
<u></u>	Defines an image
<u><input></u>	Defines an input control
<u><ins></u>	Defines a text that has been inserted into a document
<u><kbd></u>	Defines keyboard input
<u><label></u>	Defines a label for an <input> element
<u><legend></u>	Defines a caption for a <fieldset> element

HTML Tags

<u></u>	Defines a list item
<u><link></u>	Defines the relationship between a document and an external resource (most used to link to style sheets)
<u><main></u>	Specifies the main content of a document
<u><map></u>	Defines a client-side image-map
<u><mark></u>	Defines marked/highlighted text
<u><menu></u>	Defines a list/menu of commands
<u><menuitem></u>	Defines a command/menu item that the user can invoke from a popup menu
<u><meta></u>	Defines metadata about an HTML document
<u><meter></u>	Defines a scalar measurement within a known range (a gauge)
<u><nav></u>	Defines navigation links
<u><noframes></u>	Not supported in HTML5. Defines an alternate content for users that do not support frames

HTML Tags

<u><noscript></u>	Defines an alternate content for users that do not support client-side scripts
<u><object></u>	Defines an embedded object
<u></u>	Defines an ordered list
<u><optgroup></u>	Defines a group of related options in a drop-down list
<u><option></u>	Defines an option in a drop-down list
<u><output></u>	Defines the result of a calculation
<u><p></u>	Defines a paragraph
<u><param></u>	Defines a parameter for an object
<u><picture></u>	Defines a container for multiple image resources
<u><pre></u>	Defines preformatted text
<u><progress></u>	Represents the progress of a task
<u><q></u>	Defines a short quotation

HTML Tags

<u><rp></u>	Defines what to show in browsers that do not support ruby annotations
<u><rt></u>	Defines an explanation/pronunciation of characters (for East Asian typography)
<u><ruby></u>	Defines a ruby annotation (for East Asian typography)
<u><s></u>	Defines text that is no longer correct
<u><samp></u>	Defines sample output from a computer program
<u><script></u>	Defines a client-side script
<u><section></u>	Defines a section in a document
<u><select></u>	Defines a drop-down list
<u><small></u>	Defines smaller text
<u><source></u>	Defines multiple media resources for media elements (<video> and <audio>)
<u></u>	Defines a section in a document

HTML Tags

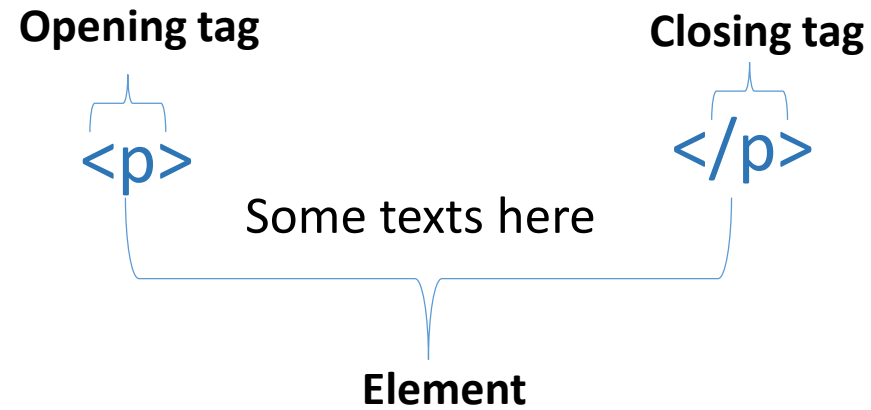
<u><strike></u>	Not supported in HTML5. Use <u></u> or <u><s></u> instead. Defines strikethrough text
<u></u>	Defines important text
<u><style></u>	Defines style information for a document
<u><sub></u>	Defines subscripted text
<u><summary></u>	Defines a visible heading for a <details> element
<u><sup></u>	Defines superscripted text
<u><svg></u>	Defines a container for SVG graphics
<u><table></u>	Defines a table
<u><tbody></u>	Groups the body content in a table
<u><td></u>	Defines a cell in a table
<u><template></u>	Defines a template
<u><textarea></u>	Defines a multiline input control (text area)

HTML Tags

<u><tfoot></u>	Groups the footer content in a table
<u><th></u>	Defines a header cell in a table
<u><thead></u>	Groups the header content in a table
<u><time></u>	Defines a date/time
<u><title></u>	Defines a title for the document
<u><tr></u>	Defines a row in a table
<u><track></u>	Defines text tracks for media elements (<video> and <audio>)
<u><tt></u>	Not supported in HTML5. Use CSS instead. Defines teletype text
<u><u></u>	Defines text that should be stylistically different from normal text
<u></u>	Defines an unordered list
<u><var></u>	Defines a variable
<u><video></u>	Defines a video or movie
<u><wbr></u>	Defines a possible line-break

Tags and Elements

From the HTML document elements you will notice pairs of angular brackets with some texts `<html></html>`.



Attributes

The html elements have attributes which describes the element. The attributes are added on the opening tag and each has a name and value.

The name is the property you want to set and the value is what you want the value of the property to be.

Example: the element has size, face, color as attributes with different values. The values should be enclosed in double quotation marks.

**

HTML Elements

- Document Elements
 - body element
- Style and Appearance Elements
- Anchor Element: Links and Named Targets
- Image Element
- List Elements
- Form Elements
- Table Elements
- Media Elements

Document Elements

<!DOCTYPE html>

<html>

<head>

<title>Welcome to digital dreams official website</title>

<meta> Defines metadata about an HTML document

</head>

<body>

A simple page put together using HTML

</body>

</html>

Rules for saving html/css files

- When saving file that has two words like about us, our services etc. Join the words with underscore(_) without a white space.
- Alphabets must be the first character e.g about_us2 and not 2about_us.
- Must end with the suffix “.html” and so with other file types like css as “.css” and so on.



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Rules for saving html/css files

- File names and folder names should not contain white space, punctuations or special characters e.g. @#\$%* etc.
- Use lower case to avoid unnecessary error, especially for tags, attributes and selectors.
- Use short names that indicate the content of the page or function of the class/id.

Rules for saving html/css files

- Name your images, sounds or videos with names that will easily remind you of the content e.g. logo.png, banner.jpg not image1 or picture1, sound1 etc.
- Always create a subfolder for files like images, CSS, JavaScript etc.
- Give your anchors descriptive name to enable you remember where it links to later.

Document type declaration

The <!DOCTYPE> declaration helps the browser to display a web page correctly. To display a document correctly, the browser must know both type and version. The doctype declaration is not case sensitive. All cases are acceptable:

<!DOCTYPE html>

<!DOCTYPE HTML>

<!doctype html>

<!Doctype Html>

HTML Document Elements

- The **DOCTYPE** declaration defines the document type to be HTML
- **UTF** stands for Unicode Transformation Format. The '**8**' means it uses **8-bit** blocks to represent a character.
- The text between **<html>** and **</html>** mark the beginning and end of the whole html document. It Tells browser that the included text is in HTML format. So it describes an HTML document.
- The text between **<head>** and **</head>** provides information about the document
- The text between **<title>** and **</title>** provides a title for the document
- The text between **<body>** and **</body>** describes the visible page content

HTML Body Elements

Heading: <h1>

They are h1, h2, h3, h4, h5 and h6. Note an h4 should be a sub-heading of an h3, which should be a sub-heading of an h2.

Paragraphs <p>.</p> Defines paragraphs in the document. Usually paragraphs

**Line Break:
** Puts a single break in the middle of a paragraph list.

horizontal line: <hr> To create horizontal line across the page (or table cell)

e.g. <hr size="10" width="50%" color="red">

HTML Body Elements

Comment: <!--...--> defines comments i.e texts/ codes that will not display on the browser

Abbreviation:<abbr> Defines an abbreviation or an acronym

Blockquote:<blockquote> Defines a section that is quoted from another source

HTML Body Elements

Cite:<cite>

Defines the title of a work

Emphasis:

Defines emphasized text

Blockquote:<blockquote> Defines a section that is quoted from another source



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HTML Body Elements

<base> Specifies the base URL/target for all relative URLs in a document

<link> Defines the relationship between a document and an external resource (most used to link to style sheets)

<script> Defines a client-side script

Creating layouts

Hands-on:

Draw on a paper 5 different ways to layout a page using 8 box grids.

HTML Table Elements

<table> Defines a table

<caption> Defines a table caption

<th> Defines a header cell in a table

<thead> Groups the header content in a table

<tbody> Groups the body content in a table

<td> Defines a cell in a table

HTML Table Elements

<tr> Defines a row in a table

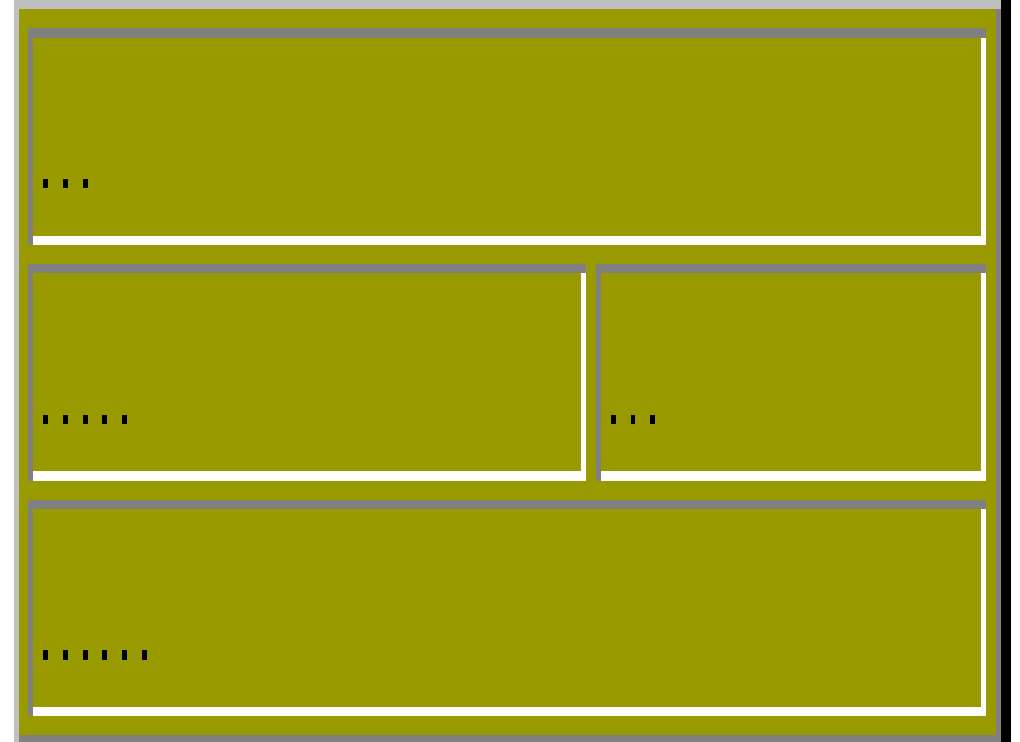
<col> Specifies column properties for each column within a
 <colgroup> element

<colgroup> Specifies a group of one or more columns in a table
for formatting

<tfoot> Groups the footer content in a table

Table Elements

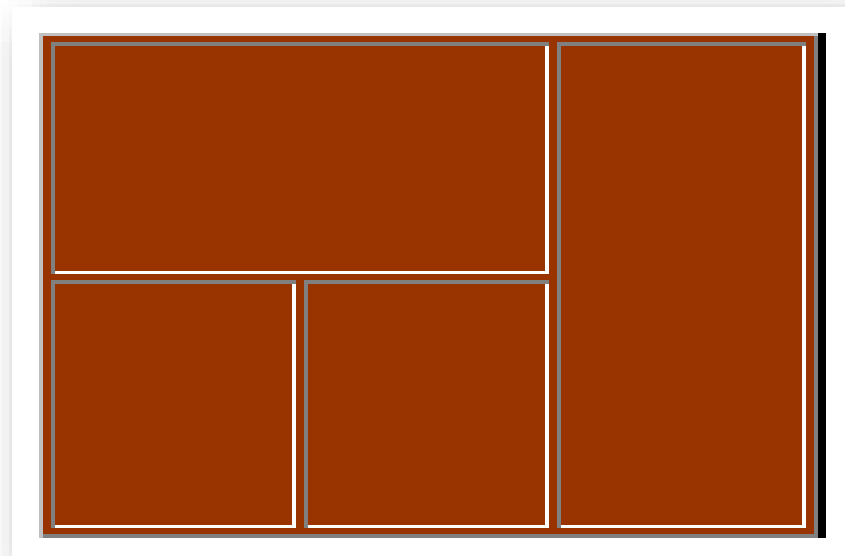
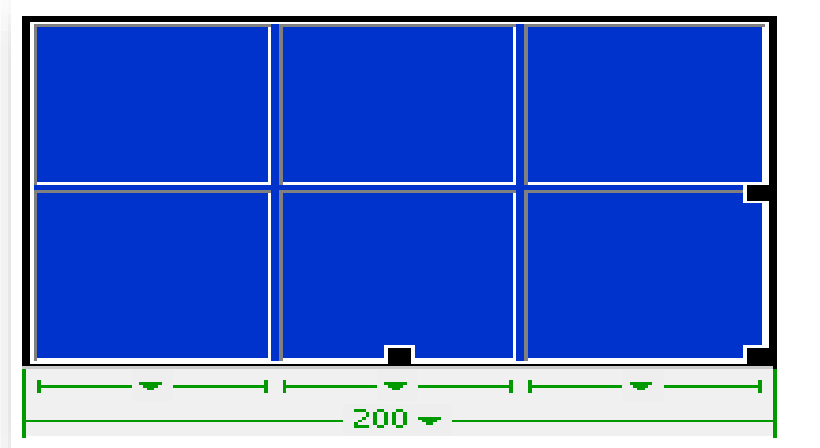
```
<table width="200" border="1">  
  <tr>  
    <td colspan="2">...</td>  
  </tr>  
  <tr>  
    <td>.....</td>  
    <td>...</td>  
  </tr>  
  <tr>  
    <td colspan="2">.....</td>  
  </tr>  
</table>
```



...	
.....	...
.....	

Table Elements

```
<table width="200"
border="1">
  <tr>
    <td colspan="2">...</td>
    <td rowspan="2">...</td>
  </tr>
  <tr>
    <td>.....</td>
    <td>.....</td>
  </tr>
</table>
```





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Table Elements

`<table>...</table>`

The table element defines the table.

`<tr>...</tr>`

The `<tr>` element defines a table row.

`<td></td>`

The td element defines a data cell.

Form Elements

Forms are used to collect data inputted by a user. They tend to be used in conjunction with a programming language to process the information inputted by the user.

So a form element will look something like this:

<form action="processingscript.php" method="post">

<form>....</form> Defines the form and within this tag, **action="processingscript.php"** An action attribute is needed to tell the form where its contents will be sent to.

method="post"> The method attribute tells the form how the data in it is going to be sent and it can have the value get, post and select.

Form Elements

```
<form action="processingscript.php" method="post">
```

```
    First name:<br>
```

```
    <input type="text" name="firstname" value="Mickey">
```

```
    <br>
```

```
    Last name:<br>
```

```
    <input type="text" name="lastname" value="Mouse">
```

```
    <br><br>
```

```
    <input type="submit" value="Submit">
```

```
</form>
```

Form Elements

<textarea> Defines a multiline input control (text area)

<select> Defines a drop-down list

<option> Defines an option in a drop-down list

<label> Defines a label for an <input> element

<input> Defines an input control

<keygen> Defines a key-pair generator field (for forms)

<fieldset> Groups related elements in a form

<optgroup> Defines a group of related options in a drop-down list

Style and Appearance Elements

`.....` To display Very important text as Bold.

`...` Generally displays text as Italic

`... ` Used to displays text as bold

`<U>Underlined Text</U>` Generally to underline text

`< FONT SIZE="+2" COLOR="green">....` To change text color and sizes

`<marquee>...</marquee>` To create a moving text/image effect

`<style> </style>` Defines style information for a document

Style and Appearance Elements

- <sup>** Defines superscripted text
- ** Defines a section in a document
- <sub>** Defines subscripted text
- <summary>** Defines a visible heading for a <details> element
- <pre>** Defines preformatted text
- <s>** Defines text that is no longer correct
- <q>** Defines a short quotation
- ** Defines text that has been deleted from a document

Style and Appearance Elements

<mark> Defines marked/highlighted text

<dfn> Represents the defining instance of a term

<div> Defines a section in a document

List Elements

List type

List type defines how the list items are labeled using the list item element. The default type is bullets, but you are able to change this to circles and to squares.

```
<li> Orange</li>
```

```
<li>Green</li>
```

```
<li>Blue</li>
```



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List Elements

When we want to use a list on a website, HTML provides three different types to choose from: unordered, ordered, and description lists.

unordered list

Creating an unordered list in HTML is accomplished using the unordered list block-level element.

```
<ul>  
  <li>Orange</li>  
  <li>Green</li>  
  <li>Blue</li>  
</ul>
```


List Elements

ordered list

The main difference between an ordered list and an unordered list is that instead of using a dot /bullets as the default list item marker, an ordered list uses numbers.

```
<ol>
```

```
<li>Education </li>
```

```
<li>Knowledge</li>
```

```
<li>Power</li>
```

```
</ol>
```

List Elements

ordered list attribute

The ordered list has an attribute called type.

The type attribute can be used in the following ways:

type="1" The list items will be numbered with numbers (default)

type="A" The list items will be numbered with uppercase letters

type="a" The list items will be numbered with lowercase letters

type="I" The list items will be numbered with uppercase roman numbers

type="i" The list items will be numbered with lowercase roman numbers

List Elements

ordered list attribute examples

```
<ol type="1">  
  <li>Beaf</li>  
  <li>Chicken</li>  
  <li>Fish</li>  
</ol>
```

```
<ol type="A">  
  <li>Beaf</li>  
  <li>Chicken</li>  
  <li>Fish</li>  
</ol>
```

```
<ol type="I">  
  <li>Beaf</li>  
  <li>Chicken</li>  
  <li>Fish</li>  
</ol>
```

```
<ol type="a">  
  <li>Beaf</li>  
  <li>Chicken</li>  
  <li>Fish</li>  
</ol>
```

```
<ol type="i">  
  <li>Beaf</li>  
  <li>Chicken</li>  
  <li>Fish</li>  
</ol>
```

List Elements

description list <dl>

Another type of list seen online (but not as often as unordered or ordered lists) is the description list.

Instead of using a element to mark up list items, the description list requires two block-level elements: the description term element, <dt>, and the description element, <dd>.

```
<dl>
```

```
  <dt>study</dt>
```

```
    <dd>The devotion of time</dd>
```

```
</dl>
```

Image Elements

``

The img tag is used to put an image in an HTML document and it looks like this:

```

```

`<map>` Defines a client-side image-map

Image Elements

To create an image map

Insert image into your html page,

Next switch to the design view

Then click on the image to select, go to the properties and choose any shape tool.

Click and drag on the image area of your choice. Then set the

Image Elements

```

```

```
<map name="locationmap">  
  <area shape="rect" coords="0,0,82,126" alt="headoffice"  
  href="headoffice.html">  
  <area shape="circle" coords="90,58,3" alt="branch" href="branch.html">  
  <area shape="circle" coords="124,58,8" alt="Abuja Office"  
  href="abujaoffice.html">  
</map>
```

Anchor/Link Elements

link Allows the user to retrieve the document at a specified URL by clicking on the contents of the element.

A link is specified using the `<a>` element. Anything between the opening `<a>` tag and the closing `` tag becomes part of the link a user can click in a browser.

`<a>` Defines a hyperlink.

Anchor/Link Elements

Before we continue on creating links, first let's understand how to save our web files.

Let's look at Directories and directory structures

A directory is simply the name for a folder on a Web site. (just the same way hard drive contains different folders, a Web site contains directories.) A Web site contains several directories and each directory contains different parts of a Web site. For example, a big site with several subsections will have a separate directory for each section of that site, and different types of files.

(such as images and style sheets) are usually kept in their own specific directory.

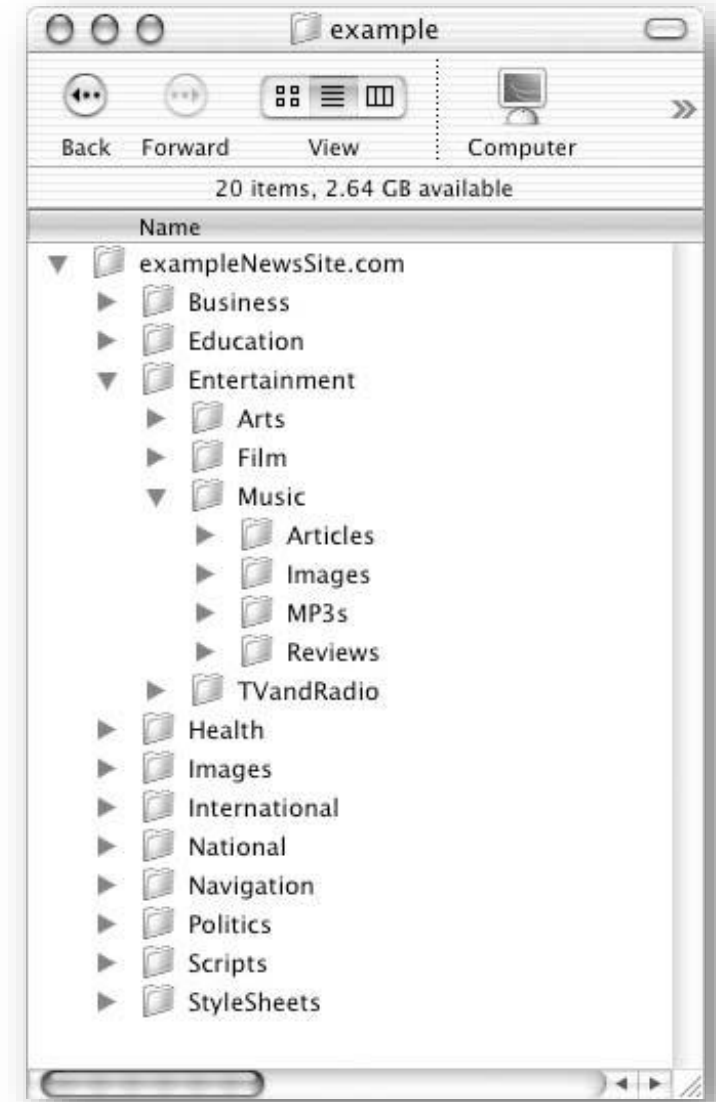
Anchor/Link Elements

Example of a website directory structure

We have *root folder*, that is main directory that holds the other directories *of the Web* site.

A *subdirectory* that is a directory within another directory.

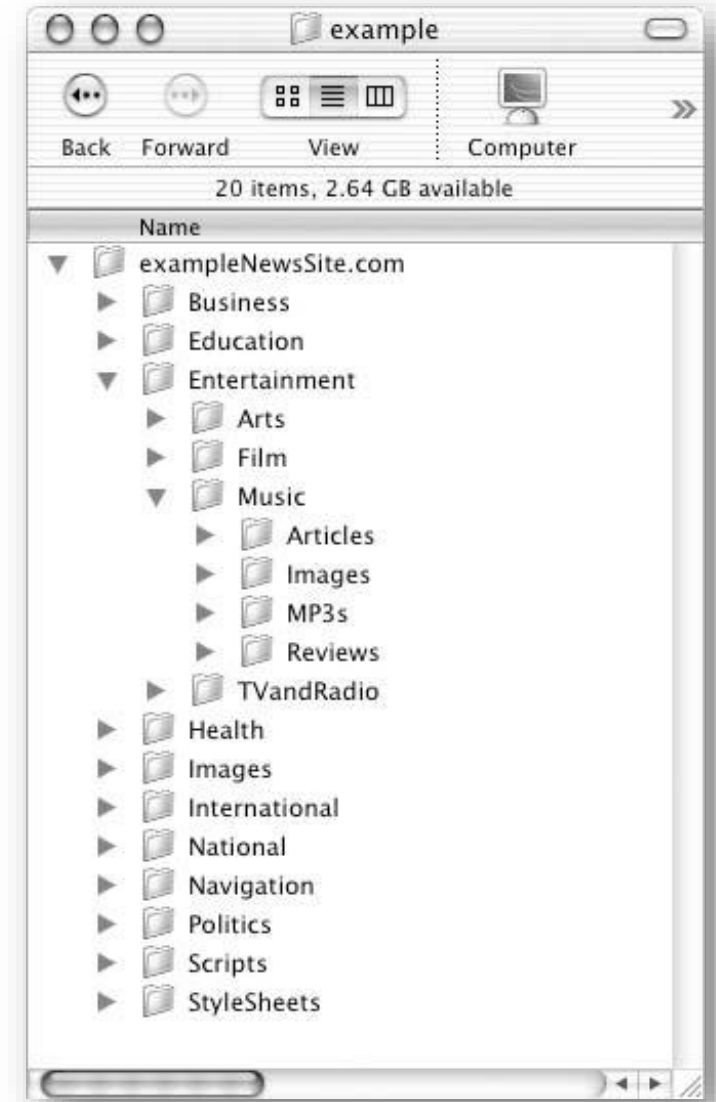
And a *parent directory*, that is a directory that contains another.



Anchor/Link Elements

exampleNewsSite.com is the root folder that contains business, entertainment, health, images etc. directories.

Music is a subdirectory of entertainment and parent directory of MP3s, Images etc.



Anchor/Link Elements

Ways of creating links:

Internal anchors/linking to other pages on your site

Linking to e-mail addresses

Destination anchors/linking to specific parts of a page on your site

External anchors/linking to other sites

Anchor/Link Elements

Linking to other documents/pages on your site:

To link to another documents, the opening `<a>` tag must carry an attribute called href, whose value is the page you are linking to.

Example, here is the `<body>` of a document called index.html.
This page contains a link to a second page called service.html

```
<a href="service.html">Our Sevices</a>
```

Note: Avoid white space immediately after the opening or before the closing<a> tags

Anchor/Link Elements

Linking to e-mail addresses

Here, the value of the href attribute starts with the keyword mailto, followed by a colon, and then the e-mail address you want the mail sent to.

As with any other link, the content of the <a> element is the visible part of the link shown in the browser, so you might choose to use the following:

```
<a href="mailto:youremail@whatever.com">E-mail us</a>.
```

Anchor/Link Elements

Destination Anchors

Destination anchors are mostly used on a web site with a long page, usually linking from bottom to top.

To create a destination anchor you need the `<a>` element, which must carry either a name or id attribute.

Before you can create links to each section of the page (using the source anchors), you have to add the destination anchors each containing an `<a>` element with the name attribute whose value uniquely identifies that section:

Anchor/Link Elements

Destination Anchors Examples

`<h1> linking to other pages </h1>`

`<h2> linking to emails </h2>`

`<h2> DestinationAnchors </h2>`

Then link the sections this way:

`<p>This page covers the following topics:`

``

`linking to other pages`

`linking to emails`

`Destination Anchors`

``

`</p>`



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Anchor/Link Elements

The value of the *href* attribute in the source anchors is the value of the *name* attribute preceded by a pound or hash sign (#).

If you want to link to a specific part of a page from a different Web site, you need to add the full URL for the page, followed by the pound or hash sign and then the value of the name attribute, like so:

<http://www.example.com/HTML/links.htm#SourceAnchors>

Anchor/Link Elements

Linking to other sites

If you want to link to a different site, you can use the following syntax, where you specify a full URL (*Uniform Resource Locator*) to the page you want to link to rather than just the Why not visit the

```
<a href=http://www.digitaldreams.com/ title="click to learn more ">Digital  
Dreams Website</a>?
```

This link points to the digital dreams site. As you can see, the value of the href attribute is the same as you would type into a browser if you wanted to visit digital dreams Web site. It is also good practice to use the title attribute on a link, as this will be displayed in a tooltip.

HTML5 Elements

<canvas> Used to draw graphics, on the fly, via scripting (usually JavaScript)

<section> Defines a section in a document (html5)

<dialog> Defines a dialog box or window

<footer> Defines a footer for a document or section

<header> Defines a header for a document or section (html5)

<progress> Represents the progress of a task

<nav> Defines navigation links (html5)

HTML5 Elements

- Address:<address>** Defines contact information for the author/owner of a document
- Article:<article>** Defines an article
- Aside:<aside>** Defines content aside from the page content
- <button>** Defines a clickable button
- <time>** Defines a date/time
- Code:<code>** Defines a piece of computer code
- <datalist>** Specifies a list of pre-defined options for input controls
- <details>** Defines additional details that the user can view or hide

HTML Media Elements

Audio:<audio> defines sound content, for adding sounds

Video:<video> defines a video or movie

Track:<track> Defines text tracks for media elements (<video> and <audio>)

<source> Defines multiple media resources for media elements (<video> and <audio>)

Other HTML Elements

<menu> Defines a list/menu of commands

<menuitem> Defines a command/menu item that the user can invoke from a popup menu

<noscript> Defines an alternate content for users that do not support client-side scripts

<object> Defines an embedded object

<meter> Defines a scalar measurement within a known range (a gauge)

<output> Defines the result of a calculation

<samp> Defines sample output from a computer program

<iframe> Defines an inline frame

Questions



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