

Internet and World Wide Web

Before you can do this, you must choose a **URL** (Uniform Resource Locator) for your site, such as `www.yahoo.com`. This is called the site's domain name.

- **HTTP** is the standard protocol for a web page. You can also get **HTTPS** with an extra s on the end that indicates it is a secure web page.
- Each **domain name must be unique** - you cannot purchase a domain that someone else already owns. This is because every URL is converted into a unique IP address. For example the web site `www.google.com` has the IP address `74.125.91.104`
- Once your site is online, you expect your web hosting company to provide
 - **Fast response time** - visitors hate waiting for a page to download because of a slow server.

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Web Design

- customer-facing part of the website. Also called front end of site.
- A web designer:
 - is concerned with how a site looks and how the customers interact with it.
 - Uses HTML, CSS, and JavaScript
 - Is competent in color scheming, graphic design, and information flow
 - Has strong perception, creativity, and imagination

Web Development

- Web development is the back-end of the website, the programming and interactions on the pages.
- A web developer:
 - Creates the inner workings of a website
 - focuses on how a site works and how the customers get things done.

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- **Conventional pages of a site**
 - **Home page** is the most important page of site and also called default page. It is displayed when a user browses to the site's domain name.
 - **Contact page** is a standard web page on a website used to allow the visitor to contact the website owner or people who are responsible for the maintenance of the site.
 - **Link page** is a type of web page found on some websites. The page contains a list of links the web page owner, a person or organization, finds notable to mention. Often this concerns an enumeration of partner organizations, clients, friends or related projects. This list gives an indication of the context of the site in question.
 - **Site map** (or sitemap) is a list of pages of a web site accessible to crawlers or users. It can be either a document in any form used as a planning tool for Web design, or a Web page that lists the pages on a Web site, typically organized in hierarchical fashion.

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Anatomy of a Web Page:

- **Page Title** This is the only web page element within the head section of the web page the visitor will see.
- **URL (Domain Name)** is the domain name of the website. If the visitor just typed `www.domainname.com` they would be taken to the home page of the website.
- **File Name** cannot contain any spaces! can be written as one long name, with hyphens, or with underscores.
- **Scroll Bars** are on the right side and bottom of the browser window. If there is a scroll bar at the bottom (horizontal scroll bar) your web page content is too wide for the browser window.
- **Header** is at the very top of the web page. It usually contains a logo for the website.
- **Navigation** A website can use a left navigation system, a right navigation system or a navigation system that spans horizontally right under the header or above the header.
- **Web Page Content** includes everything, the header, navigation system, web page footer
- **Footer** is the bottom section of the web page. This section is where you usually put your copyright notice, link to your privacy policy and your website contact information.

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Markup languages are designed for the processing, definition and presentation of text. The language specifies code for formatting, both the layout and style, within a text file. For example HTML,

- **HTML Tags**

- A command inserted in a document that specifies how the document, or a portion of the document, should be formatted.
- HTML tags normally come in pairs like `<p>` and `</p>`
- The first tag in a pair is the **start tag**, the second tag is the **end tag**
 - The end tag is written like the start tag, but with a slash before the tag name

- **Tag Attributes**

- Attributes provide additional information about an element
- Attributes are always specified in the start tag
- Attributes come in name/value pairs like: `name="value"`

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- **Nested Tags** Tag within another tag is called the nested tag.
- HTML is case insensitive
- Spacing b/w tags is ignored
- **Block Tags**
 - Some tags include line breaks. (No need to manually add new line tag.) These tags are called block-level tag. For example `<h1>`
- **Inline Tags**
 - Rest of the tags are called inline tags and effect only a few letters or words.
- HEAD is used for text and html tags that are not displayed on the page.
 - `<TITLE>` and `</TITLE>` tag contains the title of the page.
 - `<META>` tags contain useful information about webpage. These are usually used to improve ranking of page in search engines.
 - Can also contain `<SCRIPT>` and `</SCRIPT>` tags to use scripting language in html file.

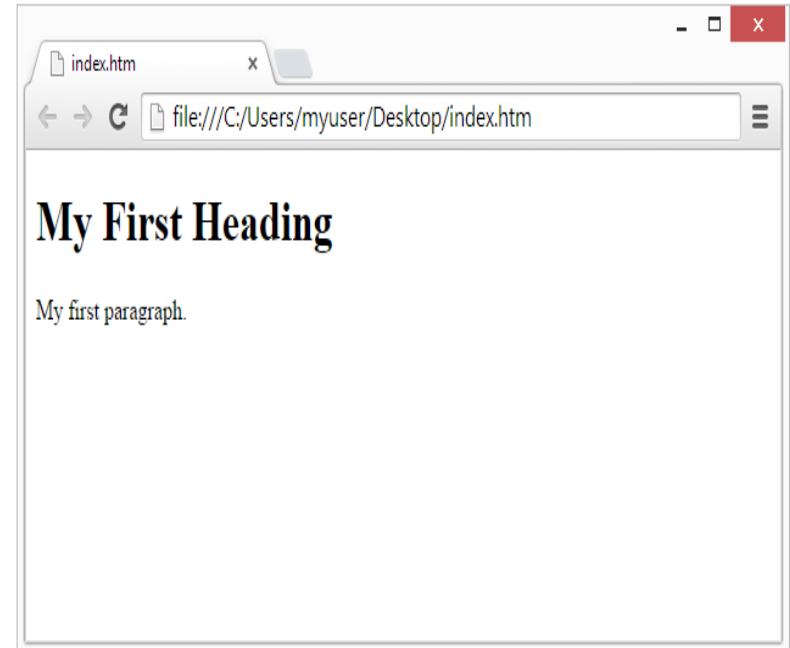
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```
<html>
<head>
<title>Page Title</title>
</head>

<body>

<h1>My First Heading</h1>
<p>My first paragraph.</p>

</body>
</html>
```



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- `<BODY>` and `</BODY>` are used for text and html tags that are displayed on the page. This element contains all the contents of an HTML document, such as text, hyperlinks, images, tables, lists, etc.
- **Viewing source code** of document; right click on web page.
- For **Line Break**, use `
` single tag.
- `<P>` and `</P>` is used to specify a paragraph
 - Contains align attribute same as of heading tag.
- 140 **color names** are defined in the HTML5 and CSS3 color specifications.
- 17 colors are from the HTML specification, 123 colors are from the CSS specification.
http://www.w3schools.com/html/html_colornames.asp

Attribute	Value	Description
alink	<i>color</i>	Specifies the color of an active link in a document
background	<i>URL</i>	Specifies a background image for a document
bgcolor	<i>color</i>	Specifies the background color of a document
link	<i>color</i>	Specifies the color of unvisited links in a document
text	<i>color</i>	Specifies the color of the text in a document
vlink	<i>color</i>	Specifies the color of visited links in a document

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- **Headings** (paired tags)
- Contains 6 levels from <H1> to <H6>. H1 is largest heading
- To display a word or phrase as heading, place an opening heading tag in front of it.

Attribute	Value	Description
align	“left” or “center” or “right” or “justify”	Specifies the alignment of a heading

- The paired tag specifies the **font** face, font size, and color of text.

Attribute	Value	Description
color	“ <i>rgb(x,x,x)</i> ” or “ <i>#xxxxxx</i> ” or “ <i>colorname</i> ”	Specifies the color of text
face	<i>font_family</i>	Specifies the font of text
size	<i>number</i>	Specifies the size of text

- Use *absolute* number to specify size or *relative* (use + or -) to existing font size. Absolute can be from 1(smallest) to 7

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The <BIG> and </BIG> tag defines 1 size **bigger** text than earlier.

<SMALL> and </SMALL> tag defines 1 size **smaller** than earlier size.

Applying Physical Styles In HTML bolding, italicizing, and underlining of text is known as physical styles.

bold

<I>italic</I>

<U>underline</U>

<S>strikethrough</S>

^{superscript}

_{subscript}

Block Quote element

<BLOCKQUOTE> tag specifies a section that is quoted from another source. Browsers usually indent <blockquote> elements. It contains only one attribute [cite](#). Its value can be a URL which specifies the source of the quotation

Setting Document Margins

You may add numeric values in following attributes of BODY tag

[leftmargin](#) [topmargin](#) [marginwidth](#) [marginheight](#)

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HTML Tables:

- 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.
- 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.

Colspan and Rowspan attributes:

You will use **colspan** attribute if you want to merge two or more columns into a single column. Similar way you will use **rowspan** if you want to merge two or more rows.

HTML List:

HTML offers web authors three ways for specifying lists of information. All lists must contain one or more list elements. Lists may contain:

- **** - An unordered list. This will list items using plain bullets.
- **** - An ordered list. This will use different schemes of numbers to list your items.
- **<dl>** - A definition list. This arranges your items in the same way as they are arranged in a dictionary.

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Cascading Style Sheet (CSS):

- CSS is used to control the look and feel part of a web document in a simple and easy way.
- Most commonly, CSS is combined with the markup languages HTML or XHTML.

Advantages of CSS

- CSS saves time
- Pages load faster
- Easy maintenance
- Superior styles to HTML
- Multiple Device Compatibility
- Global web standards

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Three Ways to add CSS to HTML :

- **Inline styles**

- An inline style may be used to apply a unique style for a single element.
- An inline style loses many of the advantages of a style sheet (by mixing content with presentation). Use this method carefully.
- To use inline styles, add the style attribute to the relevant tag. The style attribute can contain any CSS property.

- **Internal (embedded) style sheet**

- An internal style sheet may be used if one single page has a unique style.
- Internal styles are defined within the **<style>** element, inside the head section of an HTML page

- **External style sheet**

- With an external style sheet, you can change the look of an entire website by changing just one file
- Each page must include a reference to the external style sheet file inside the **<link>** element. The **<link>** element goes inside the head section:
 - `<link rel="stylesheet" type="text/css" href="mystyle.css">`

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- A CSS comprises of style rules that are interpreted by the browser and then applied to the corresponding elements in your document.
- A style rule is made of three parts
 - **Selector:** A selector is an HTML tag at which style will be applied. This could be any tag like `<h1>` or `<table>` etc.
 - **Property:** A property is a type of attribute of HTML tag. All the HTML attributes can be converted into CSS properties. These could be color or border etc.
 - **Value:** Values are assigned to properties. For example color property can have value either red or #F1F1F1 etc.

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Types of Selectors:

- **Element Selector** The element selector selects elements based on the element name.

```
P {  
text-align: center;  
color: red;  
}
```

(in this case, all <p> elements will be center-aligned, with a red text color):

- **Universal Selectors** Rather than selecting elements of a specific type, the universal selector quite simply matches the name of any element type

```
{ color: #000000; }
```

- This rule renders the content of every element in our document in black.

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Types of Selectors:

- **ID Selectors** uses the id attribute of an HTML element to select a specific element. An id should be unique within a page, so the id selector is used if you want to select a single, unique element.
 - To select an element with a specific id, write a hash character, followed by the id of the element.

```
# para1 {  
  text-align: center;  
  color: red;  
}
```

- **Class Selectors** selects elements with a specific class attribute.
 - To select elements with a specific class, write a period character “.” followed by the name of the class

```
.center {  
  text-align: center;  
  color: red;  
}
```


Thank you