

Website Development

by Sophia



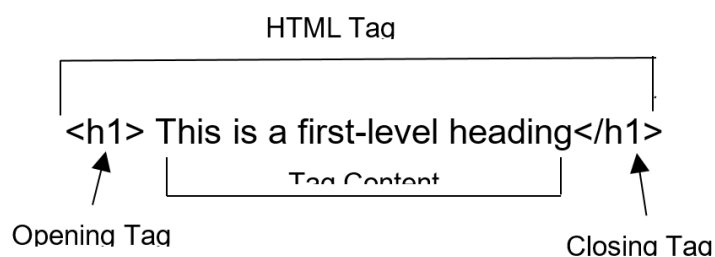
WHAT'S COVERED

The World Wide Web (commonly referred to as the Web) is one of the most popular parts of the Internet. In the early days of the World Wide Web, the creation of a website required knowing how to use Hypertext Markup Language (HTML). Today, most websites are built with a variety of tools, but the final product that is transmitted to a browser is still HTML. In this tutorial, we will discuss the significance of HTML as the main way in which information is communicated via the Web.

Our discussion will break down as follows:

1. What is HTML?

Recall that information on the World Wide Web is contained in web pages, and that a web page is a document written in **Hypertext Markup Language (HTML)** format that contains content prepared for the web. For the most part, the Web is merely a network of documents written in HTML and supported by a network protocol called **Hypertext Transfer Protocol (HTTP)**. At its simplest, HTML is a text language that allows you to define the different components of a web page. The markup part of the name refers to how the HTML defines blocks of text to receive formatting instructions. These definitions are handled through the use of **HTML tags**. An HTML tag is an HTML markup code enclosed in angle brackets `< >` (greater than, less than symbols), that alters how content is formatted, or it does something such as link to another page. For example, an HTML tag can tell the browser to show a word in italics, to link to another web page, or to insert an image. HTML forms the basic programming language of websites. Listed below is the structural breakdown of an HTML tag.



HTML tag

In the above example, the opening tag, `<h1>`, signals the web browser that the tag content is to be treated as a heading, and should display on screen as a heading utilizing an increased font and bold. The closing tag, `</h1>`

signals to the web browser the end of the text that will be treated by the <h1>.



An HTML tag must begin with an opening tag and a closing tag. Failure to properly open < or close > a tag can result in no action being performed on the tag's content, or improper display of the tag's content. Additionally, failure to close an HTML tag may also prevent any subsequent tags from being opened, thereby leading to an error or crash of the website.

In the example below, some text is being defined as a heading, while other text is being emphasized:

```
<h1>This is a first-level heading</h1>
Here is some text. <em>Here is some emphasized text.</em>
<h2>Here is a second-level heading</h2>
Here is some more text.
```

Simple HTML

The HTML contained in the picture outputs the following when viewed in a web browser:

This is a first-level heading

Here is some text. *Here is some emphasized text.*

Here is a second-level heading

Here is some more text.

HTML in web browser



Following the steps to create a web page using notepad:

1. Open Notepad
2. In Notepad type the following:

```
<!DOCTYPE HTML>
<html>
```

```
<head>
<title> My first web page </title>
</head>
<body>
<h1> I am learning computer science </h1>
<p> This page is in progress </p>
</body>
</html>
```

3. Click on File in the menu bar and then select Save

4. In the Save As dialog, type in MyFirstPage.htm

5. Click Save

6. Open Windows Explorer and navigate to the file you just created and double click it. You should see this file open in your web browser.



TERMS TO KNOW

Hypertext Markup Language (HTML)

Programming language used to create websites.

Hypertext Transfer Protocol (HTTP)

Networking protocol used to distribute websites.

HTML Tag

HTML markup code enclosed in < > brackets; used to define how content is displayed on screen.

2. Web Addresses

A requirement of publishing Web content via a website is that the site must have a unique address. This unique address is called a **Uniform Resource Locator (URL)**. Typically, an URL begins with the text “www.” followed by the domain name of the site. The “www” indicates to the web browser that the URL is referencing a web server as opposed to some other type of server such as an email server. Consider the URL, <http://www.sophia.org> The http:// indicates that the HTTP protocol should be used to retrieve the page. When a web browser sends out a request to retrieve a web page, the request goes to a domain name server (DNS), which translates the domain name into the IP address. The server sends the requested page back to the web browser and the browser displays the requested page.



TERM TO KNOW

Uniform Resource Locator (URL)

Address of an Internet resource such as a website; must begin with a communication protocol such as HTTP.

3. Using HTML

The process of developing web pages, websites, or any web content can be complex, and may involve an entire group of web designers and programmers. Depending on the size and scope, a web development project may also involve several programming languages. There are, however, some instances in which a web development project may be as simple as one person using HTML to code a web page or website. If you

know HTML, then one way to develop web content is to create it in a software application such as MS Word or Notepad. These applications give users the ability to save documents in a web-enabled format. Listed below are some common HTML tags:

| Opening Tag | Closing Tag | Description |
|---------------|----------------|---|
| <html> | </html> | Opens and closes an HTML document |
| <head> | </head> | The <head>section is used to provide information about the document for use by search engines and browsers |
| <title> | </title> | The title of the document. This element is inside the <head> section. |
| <body> | </body> | The <body>section contains all the content of the web page |
| | none | Inserts an image into a web page. To insert an image hosted on another site, paste the image URL between the quotation marks. |
| <h1> to <h6> | </h1> to </h6> | Headings; H1 is the main heading, H2 is secondary, etc. |
| <p> | </p> | Paragraph |
| | | A container for inline content, such as text inside a paragraph. |
| <div> | </div> | A container for a block of content |
| | | Gives the contained text emphasis (usually as italics) |
| | | Makes the contained text bold |
| | | Creates a hyperlink of the text between the tags. Paste the URL of the webpage between the quotation marks. |
| | | Creates an ordered (numbered) list of items. 1, 2, 3, etc. |
| | | Creates an unordered (bulleted) list of items. Additional attributes can change the shape of the bullet. |
| | | The list tag separates items in an ordered or unordered list. Use these tags to indicate a new entry to the list. |



DID YOU KNOW

Most of the social networking websites such as Facebook and Twitter provide their users with HTML web pages (also called profiles or profile pages) that users can then add content to for friends and followers to view. The key to completely customizing your profile page is to know HTML and some of the common tags. Users who wish to change the navigation on a social network page can open the HTML for the page (if access is allowed by the social network) and locate the <nav>, </nav> tags and insert whatever information is needed in between the tags. The newly edited profile will be displayed immediately after changing the content within the tags.



SUMMARY

Hypertext Markup Language is the language in which web pages are created. **HTML** uses tags to define how content should be displayed on screen. Having some basic knowledge of HTML can help with developing simple **web pages** and with customizing a social networking profile page. In this tutorial, we covered HTML and the common tags used to develop web pages.

Source: Derived from Chapter 10 of “Information Systems for Business and Beyond” by David T. Bourgeois. Some sections removed for brevity.

<https://www.saylor.org/site/textbooks/Information%20Systems%20for%20Business%20and%20Beyond/Textbook.html>



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