

1.5 Introduction to HTML

HTML and tags

HTML, CSS, and JavaScript are used together to create a webpage.

- HTML defines the structure and content of a webpage.
- CSS specifies the layout and visible appearance.
- JavaScript describes the dynamic behaviors and actions of a webpage.

As an analogy, humans have similar components: structure (bones, organs, central nervous system), identifying attributes (eye color, hair style, height), and behaviors (brushing teeth, slam dunking a basketball).

HTML (HyperText Markup Language) is a textual language for creating webpages. HTML files are usually saved with a .html or .htm file extension. Ex: index.html. An HTML file starts with an indication of the document type, then a head part with the page title and other page information, and finally a body part with the actual page content. The HTML file may also contain CSS and JavaScript code.

Figure 1.5.1: An HTML file and the rendered webpage.

```
<!DOCTYPE html>
<html lang="en">
  <head>
    <meta charset="UTF-8">
    <title>For sale: 2012 Ducati Streetfighter</title>
  </head>
  <body>
    
    <h1>2012 Ducati Streetfighter 848 - $9000</h1>
    <p>2012 Ducati Streetfighter 848, Low Miles, Lots of Upgrades.
      Full service history.
      Call or text 555-4400.</p>
    <p>year: <strong>2012</strong></p>
    <p>make and model: <strong>Ducati Streetfighter 848</strong></p>
    <p>condition: <strong>excellent</strong></p>
    <p>engine: <strong>848</strong></p>
    <p>odometer: <strong>9500</strong></p>
    <p>paint color: <strong>yellow</strong></p>
  </body>
</html>
```



2012 Ducati Streetfighter 848 - \$9000

2012 Ducati Streetfighter 848, Low Miles, Lots of Upgrades. Full service history. Call or text 555-4400.

year: **2012**

make and model: **Ducati Streetfighter 848**

condition: **excellent**

engine: **848**

odometer: **9500**

paint color: **yellow**

Source: zyBooks

[Feedback?](#)

An HTML document is constructed with elements. An **element** is a single HTML structure that is represented with HTML tags.

A **tag** has a descriptive name surrounded by < and > characters that the web browser uses to display content. Ex: <p> specifies a paragraph. Most HTML elements have an opening and closing tag. Ex: always has an opening tag and closing tag . Some tags, like , do not require a closing tag.

Table 1.5.1: Common HTML elements.

Elements	Purpose	Example HTML
h1, h2, h3	Headers. h1 is largest.	< h2h2
p	Paragraph	< pp
em, strong	Emphasis (italic), strong emphasis (bold)	"When in < strong >doubt</ strong >, tell the < em >truth</ em >. Mark Twain.
img	Image	< img src ="https://resources.zybooks.com/WebProgramming/duc alt ="Bike photo"> Note: src is the image's URL source, and alt describes the ima
a	Link	< a href ="https://www.wikipedia.org/">Click Here</ a

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PARTICIPATION ACTIVITY
1.5.1: Practice with HTML tags.


Modify the HTML to include h2 and h3 headers, bold text, another paragraph, etc.

```

1  <!DOCTYPE html>
2  <html lang="en">
3      <head>
4          <meta charset="UTF-8">
5          <title>What I want to know...</title>
6      </head>
7      <body>
8          
    <title>What I want to know...</title>
  </head>
  <body>
    
    <h1>Is Pluto a Planet?</h1>

    <p>When I was young, <em>Pluto</em> was a planet.  

    Then later, Pluto wasn't. Now, Pluto may be a planet again.  

    Well, <strong><em>is it or isn't it??</em></strong></p>

    <h2>What makes a planet a planet?</h2>

    <p>A planet is a celestial object that orbits a star  

    and that has a large enough mass to be round in shape. </p>

    <h3> International Astronomical Union (IAU) </h3>
  </body>
</html>
```

--- END FILE: HTML ---

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PARTICIPATION
ACTIVITY

1.5.2: Match HTML basic formatting.



If unable to drag and drop, refresh the page.

<code><p>ABC</p></code>	ABC Just normal paragraph text.	Correct
<code>ABC</code>	ABC em indicates emphasized text, and is displayed as <i>italics</i> .	Correct
<code>ABC</code>	ABC strong indicates important text, and is displayed as bold	Correct
<code><h3>ABC</h3></code>	ABC h indicates a heading. h1 is first-level heading. h2 is the second-level heading and is displayed a little smaller, h3 is the third-level and is displayed even smaller, but usually slightly larger than normal paragraph text.	Correct
<code>ABC</code>	ABC Tags can be nested, in this case to indicate emphasized and important text.	Correct

[Reset](#)

[Feedback?](#)

Links

A **link** on a webpage is a clickable item that usually causes the web browser to open another webpage when clicked. Ex: [Dear Photograph](#) is a link to an interesting website. A button or image can also be a link.

A link is created with an anchor element. The opening `<a>` tag uses the `href` attribute to specify the link's URL target. The link text comes next and is followed by the closing `` tag.

PARTICIPATION
ACTIVITY

1.5.3: Creating a link in HTML.



Change the link's URL to your favorite webpage. Then add a second link to the words "second favorite webpage". After clicking a link in the rendered webpage, re-render the page to see the links again.

```
1 <!DOCTYPE html>
2 <html lang="en">
3   <head>
4     <title>My Favorite Webpages</title>
5   </head>
6   <body>
7     <p>Visit my <a href="https://www.wikipedia.org/">favorite
8       <p>Visit my second favorite webpage.</p>
9     </body>
10    </html>
11
```

Render webpage

Reset code

Your webpage

Visit my [favorite webpage](#)

Visit my second favorite webpage.

▼ View solution

--- START FILE: HTML ---

```
<!DOCTYPE html>
<html lang="en">
  <head>
    <title>My Favorite Webpages</title>
  </head>
  <body>
    <p><a href="http://www.plutoisaplanet.org/">Click Here</a> to visit my favorite webpage.</p>
    <p><a href="https://www.nasa.gov/">NASA</a> is my second favorite webpage.</p>
  </body>
</html>
```

--- END FILE: HTML ---

[Feedback?](#)

PARTICIPATION ACTIVITY

1.5.4: HTML links.



Are the following valid HTML links?

- 1) `CNN`

Correct



Valid Not valid

Missing href= before the URL.

2)

```
<a href="https://cnn.com">News</a>
```

 Valid Not valid**Correct**

3)

```
<a href="https://www.youtube.com/watch?v=uu7XCEMdSHg">News</a>
```

 Valid Not valid**Correct**

The items after www.youtube.com are used by YouTube to find a specific video file.

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CHALLENGE ACTIVITY

1.5.1: Introduction to HTML.



530096.4000608.qx3zqy7

[Jump to level 1](#)

Add an anchor element with href attribute containing: https://www.wikipedia.org/ and text containing: "Click here". [SHOW EXPECTED](#)



```

1 <!DOCTYPE html>
2 <html lang="en">
3   <head>
4     <meta charset="UTF-8">
5     <title>My webpage with links</title>
6   </head>
7   <body>
8     <h1>External links</h1>
9     <p>
10    <a href = "https://www.wikipedia.org/">Click here</a>
11    <!-- Your solution goes here -->
12
13    </p>
14  </body>
15 </html>

```



1

2

3

4

5

[Check](#)[Next](#)

Done. Click any level to practice more. Completion is preserved.



✓ Testing number of <a> tags

Yours

Exactly one <a> tag found

✓ Testing that href is defined on <a> tag

Yours

Defined

✓ Testing href attribute of <a> tag

Yours

<https://www.wikipedia.org/>

✓ Testing contents of <a> tag

Yours

[Click here](#)

✓ Testing the number of closing tags

Yours

1

Your webpage

External links

[Click here](#)

[Feedback?](#)

How was
this
section?



[Provide section feedback](#)

