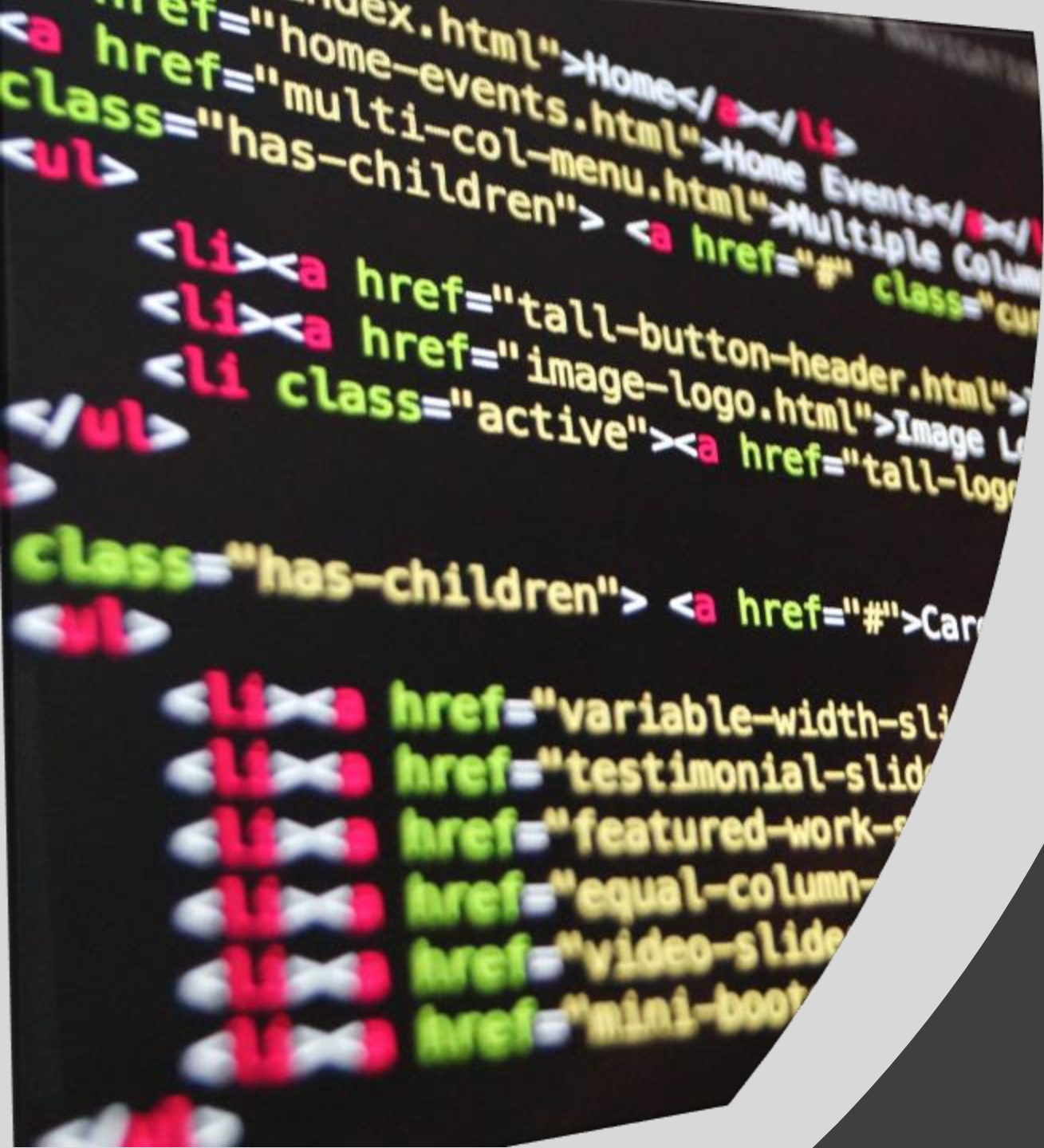


Web Design with HTML5 & CSS3

Chapter 1

Introduction to the
Internet and Web Design



HTML

- HTML (Hypertext Markup Language)
 - Describes the structure of Web pages using markup
 - Considered a mark-up language rather than a traditional programming language
- Saved as an HTML document (.html)

HTML

What it looks like:

```
<!DOCTYPE html>
<html lang="en">
<head>
  <title>My First Webpage</title>
  <meta charset="utf-8">
</head>
<body>
  Welcome to My First Webpage
</body>
</html>
```

HTML Formatting Elements

- HTML formatting elements, also called paired tags and mark-up tags
 - The building blocks of HTML pages
 - Define the structure and layout of content in a webpage such as "heading", "paragraph", "table", and so on
 - Browsers do not display the HTML tags, but use them to render the content of the page

HTML Formatting Elements

- Begin with a start tag, or opening tag, such as `<title>`
- End with an end tag, or closing tag, such as `</title>`
- Content is inserted between the start and end tags
- Example:

```
<title>My First Webpage</title>
```

```
<title>My First Webpage</title>
```

HTML Formatting Elements

Empty tags:

- Do not have content
- Syntax is <tag>
- Examples:
 -
 or
 -- line break
 - <hr> or <hr /> -- horizontal line, or rule

Basic Webpage

Every HTML webpage includes the basic HTML tags



Basic Tags

- The `<!DOCTYPE html>` declaration defines this document to be HTML5
- The `<html>` element is the root element of an HTML page
- The `<head>` element contains meta information about the document
- The `<title>` element specifies a title for the document
- The `<body>` element contains the visible page content
- The `<h1>` element defines a large heading
- The `<p>` element defines a paragraph


```
<!DOCTYPE html>
<html lang="en">
  <head>
    <title> Webpage Title </title>
    <meta charset="utf-8">
  </head>
  <body>
    <h1> My webpage </>
    <h2> your name </h2>
  </body>
</html>
```

HTML Elements and Attributes

Attributes

- Enhance HTML elements with additional characteristics, or properties, of an element
- Here **lang** is an attribute of the html tag used to set the language for the browser
- "en" is the value of the attribute **lang**

HTML Character Sets

- The **meta** tag name derives from the word, metadata, which is information about data
- To display an HTML page correctly, the browser must know what character-set (encoding) to use
- The default character-set for HTML5 is UTF-8
 - `<meta charset="UTF-8">`
- The Unicode Transformation Format (UTF) is a compressed format that allows computers to display and manipulate text

<meta charset="UTF-8">

The charset attribute specifies the character encoding for the HTML document

UTF-8 - Character encoding for Unicode

- Default character encoding for HTML5
- Covers almost all the characters and symbols in the world
- Encompasses all kinds of characters and scripts (Chinese, Japanese, Korean, etc.)
- Every emoji is just a visual **Unicode** representation
- <https://unicode.org/emoji/charts-14.0/full-emoji-list.html>

Meta Tags

1
2

- Author, description, and keywords for the webpage are specified through the use of the name and content attributes
- The following is an example of a description meta tag:

```
<meta name="description"
content="Forward Fitness Club is an
elite fitness center dedicated to
helping our clients achieve their
fitness and nutrition goals.">
```
- The **name** attribute identifies the type of information in the content attribute
- The **content** attribute identifies the specific phrases or words that are required to appear as metadata

Adding a Description Meta Tag to a Webpage

```
<meta name="description" content="Forward Fitness Club is an elite fitness center dedicated to helping our clients achieve their fitness and nutrition goals.">
```

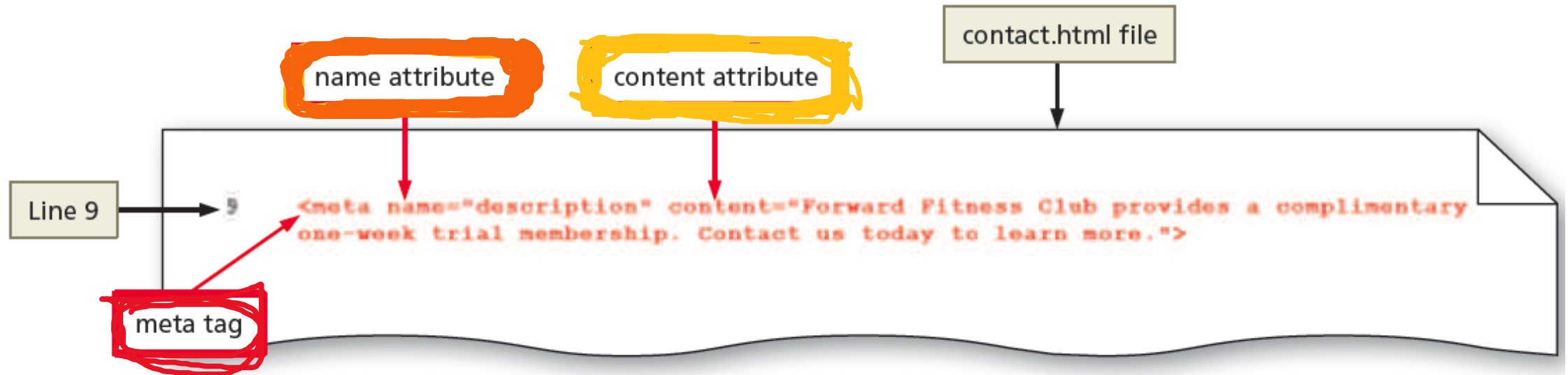



Figure 11-8



Web Hosting | Lightning Fast Hosting & One Click Setup ...
<https://www.godaddy.com/hosting/web-hosting.aspx> ▾ GoDaddy ▾
GoDaddy's Reliable Web Hosting keeps your website up and running. ... Domain Services ... Fast, secure, reliable hosting that grows with your business.

SiteGround: Quality-Crafted Hosting Services
<https://www.siteground.com/> ▾
All of our web hosting plans are carefully tailored. On top of the standard features like free domain names, 24/7 technical support, 99.9% uptime, etc., we add our ...

Web Hosting Services from Network Solutions - Professional ...
www.networksolutions.com/web-hosting/ ▾ Network Solutions ▾
Web hosting services, blogs, and web site builder tools. Get 24/7 customer service and reliable, affordable web hosting from provider Network Solutions.

Figure 11-4

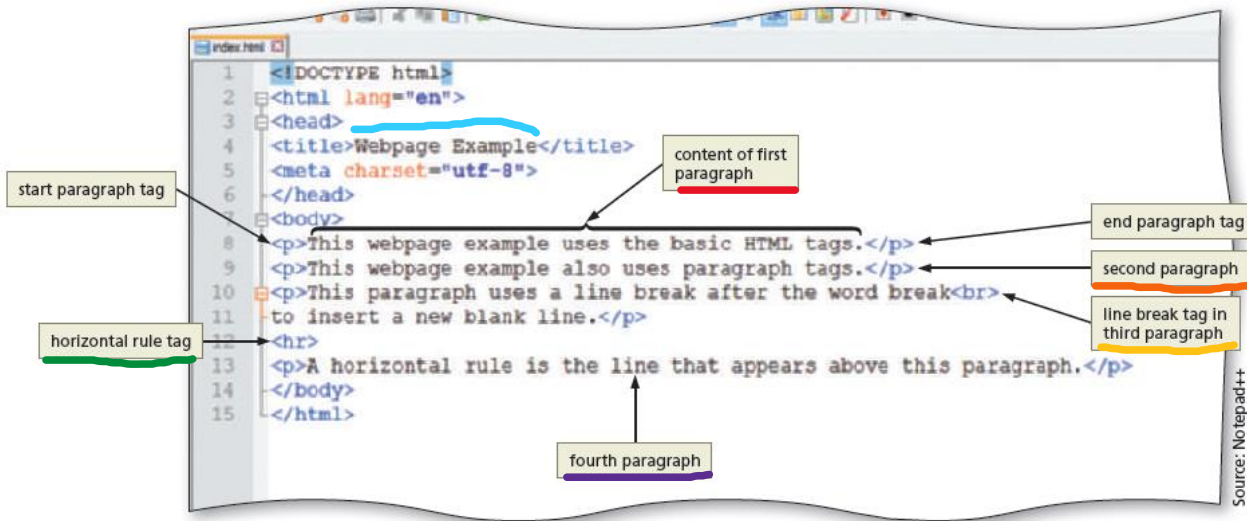
Meta Tags

Webpage Content

```
<!DOCTYPE html>
<html lang="en">
  <head>
  .....
  <title> Webpage Title </title>
  .....
  <meta charset="utf-8">
</head>
<body>
  .....
  <h1> My webpage </>
  .....
  <h2> your name </h2>
</body>
</html>
```

- Contained within the <body> </body> tags

HTML Elements and Attributes

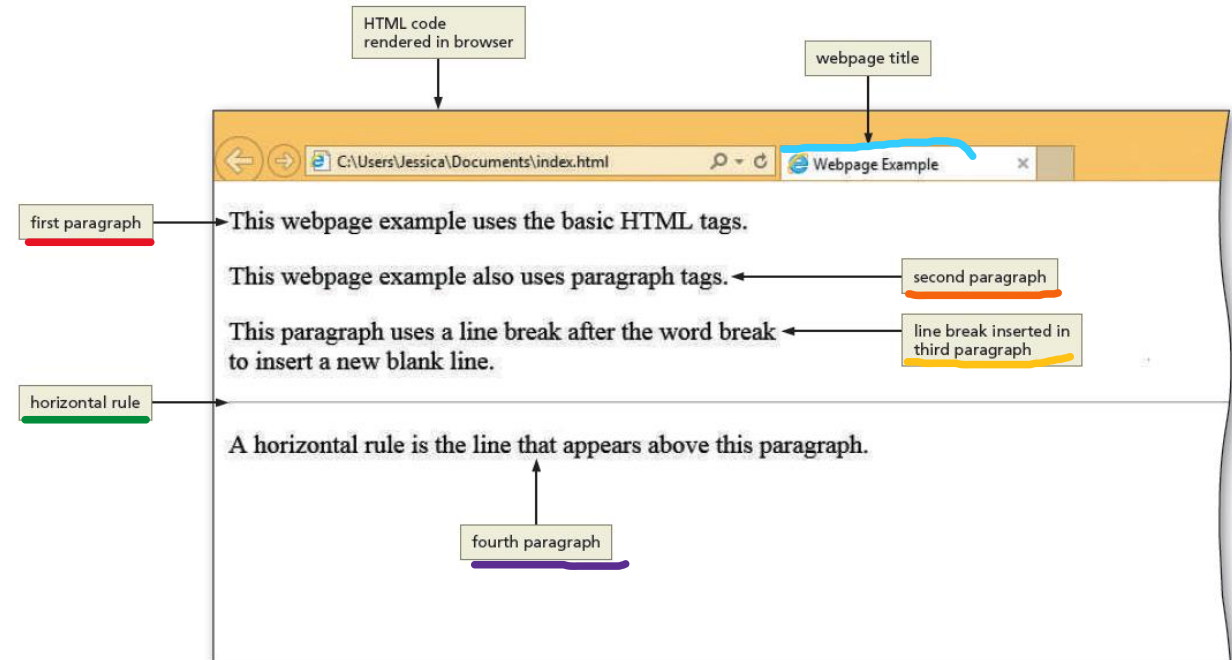


```
1 <!DOCTYPE html>
2 <html lang="en">
3 <head>
4 <title>Webpage Example</title>
5 <meta charset="utf-8">
6 </head>
7 <body>
8 <p>This webpage example uses the basic HTML tags.</p>
9 <p>This webpage example also uses paragraph tags.</p>
10 <p>This paragraph uses a line break after the word break<br>
11 to insert a new blank line.</p>
12 <hr>
13 <p>A horizontal rule is the line that appears above this paragraph.</p>
14 </body>
15 </html>
```

Annotations in the code editor:

- start paragraph tag (points to line 8)
- horizontal rule tag (points to line 12)
- content of first paragraph (points to line 8)
- end paragraph tag (points to line 9)
- second paragraph (points to line 10)
- line break tag in third paragraph (points to line 11)
- fourth paragraph (points to line 13)

Source: Notepad++



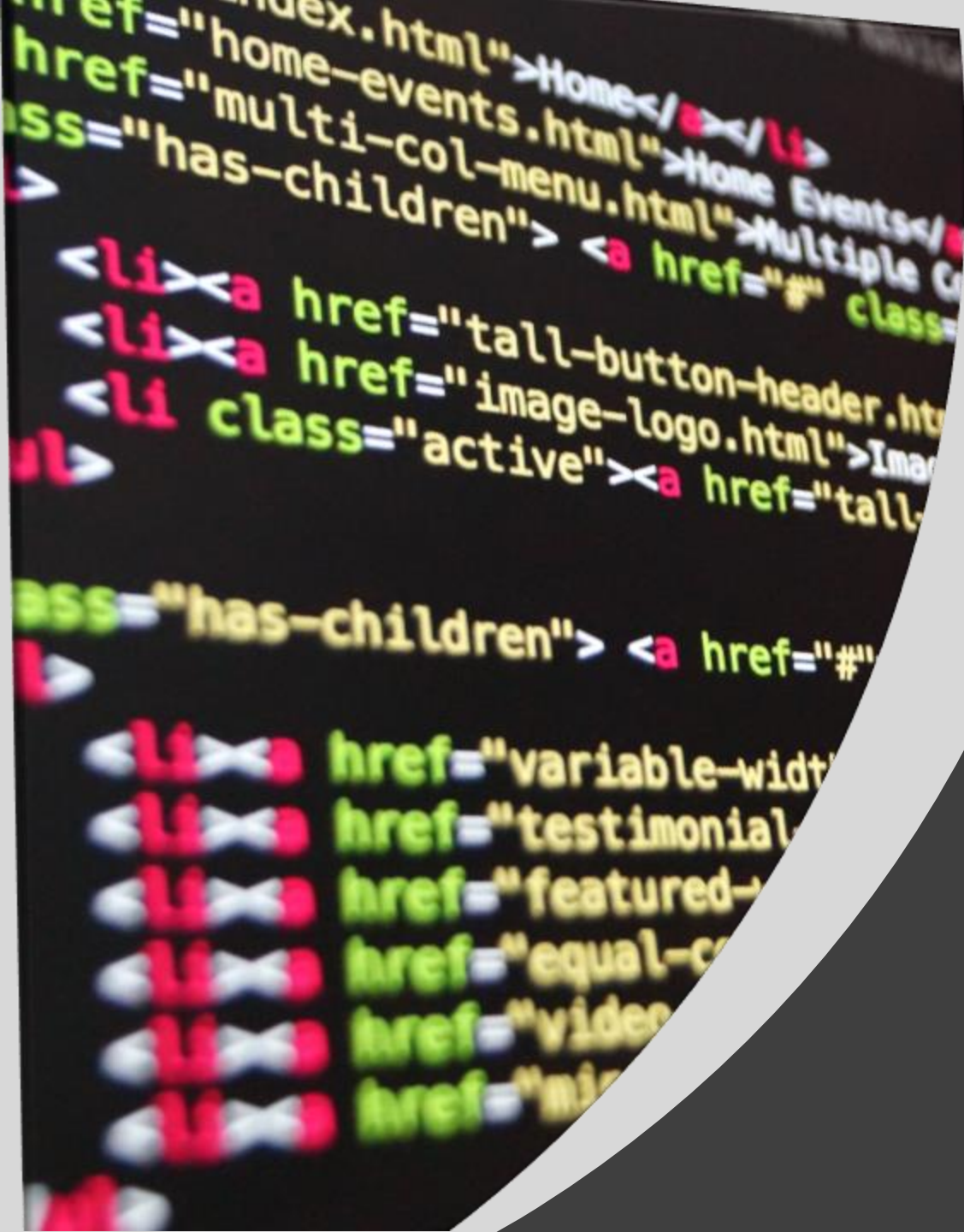
HTML5

- Most recent version of HTML
- Introduces new elements such as header, nav, main, and footer to better define the areas of a webpage
- They are known as **semantic elements** because they provide meaning about the content of the tags
- HTML is platform independent

CSS

- CSS
 - Cascading **Style Sheets**
 - Describes the **presentation** of HTML elements
 - How HTML content is displayed
 - Can control the layout of multiple web pages at once

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



Text Editors



Visual Studio Code

```
index.html x
git_test > <> index.html > ...
1 <!DOCTYPE html>
2 <html lang="en">
3
4 <head>
5   <meta charset="UTF-8">
6   <meta name="viewport" content="width=device-width, initial-scale=1.0">
7   <meta http-equiv="X-UA-Compatible" content="ie=edge">
8   <title>Git Test</title>
9 </head>
10
11 <body>
12   <!-- the following line has been modified -->
13   <h1>This is an Updated GIT test</h1>
14
15   <!-- the following line has been removed -->
16
17   <!-- the following line has been added -->
18   <h2>This is a new line of code</h2>
19 </body>
20
```

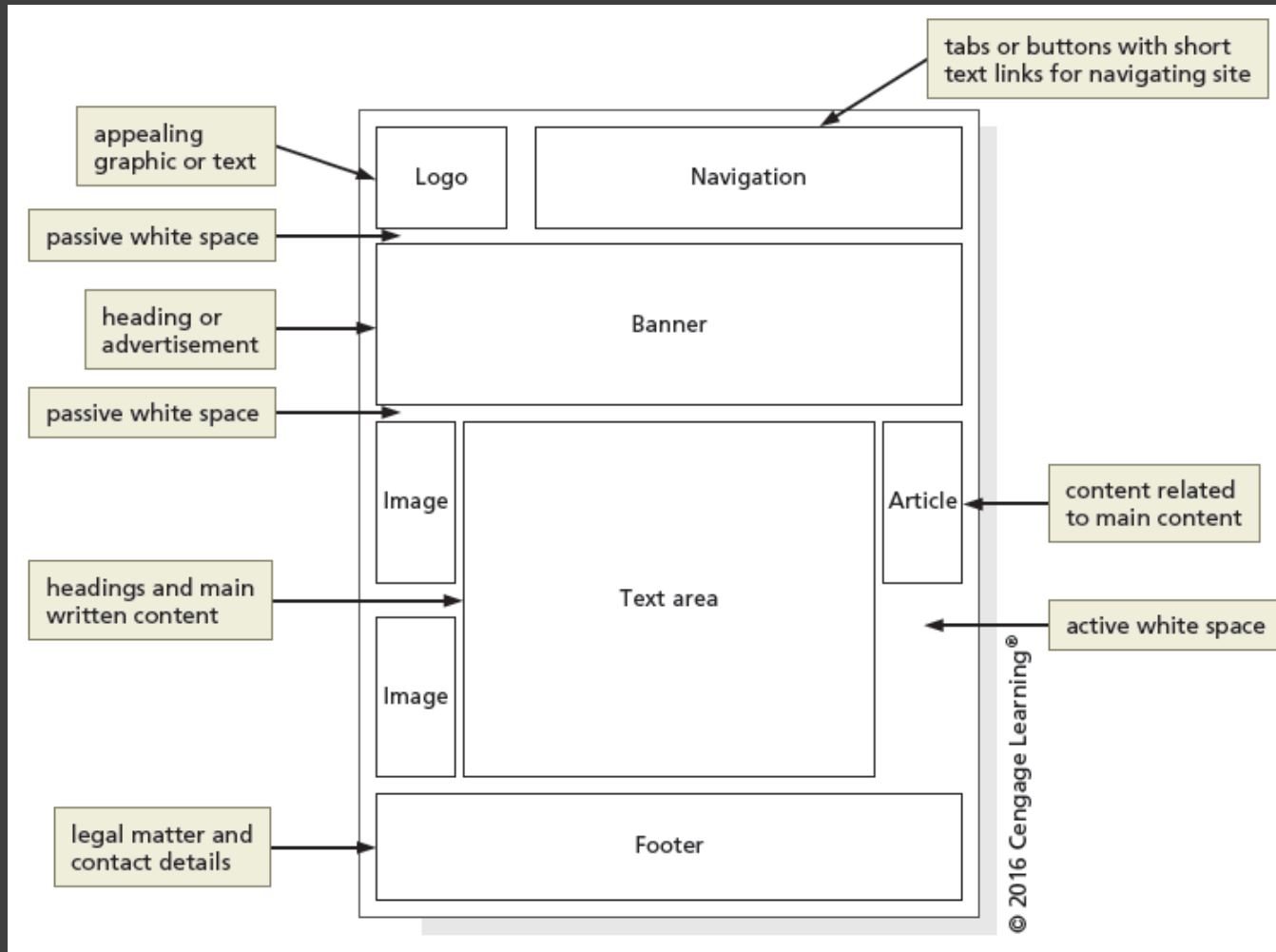
For in class demonstrations, I will be using **Visual Studio Code** because it is what I am most familiar. It enables us to run our code and open it in a browser as if we were connecting to a website. More on this later.

I would also advise you become familiar with GIT (source control), but that is not a specific focus of this course but will help you in all your code related projects.

Wireframe

A wireframe is a simple, visual guide that clearly identifies the location of main webpage elements.

Creating one of these is the first step to designing an interface, which webpages are just one kind!





Site Map

- A site map is a planning tool that lists or displays all the pages on a website and indicates how they are related to each other
 - It shows the structure of a website

```
ref="index.html">Home</a></li>
href="home-events.html">Home Events</a>
href="multi-col-menu.html">Multiple C
ss="has-children"> <a href="#" class=
<li><a href="tall-button-header.htm
<li><a href="image-logo.html">Ima
<li class="active"><a href="tall-
ss="has-children"> <a href="#"
<li><a href="variable-widt
<li><a href="testimonial
<li><a href="featured-
<li><a href="equal-c
<li><a href="video
<li><a href="mi
```

Slides Concluded

Expectations for next week: