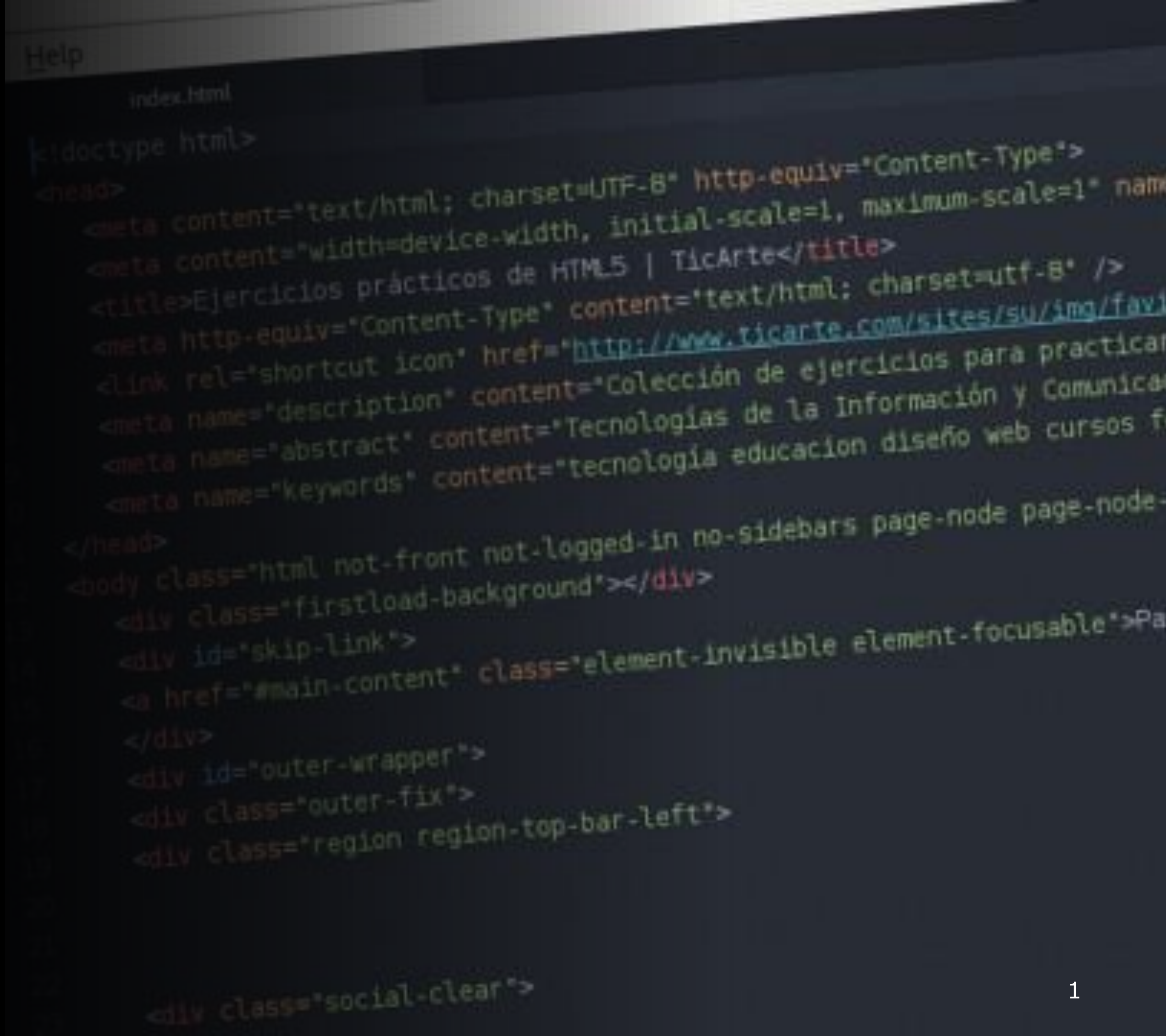
Web Design with HTML5 & CSS3

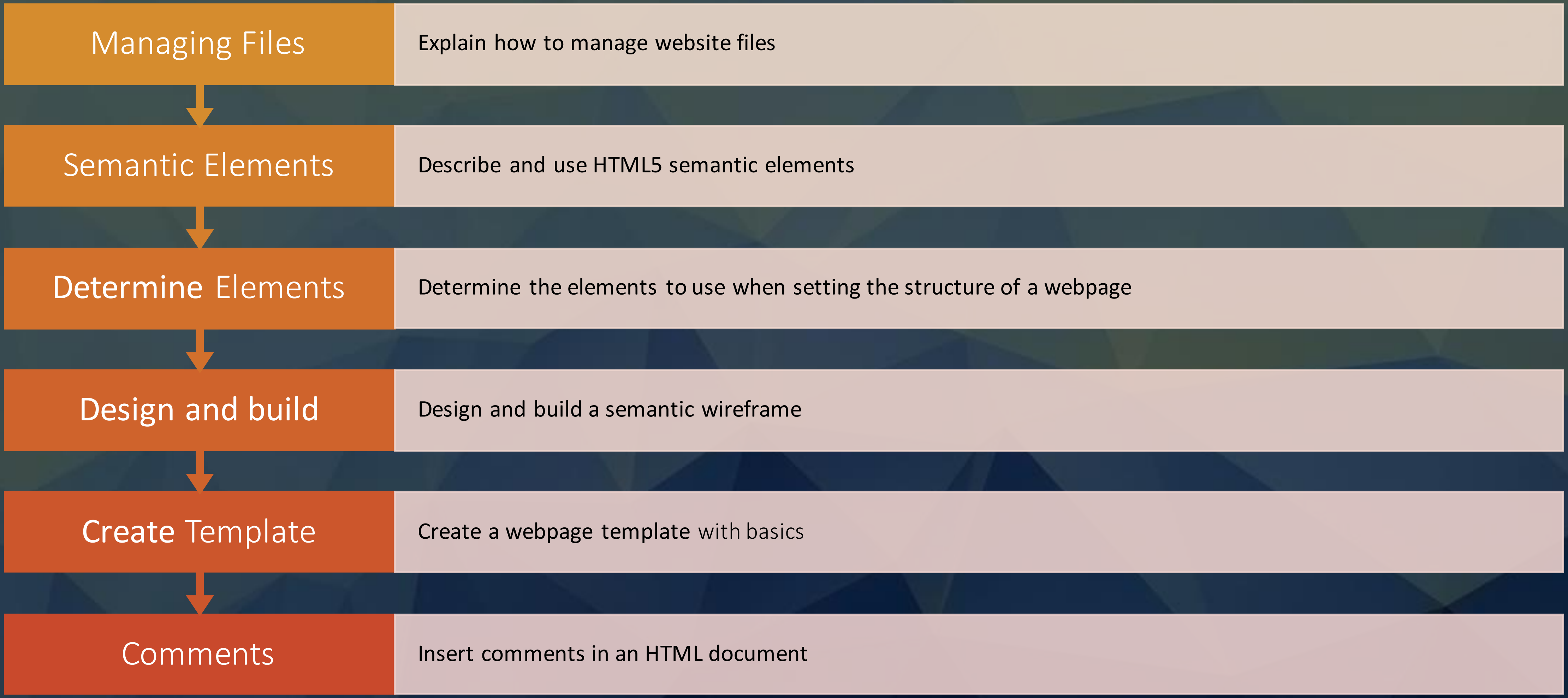
Chapter 2

Building a Webpage Template with HTML5



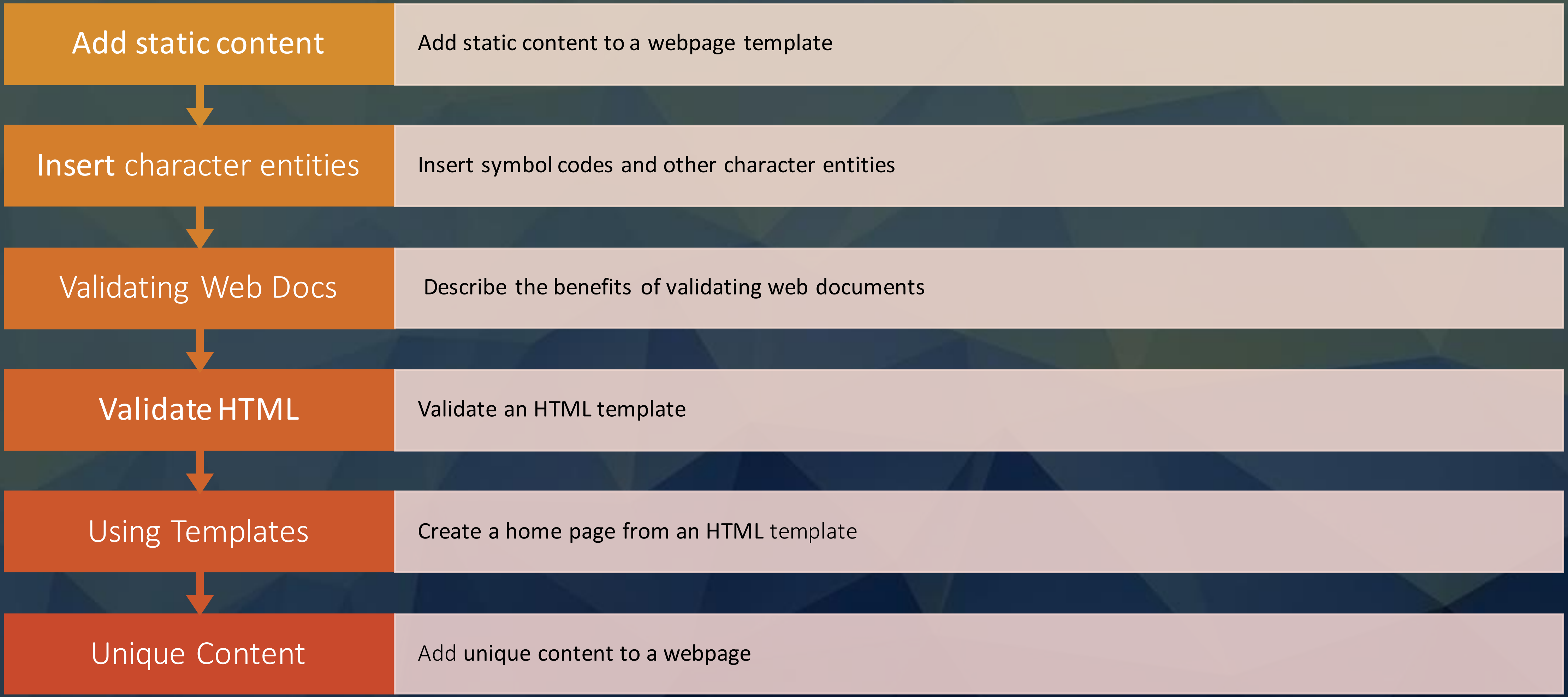
```
<!doctype html>
<head>
  <meta content="text/html; charset=UTF-8" http-equiv="Content-Type">
  <meta content="width=device-width, initial-scale=1, maximum-scale=1" nam
  <title>Ejercicios prácticos de HTML5 | TicArte</title>
  <meta http-equiv="Content-Type" content="text/html; charset=utf-8" />
  <link rel="shortcut icon" href="http://www.ticarte.com/sites/su/img/favi
  <meta name="description" content="Colección de ejercicios para practica
  <meta name="abstract" content="Tecnologías de la Información y Comunica
  <meta name="keywords" content="tecnología educacion diseño web cursos f
</head>
<body class="html not-front not-logged-in no-sidebars page-node page-node-
  <div class="firstload-background"></div>
  <div id="skip-link">
  <a href="#main-content" class="element-invisible element-focusable">Pa
  </div>
  <div id="outer-wrapper">
  <div class="outer-fix">
  <div class="region region-top-bar-left">

   <div class="social-clear">
```

Objectives



Managing Files	Explain how to manage website files
Semantic Elements	Describe and use HTML5 semantic elements
Determine Elements	Determine the elements to use when setting the structure of a webpage
Design and build	Design and build a semantic wireframe
Create Template	Create a webpage template with basics
Comments	Insert comments in an HTML document

Objectives

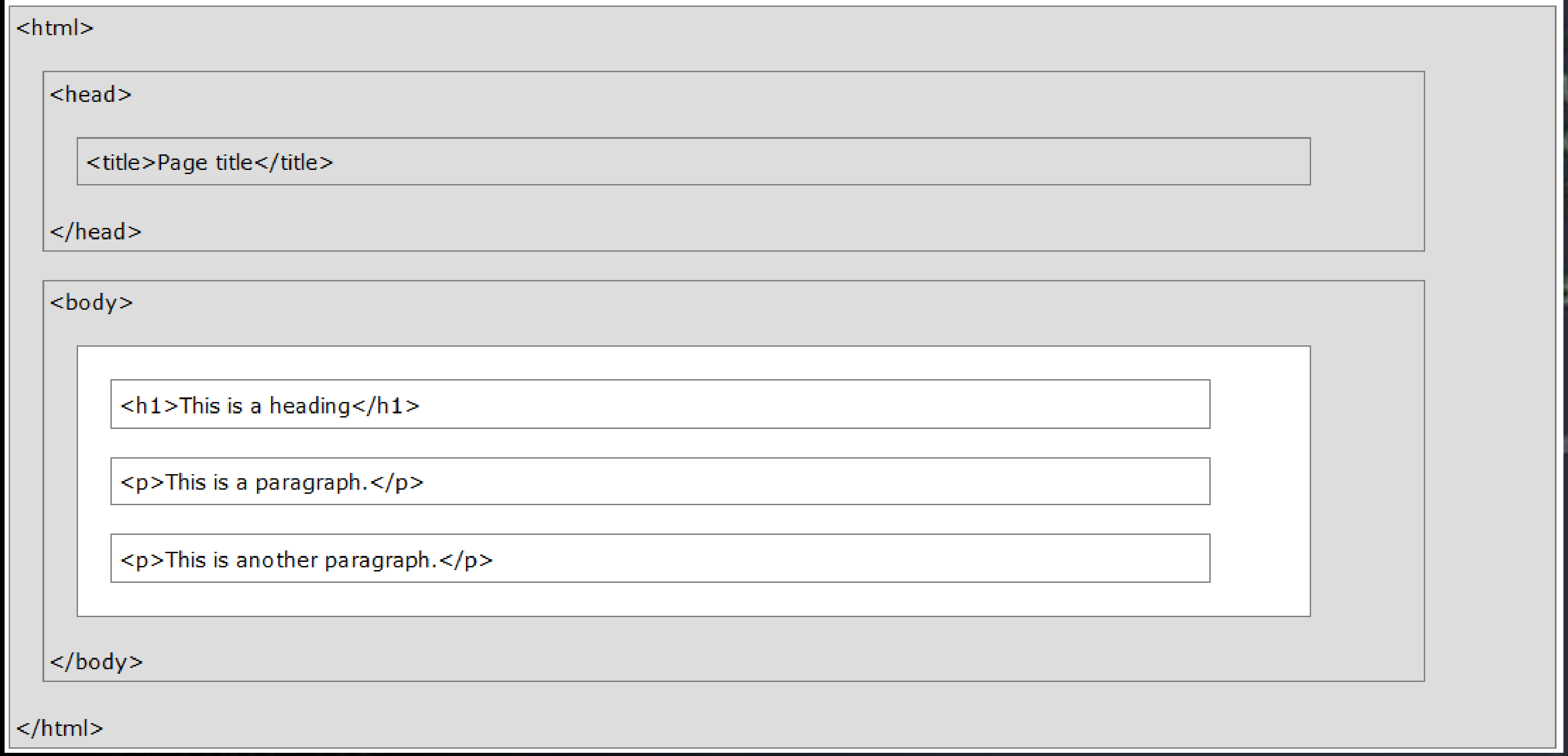


Add static content	Add static content to a webpage template
Insert character entities	Insert symbol codes and other character entities
Validating Web Docs	Describe the benefits of validating web documents
Validate HTML	Validate an HTML template
Using Templates	Create a home page from an HTML template
Unique Content	Add unique content to a webpage

Looking Back

What is the purpose of `<!DOCTYPE html>`?

- Must be the first statement in the HTML document
- Can only appear once
- Represents the document type as HTML5
- Not considered a tag, but a directive to the web browser about what version of HTML the page is written in

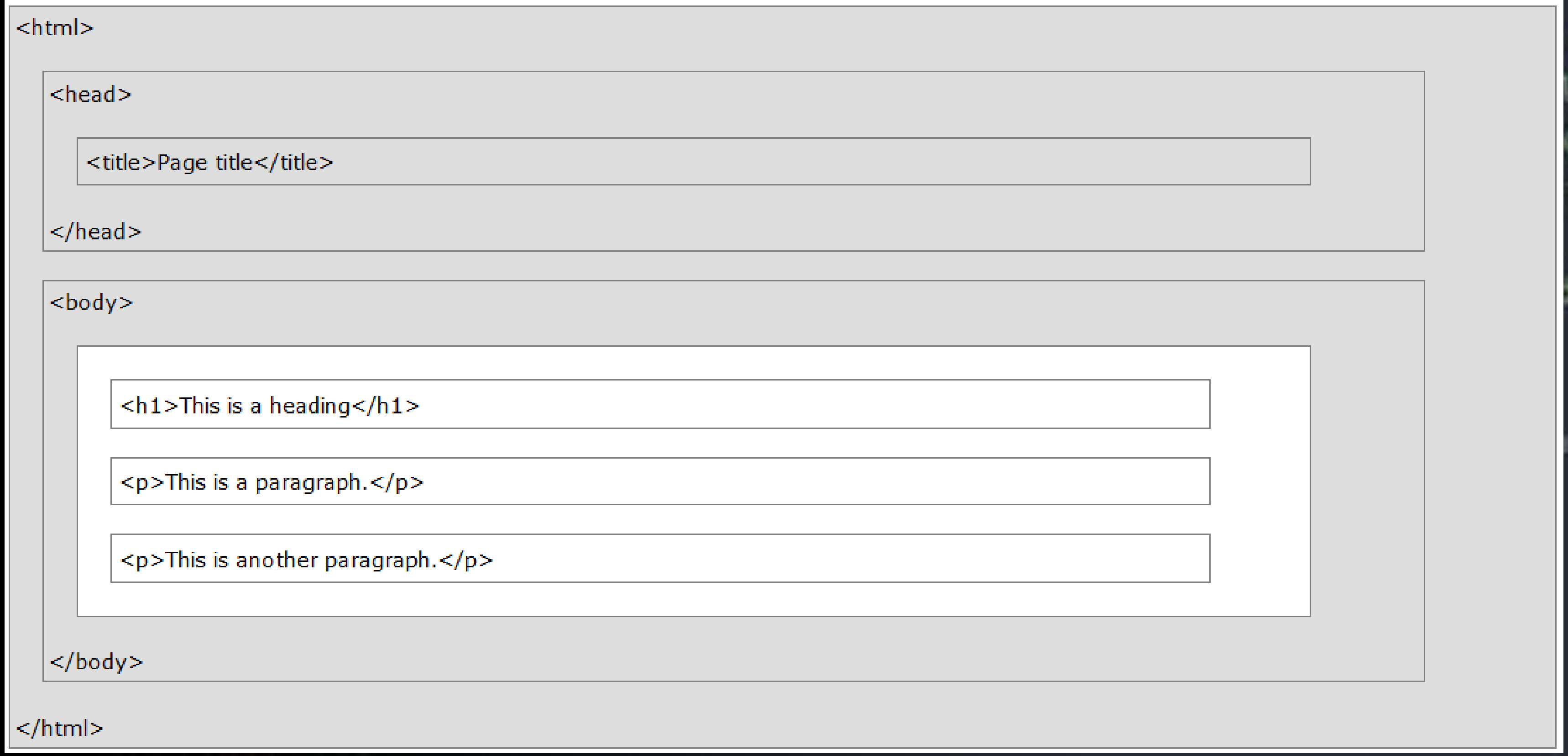


```
<html>
  <head>
    <title>Page title</title>
  </head>
  <body>
    <h1>This is a heading</h1>
    <p>This is a paragraph.</p>
    <p>This is another paragraph.</p>
  </body>
</html>
```

Looking Back

What is the purpose of the `<html> </html>` tags?

- Root element of an HTML page
- Container for all other HTML elements (except `<!DOCTYPE html>`)

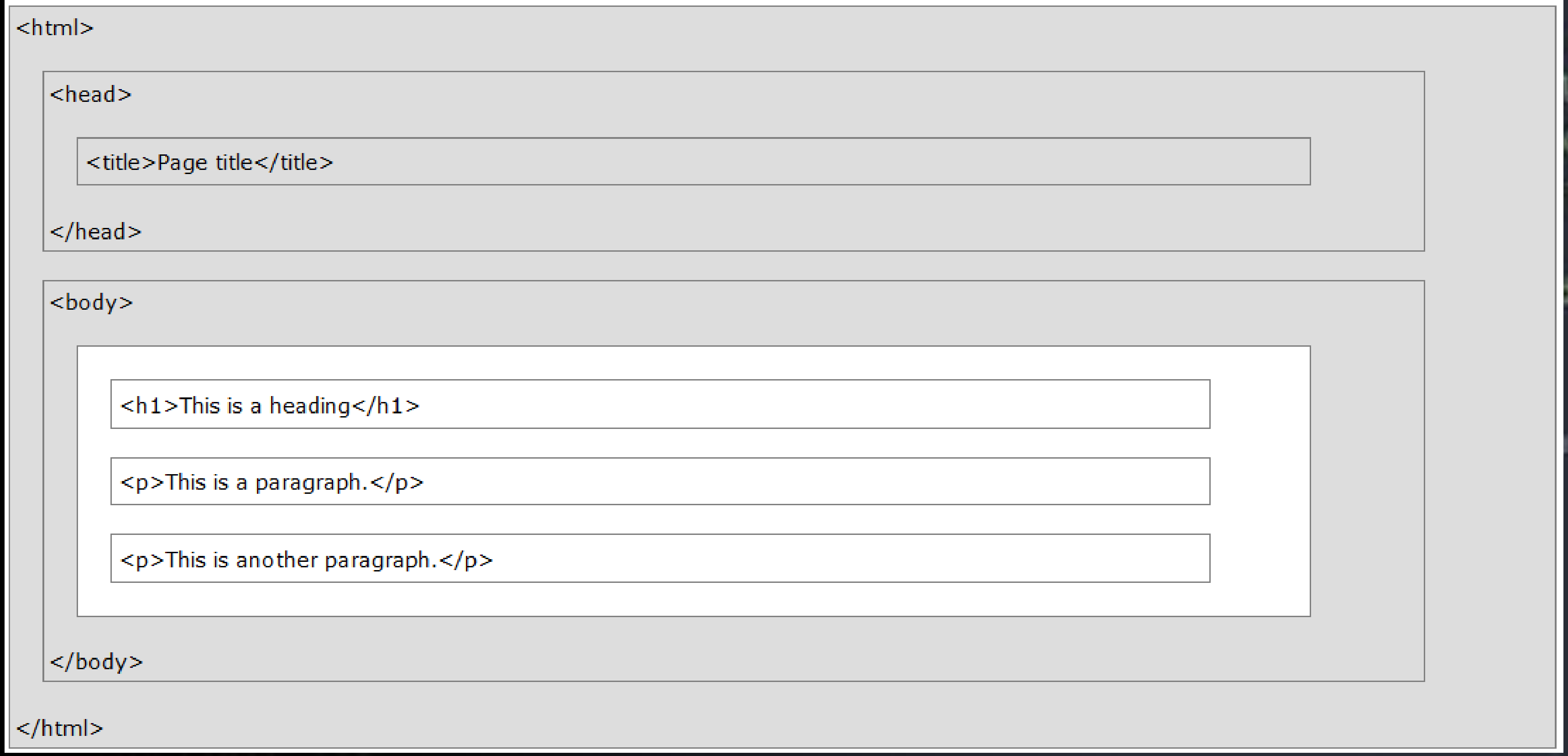


```
<html>
  <head>
    <title>Page title</title>
  </head>
  <body>
      <h1>This is a heading</h1>
      <p>This is a paragraph.</p>
      <p>This is another paragraph.</p>
  </body>
</html>
```

Looking Back

What is the purpose of the `<head></head>` tags?

- Contains meta information about the document



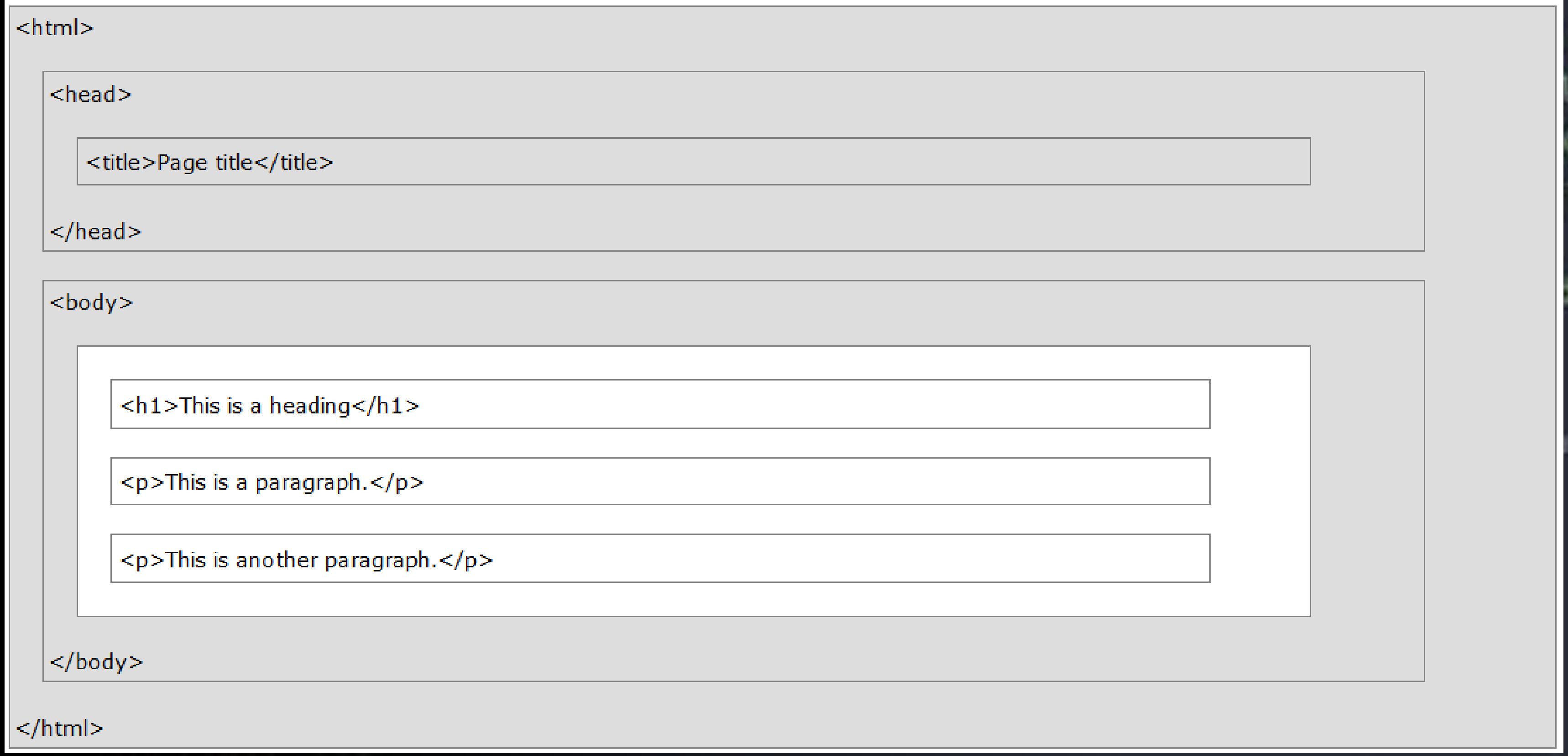
```
<html>
  <head>
    <title>Page title</title>
  </head>
  <body>
      <h1>This is a heading</h1>
      <p>This is a paragraph.</p>
      <p>This is another paragraph.</p>
  </body>
</html>
```

Looking Back

What is the purpose of the lang attribute?

```
<html lang="en">
```

- Specifies the language



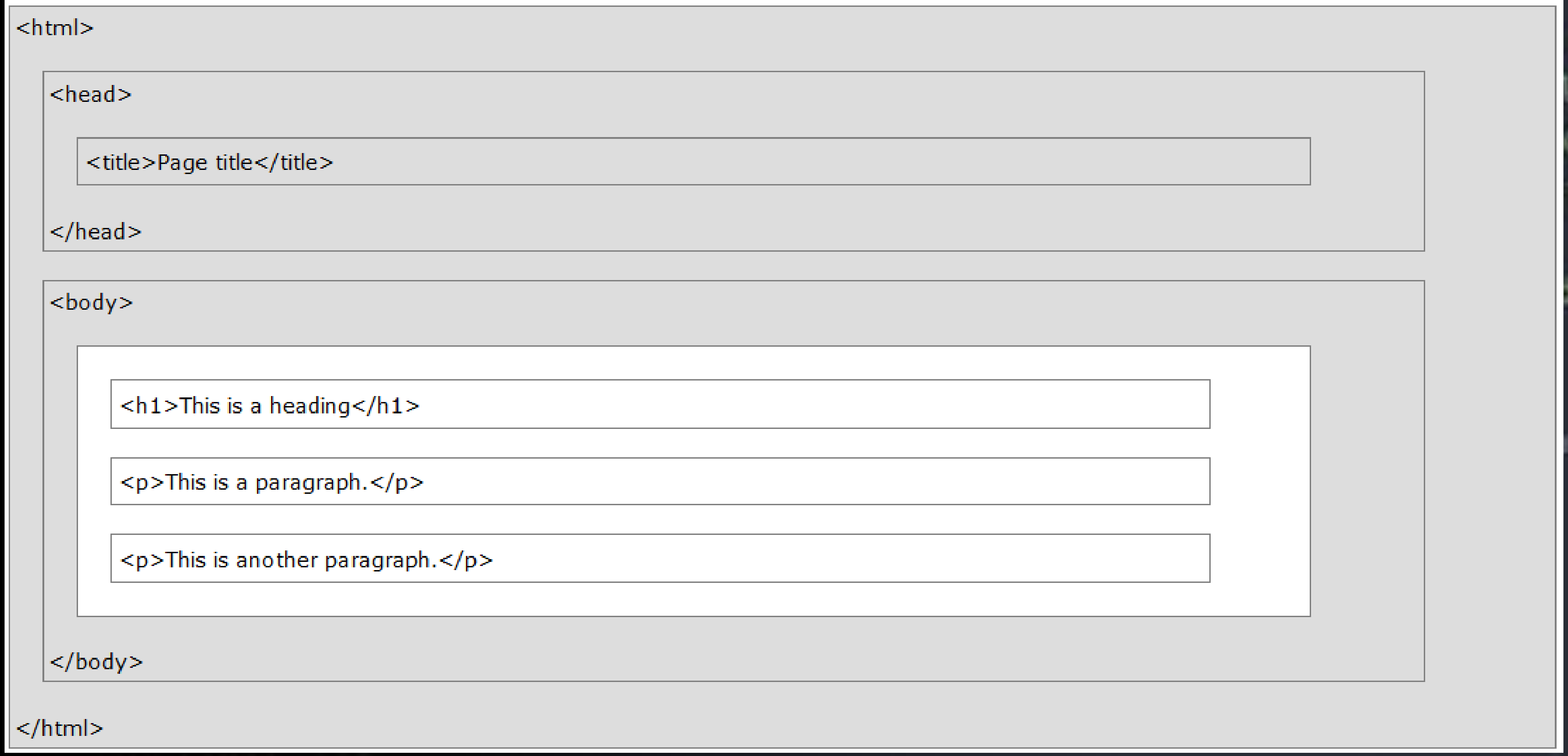
```
<html>
  <head>
    <title>Page title</title>
  </head>
  <body>
      <h1>This is a heading</h1>
      <p>This is a paragraph.</p>
      <p>This is another paragraph.</p>
  </body>
</html>
```

Looking Back

What is the purpose of the charset attribute?

```
<meta charset="utf-8">
```

- Specifies the character encoding for the HTML document

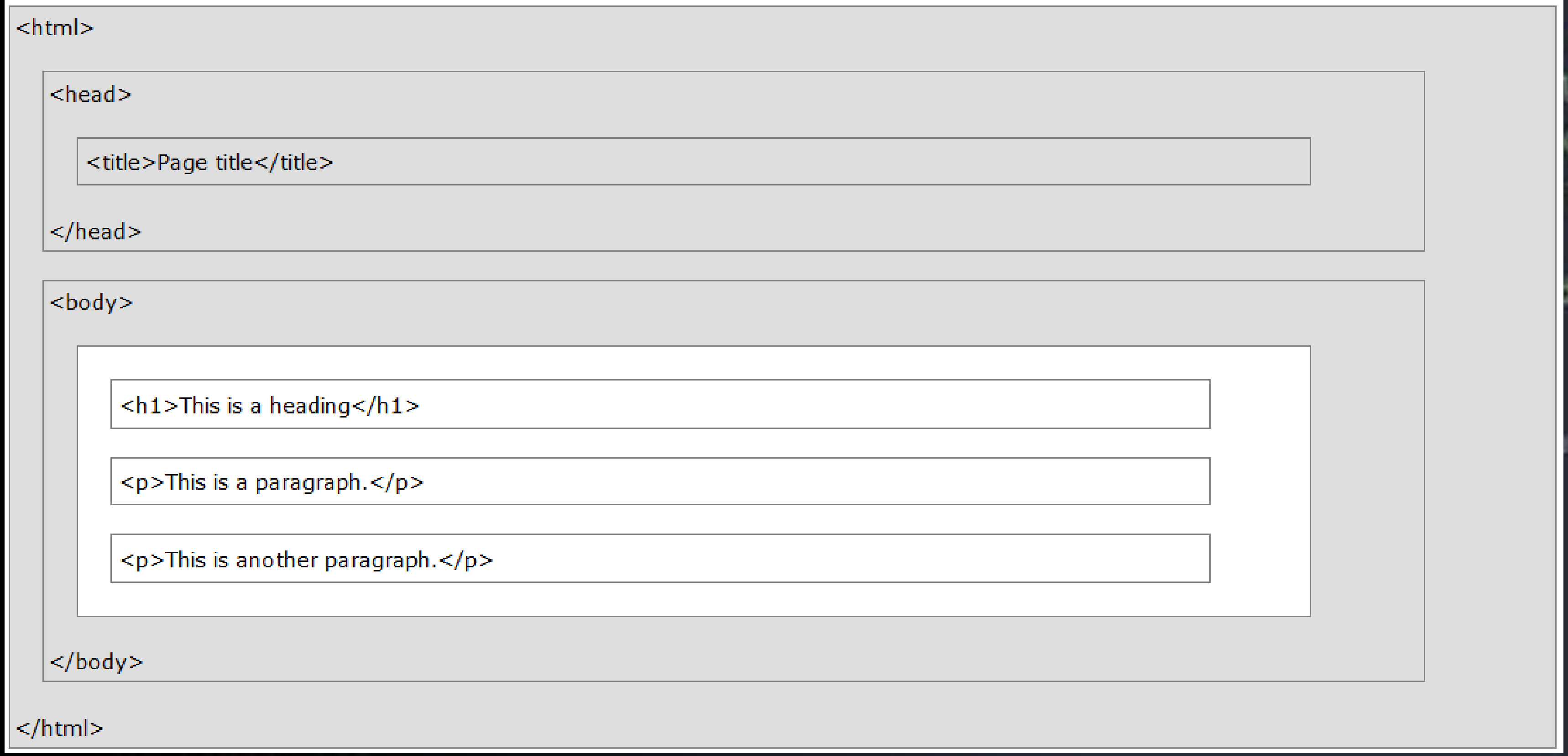


```
<html>
  <head>
    <title>Page title</title>
  </head>
  <body>
    <h1>This is a heading</h1>
    <p>This is a paragraph.</p>
    <p>This is another paragraph.</p>
  </body>
</html>
```

Looking Back

What is the purpose of the forward slash (/) as in the `</head> tag`?

- Identifies an end or closing tag

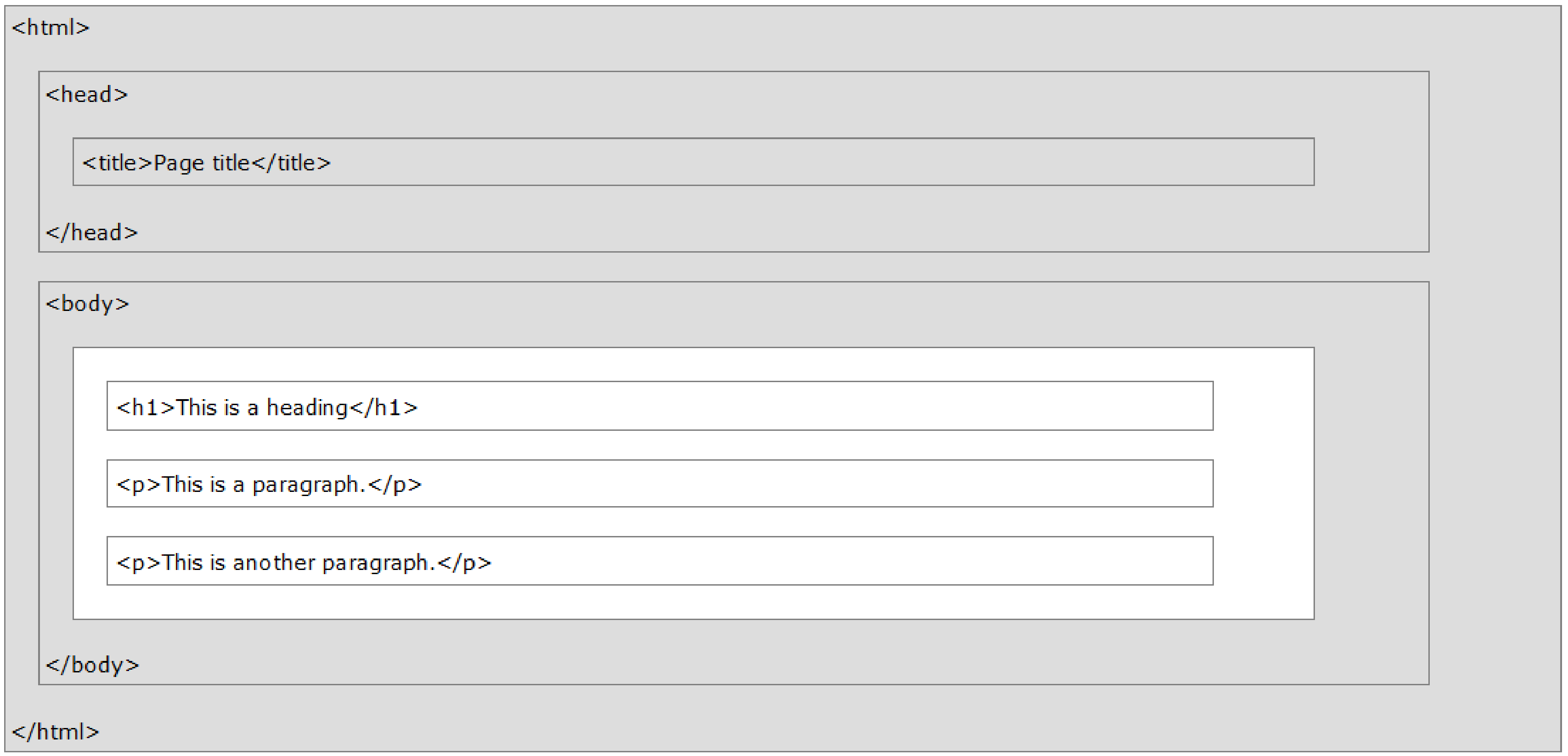


```
<html>
  <head>
    <title>Page title</title>
  </head>
  <body>
      <h1>This is a heading</h1>
      <p>This is a paragraph.</p>
      <p>This is another paragraph.</p>
  </body>
</html>
```

Looking Back

What is the purpose of
the <body> </body> tags?

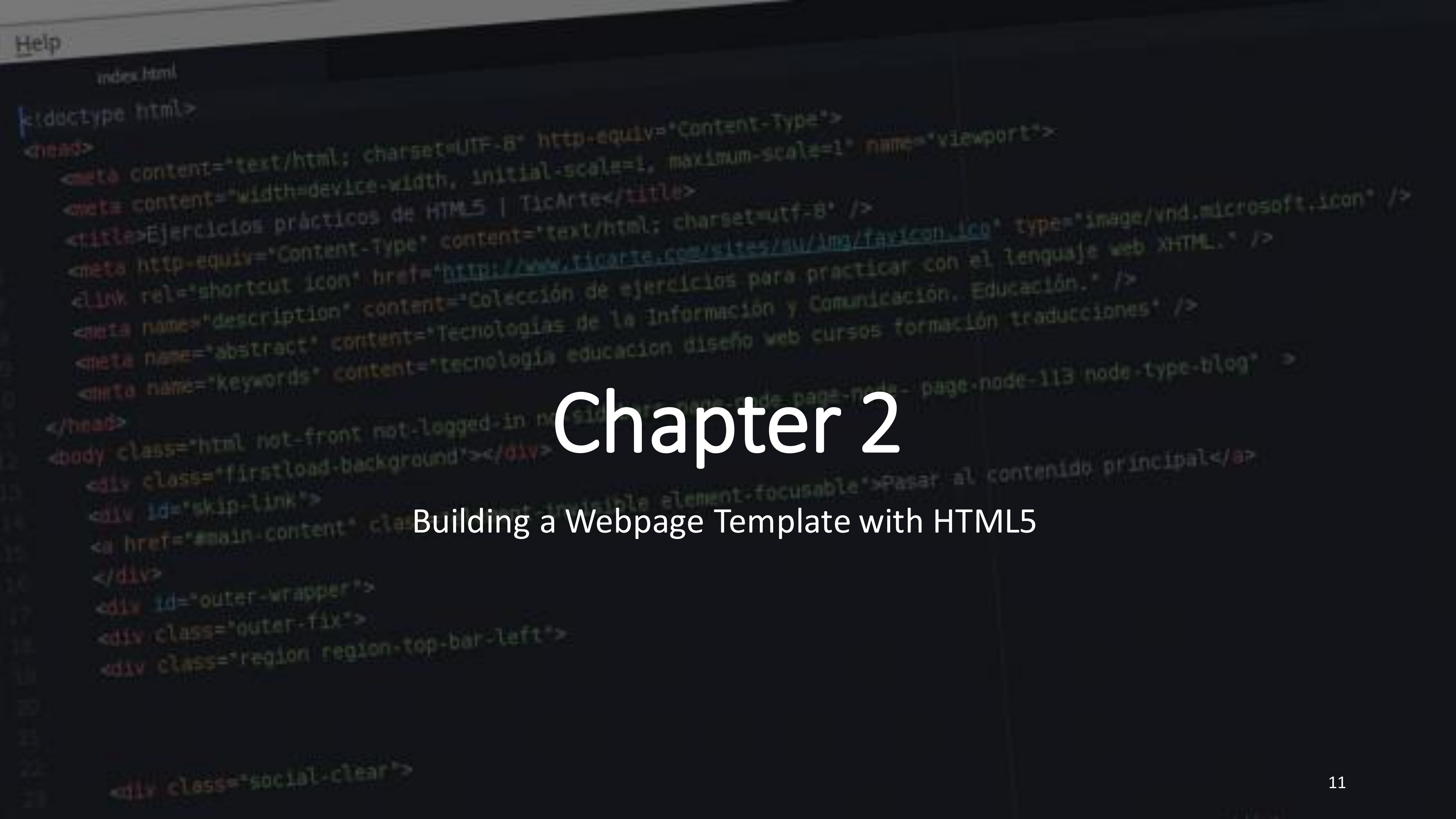
- Defines the document's body
- Contains all the contents of an HTML document, such as text, hyperlinks, images, tables, lists, etc.



```
<html>
  <head>
    <title>Page title</title>
  </head>
  <body>
      <h1>This is a heading</h1>
      <p>This is a paragraph.</p>
      <p>This is another paragraph.</p>
  </body>
</html>
```

Chapter 2

Building a Webpage Template with HTML5

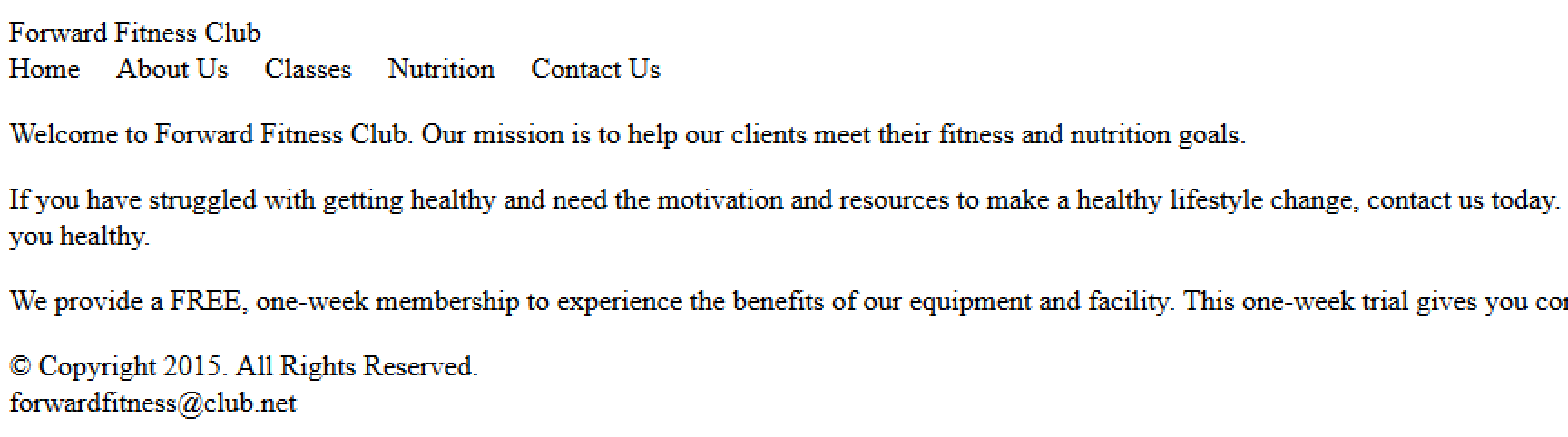


```
<!doctype html>
<head>
    <meta content="text/html; charset=UTF-8" http-equiv="Content-Type">
    <meta content="width=device-width, initial-scale=1, maximum-scale=1" name="viewport">
    <title>Ejercicios prácticos de HTML5 | TicArte</title>
    <meta http-equiv="Content-Type" content="text/html; charset=utf-8" />
    <link rel="shortcut icon" href="http://www.ticarte.com/sites/su/img/favicon.ico" type="image/vnd.microsoft.icon" />
    <meta name="description" content="Colección de ejercicios para practicar con el lenguaje web XHTML." />
    <meta name="abstract" content="Tecnologías de la Información y Comunicación. Educación." />
    <meta name="keywords" content="tecnología educacion diseño web cursos formación traducciones" />
</head>
<body class="html not-front not-logged-in no-sidebars page-node page-node- page-node-113 node-type-blog" >
    <div class="firstload-background"></div>
    <div id="skip-link">
    <a href="#main-content" class="element-invisible element-focusable">Pasar al contenido principal</a>
    </div>
    <div id="outer-wrapper">
    <div class="outer-fix">
    <div class="region region-top-bar-left">



     <div class="social-clear">
```

Chapter Tutorial

Create INDEX.html page

- Create an index page for the Forward Fitness Club



Forward Fitness Club
Home About Us Classes Nutrition Contact Us

Welcome to Forward Fitness Club. Our mission is to help our clients meet their fitness and nutrition goals.

If you have struggled with getting healthy and need the motivation and resources to make a healthy lifestyle change, contact us today. you healthy.

We provide a FREE, one-week membership to experience the benefits of our equipment and facility. This one-week trial gives you co

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forwardfitness@club.net

HTML5 Semantic Elements

Semantic elements are elements with a meaning

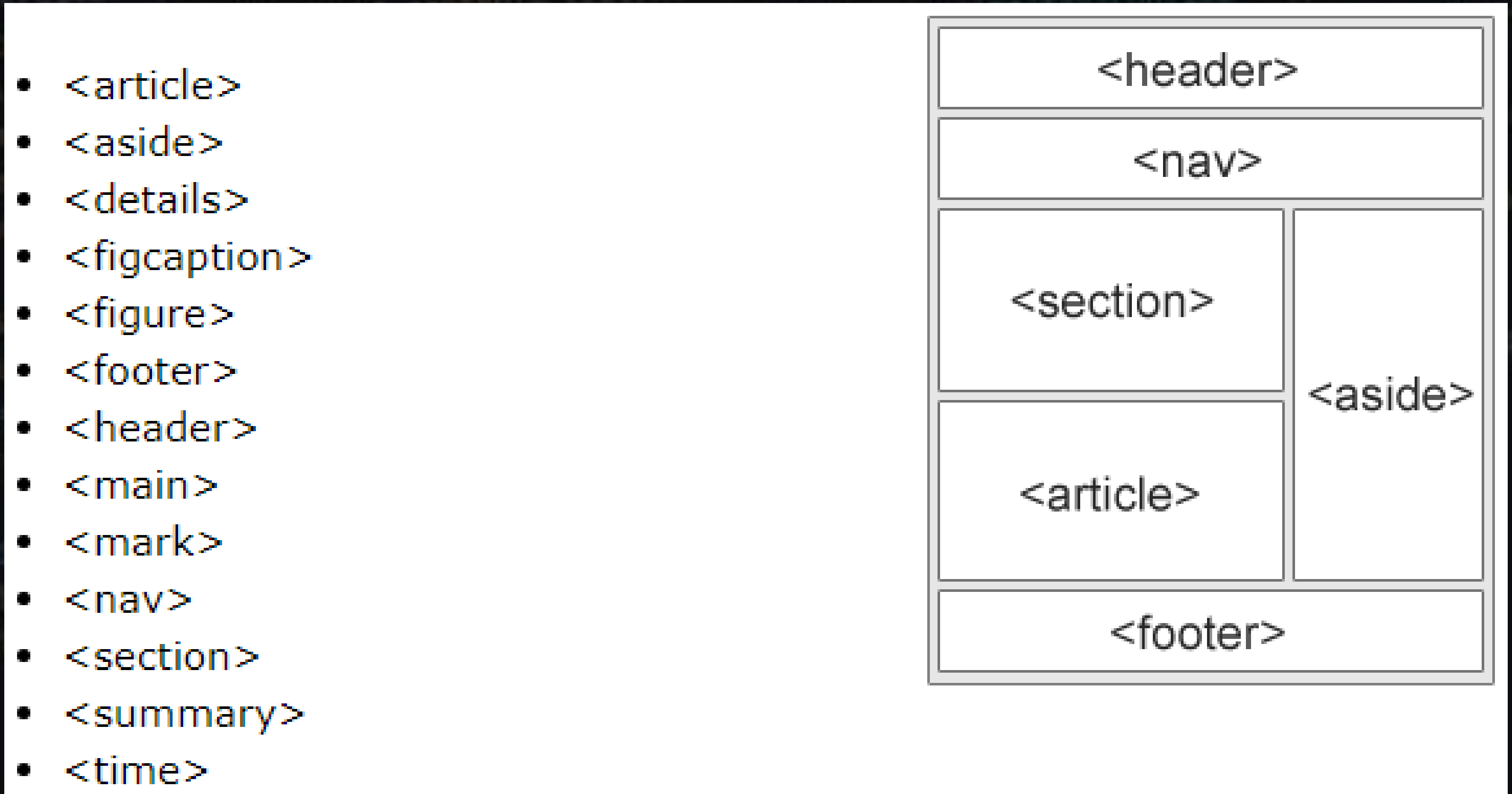
Clearly describes its meaning to both the browser and the developer

<header>, <nav>, <main>, and <footer> - Clearly defines their content

Non-semantic elements:

<div> and <span> -- Tells nothing about their content

Semantic Elements Define Different Parts of a Web Page



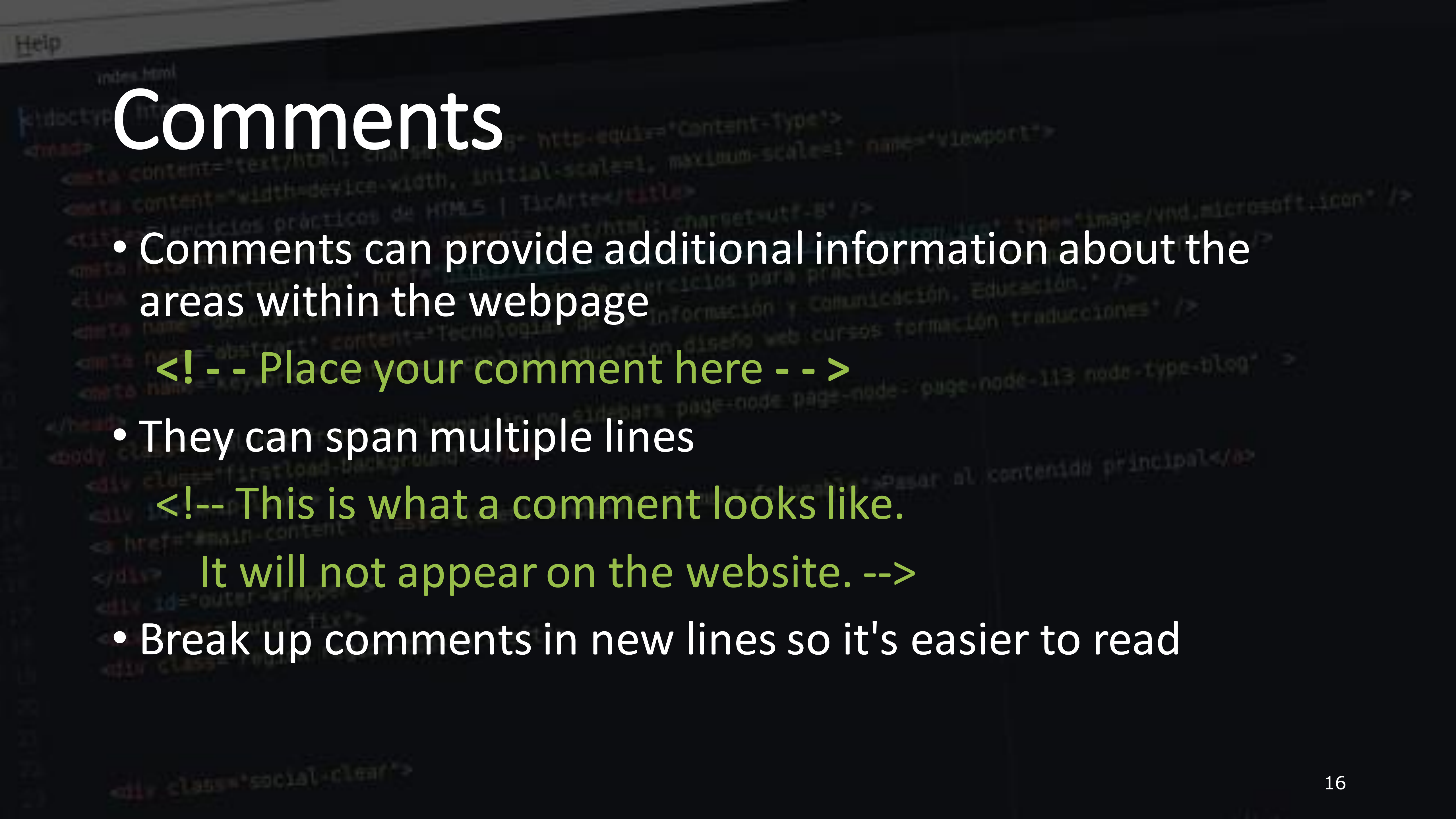
- <article>
- <aside>
- <details>
- <figcaption>
- <figure>
- <footer>
- <header>
- <main>
- <mark>
- <nav>
- <section>
- <summary>
- <time>

<main> Tag

- Starting with chapter 3, exercises use

  <div id="main"> instead of <main> tag
- <div id="main"> accommodates browsers that may not support the semantic <main> tag
- Page 76

- We should use the most modern elements we can



Comments

- Comments can provide additional information about the areas within the webpage

  <! - - Place your comment here - - >

- They can span multiple lines

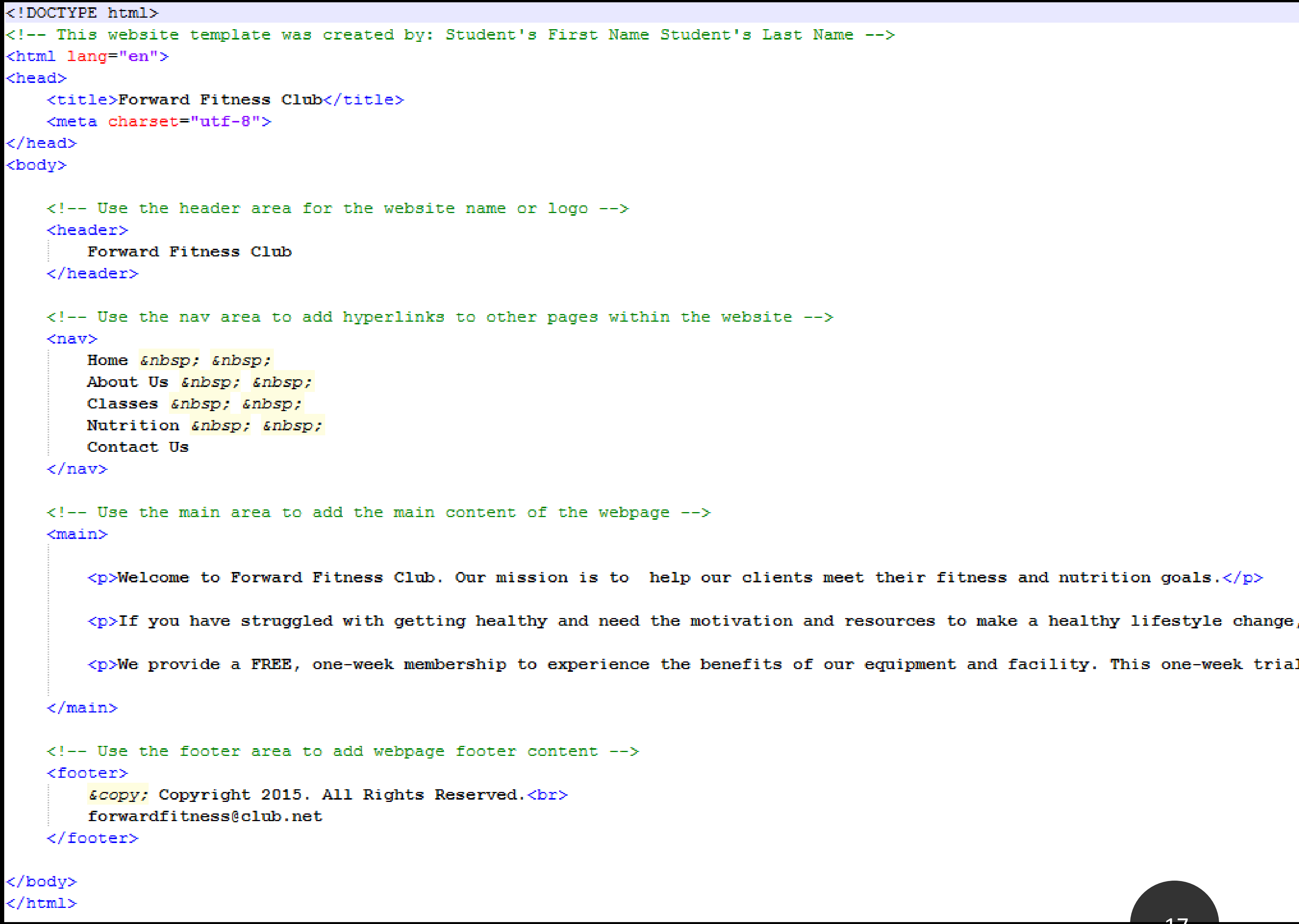
  <!-- This is what a comment looks like.

      It will not appear on the website. -->

- Break up comments in new lines so it's easier to read

Comments

- Remember that white space and line breaks are ignored
- There can never be too many comments.
- Comment everything!
- Don't just copy the comments either. These should be YOUR comments. Explain YOUR files to the reader.



```
<!DOCTYPE html>
<!-- This website template was created by: Student's First Name Student's Last Name -->
<html lang="en">
<head>
    <title>Forward Fitness Club</title>
    <meta charset="utf-8">
</head>
<body>

    <!-- Use the header area for the website name or logo -->
    <header>
        Forward Fitness Club
    </header>

    <!-- Use the nav area to add hyperlinks to other pages within the website -->
    <nav>
        Home &nbsp; &nbsp;
        About Us &nbsp; &nbsp;
        Classes &nbsp; &nbsp;
        Nutrition &nbsp; &nbsp;
        Contact Us
    </nav>

    <!-- Use the main area to add the main content of the webpage -->
    <main>

        <p>Welcome to Forward Fitness Club. Our mission is to  help our clients meet their fitness and nutrition goals.</p>

        <p>If you have struggled with getting healthy and need the motivation and resources to make a healthy lifestyle change,

        <p>We provide a FREE, one-week membership to experience the benefits of our equipment and facility. This one-week trial

    </main>

    <!-- Use the footer area to add webpage footer content -->
    <footer>
        &copy; Copyright 2015. All Rights Reserved.<br>
        forwardfitness@club.net
    </footer>

</body>
</html>
```

HTML Symbol Entities

- Displays a reserved HTML character on the webpage

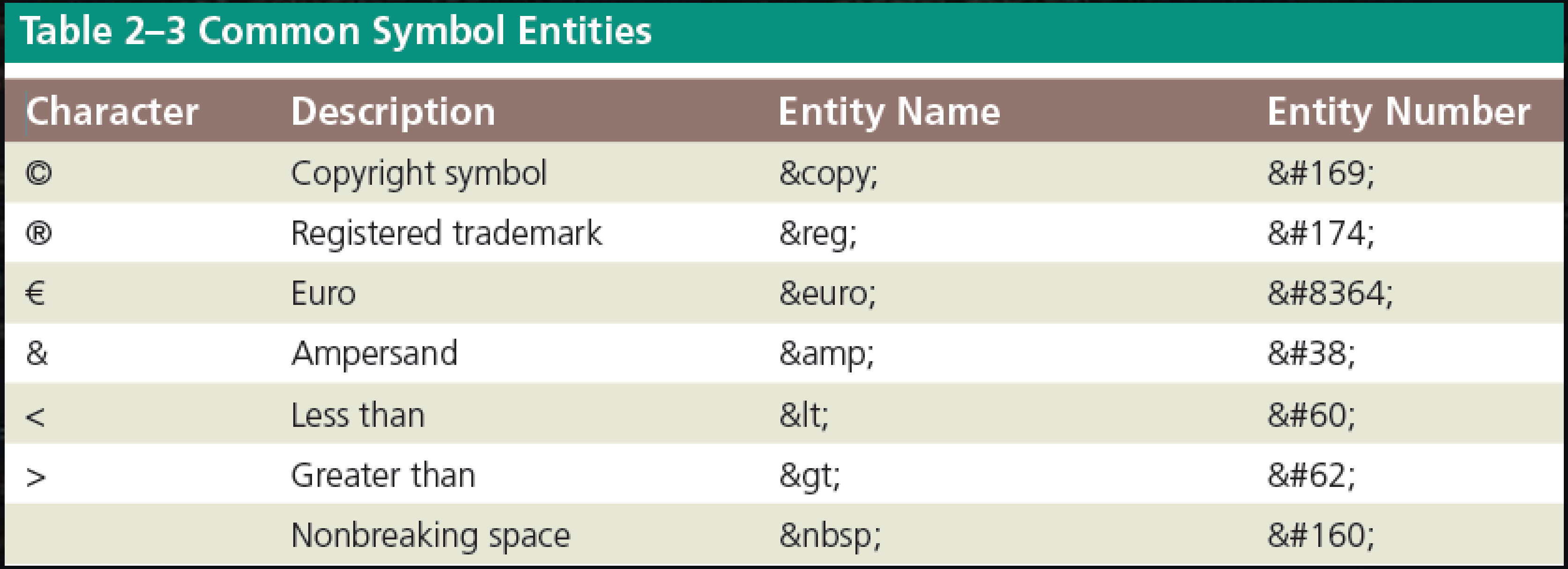


Table 2–3 Common Symbol Entities

Character	Description	Entity Name	Entity Number
©	Copyright symbol	&copy;	&#169;
®	Registered trademark	&reg;	&#174;
€	Euro	&euro;	&#8364;
&	Ampersand	&amp;	&#38;
<	Less than	&lt;	&#60;
>	Greater than	&gt;	&#62;
	Nonbreaking space	&nbsp;	&#160;

HTML Symbol Entities

Copyright symbol:

```
<p> I will display &copy; </p>      -- Entity name
<p> I will display &#169; </p>      -- Entity number
```

I will display ©

I will display ©

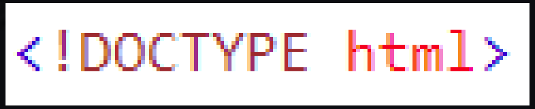
HTML Style Guide

```
<body <?php body_cla
<div id="fb-root"></div>
<script>(function(d, s, id) {
  var js, fjs = d.getElementsByTagName(s)[0];
  if (d.getElementById(id)) return;
  js = d.createElement(s); js.id = id;
  js.src = "//connect.facebook.net/en_US/sdk.js#xfbml=1&version=v2.6&appId=
  fjs.parentNode.insertBefore(js, fjs);
}(document, 'script', 'facebook-jssdk'));</script>
<div id="page" class="site">
    <a class="skip-link screen-reader-text" href="#content"><?php esc_html_e( 'Skip to content', 'urdutube' ); ?></

    <header id="masthead" class="site-header" role="banner">
        <div class="site-branding">
            <div class="navBtn pull-left">
                                ['homepage-style'] == 1) { ?>

            </div>
            <div class="logo pull-left">
                <a href="<?php echo esc_url( home_url() ) ?>">
                    <img src="<?php echo $xpanel['logo']['url'] ?>">
                </a>
            </div>
            <div class="search-box hidden-xs hidden-sm pull-left ml-10">
                <?php get_search_form(); ?>
            </div>
            <div class="submit-btn hidden-xs hidden-sm pull-left ml-10">
                <a href="<?php echo get_page_link($xpanel['submit-link']) ?>" class="header-submit-btn"><i class
            </div>
            <div class="user-info pull-right mr-10">
                <?php
                if ( is_user_logged_in() ) {
```

Be Consistent

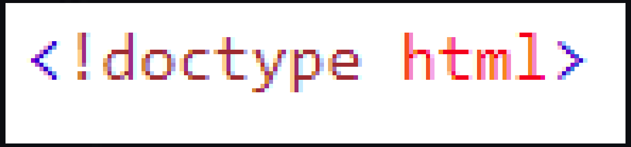
Be consistent in your style as it makes it easier for others to understand your HTML code

Use correct document type:



```
<!DOCTYPE html>
```

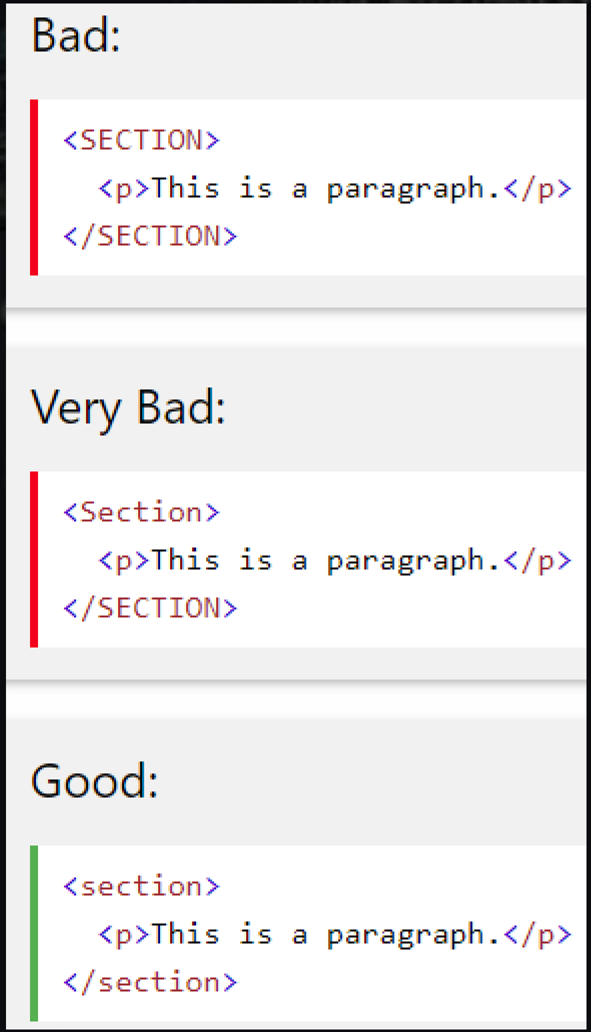
If you want consistency with lower case tags, you can use:



```
<!doctype html>
```

HTML5 allows mixing uppercase and lowercase letters in element names

- Using lowercase element names is recommended because:
  - Mixing uppercase and lowercase names is bad
  - Developers normally use lowercase names
  - Lowercase looks cleaner
  - Lowercase are easier to write



Bad:

```
<SECTION>
  <p>This is a paragraph.</p>
</SECTION>
```

Very Bad:

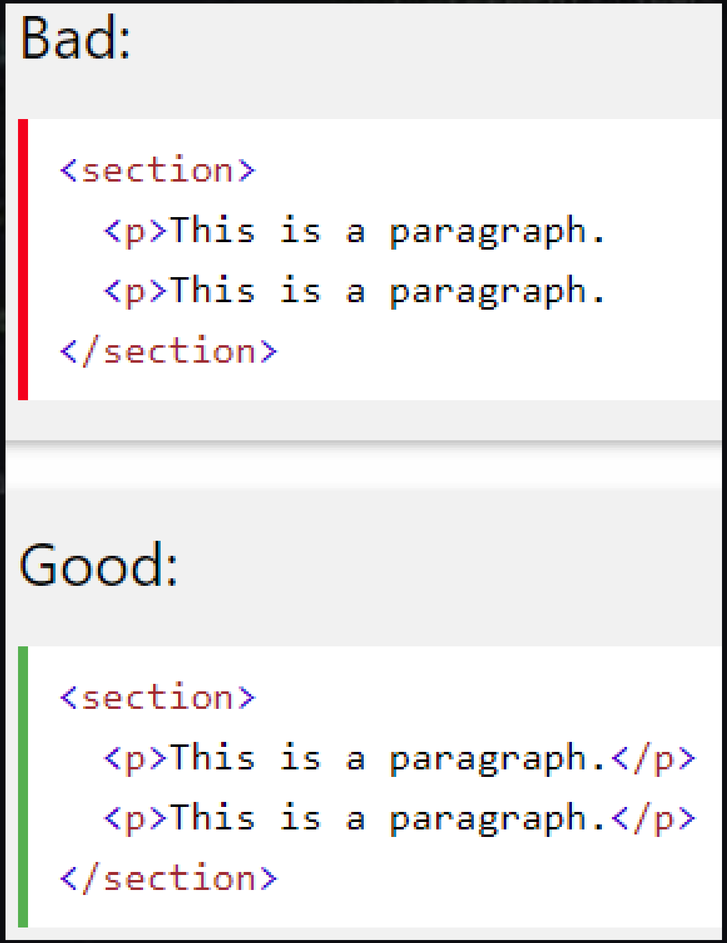
```
<Section>
  <p>This is a paragraph.</p>
</SECTION>
```

Good:

```
<section>
  <p>This is a paragraph.</p>
</section>
```

Close All HTML Elements

- In HTML5, some elements do not have to be closed
- Closing all elements is recommended



Bad:

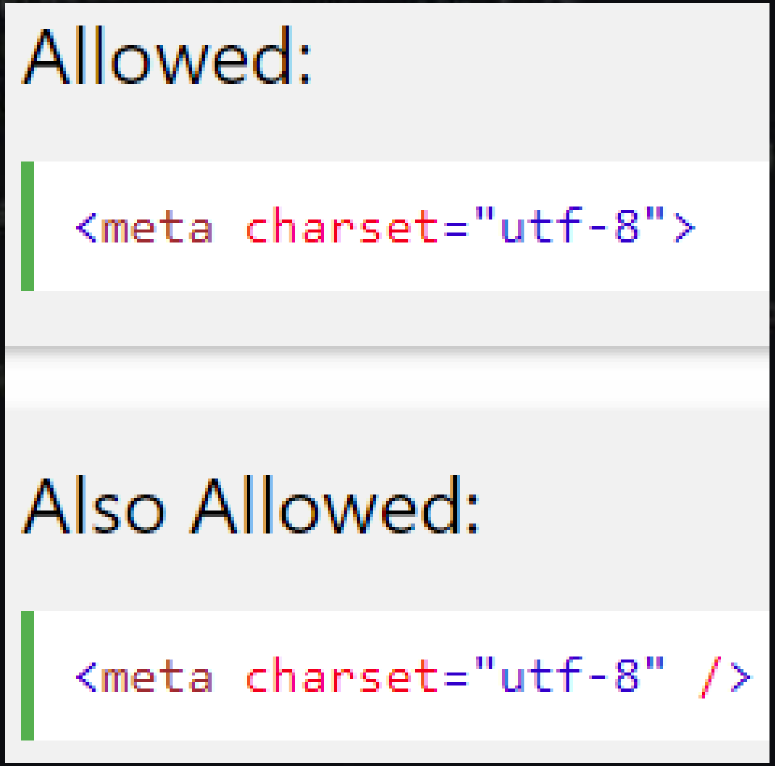
```
<section>
  <p>This is a paragraph.
  <p>This is a paragraph.
</section>
```

Good:

```
<section>
  <p>This is a paragraph.</p>
  <p>This is a paragraph.</p>
</section>
```

Close Empty HTML Elements

- In HTML5, it is optional to close empty elements



Allowed:

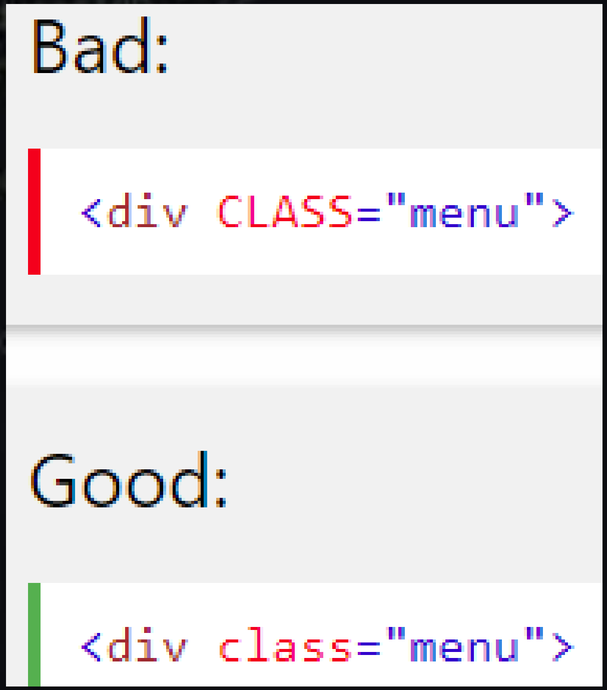
```
<meta charset="utf-8">
```

Also Allowed:

```
<meta charset="utf-8" />
```

Use Lower Case Attribute Names

- HTML5 allows mixing uppercase and lowercase letters in attribute names
- Using lowercase attribute names is recommended because:
  - Mixing uppercase and lowercase names is bad
  - Developers normally use lowercase names
  - Lowercase looks cleaner
  - Lowercase are easier to write



Bad:

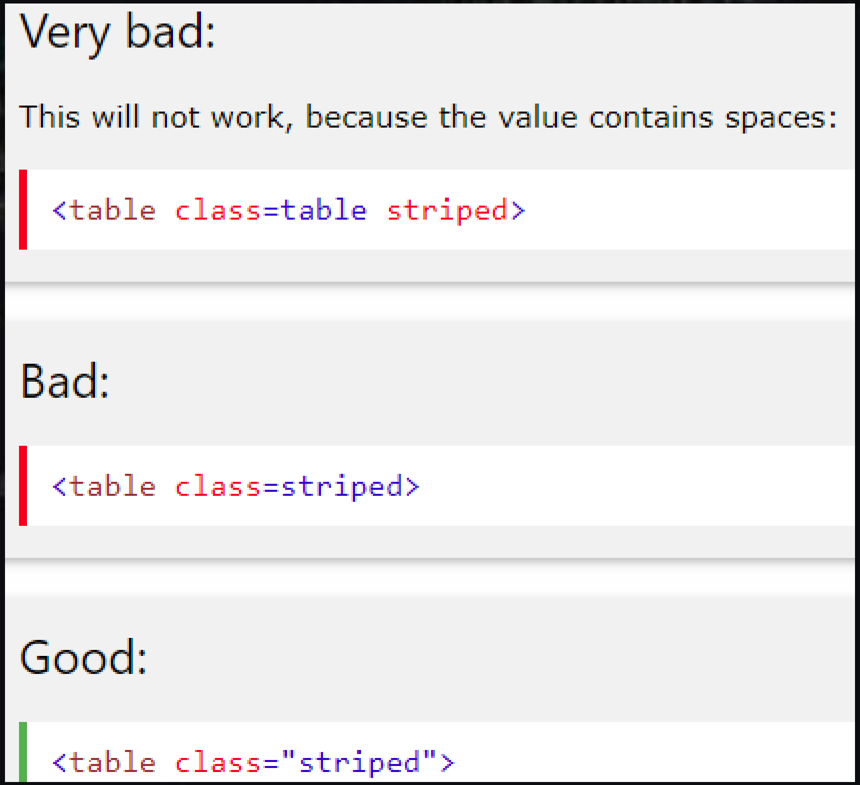
```
<div CLASS="menu">
```

Good:

```
<div class="menu">
```

Quote Attribute Values

- HTML5 allows attribute values without quotes
- Quoting attribute values is recommended because:
  - Quoted values are easier to read
  - You MUST use quotes if the value contains spaces



Very bad:

This will not work, because the value contains spaces:

```
<table class=table striped>
```

Bad:

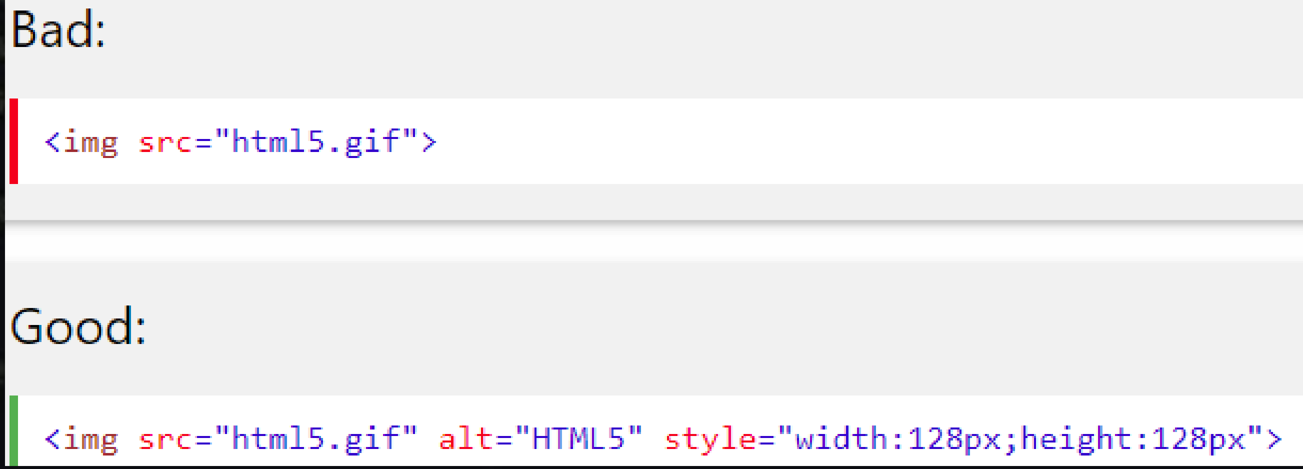
```
<table class=striped>
```

Good:

```
<table class="striped">
```

Image Attributes

- Always add alt attribute to images
  - Displays if image cannot be displayed for some reason
- Define image width and height
  - Reduces flickering because the browser can reserve space for the image before loading



Bad:

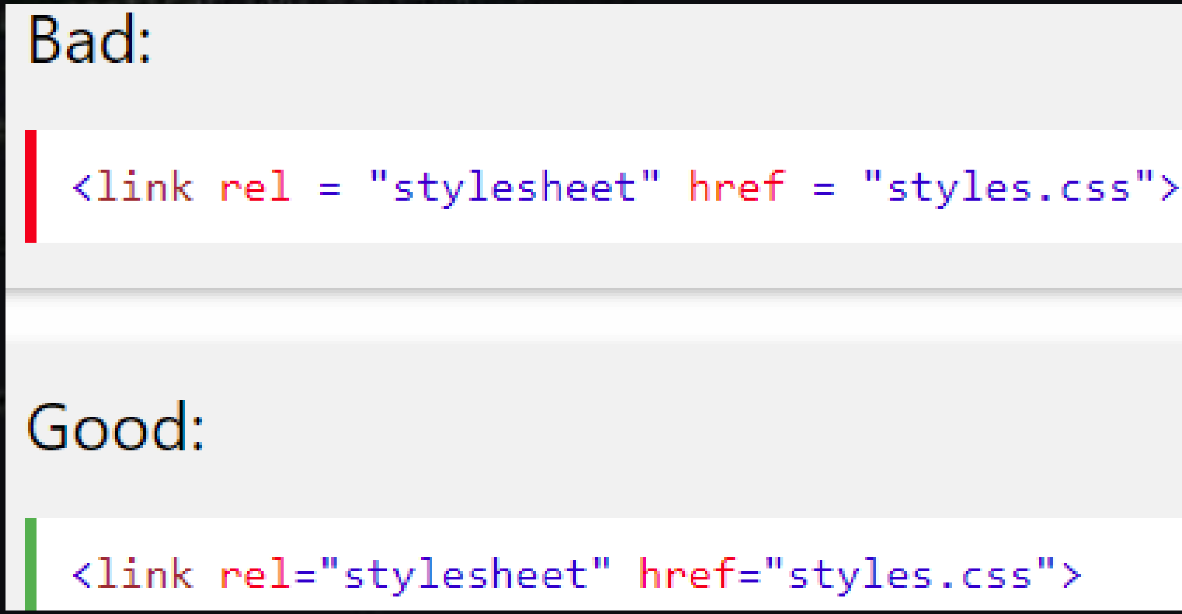
```
<img src="html5.gif">
```

Good:

```
<img src="html5.gif" alt="HTML5" style="width:128px;height:128px">
```

Spaces and Equal Signs

- HTML ignores extra spacing, allowing spacing around equal signs
- Space-less is easier to read and groups entities together better



Bad:

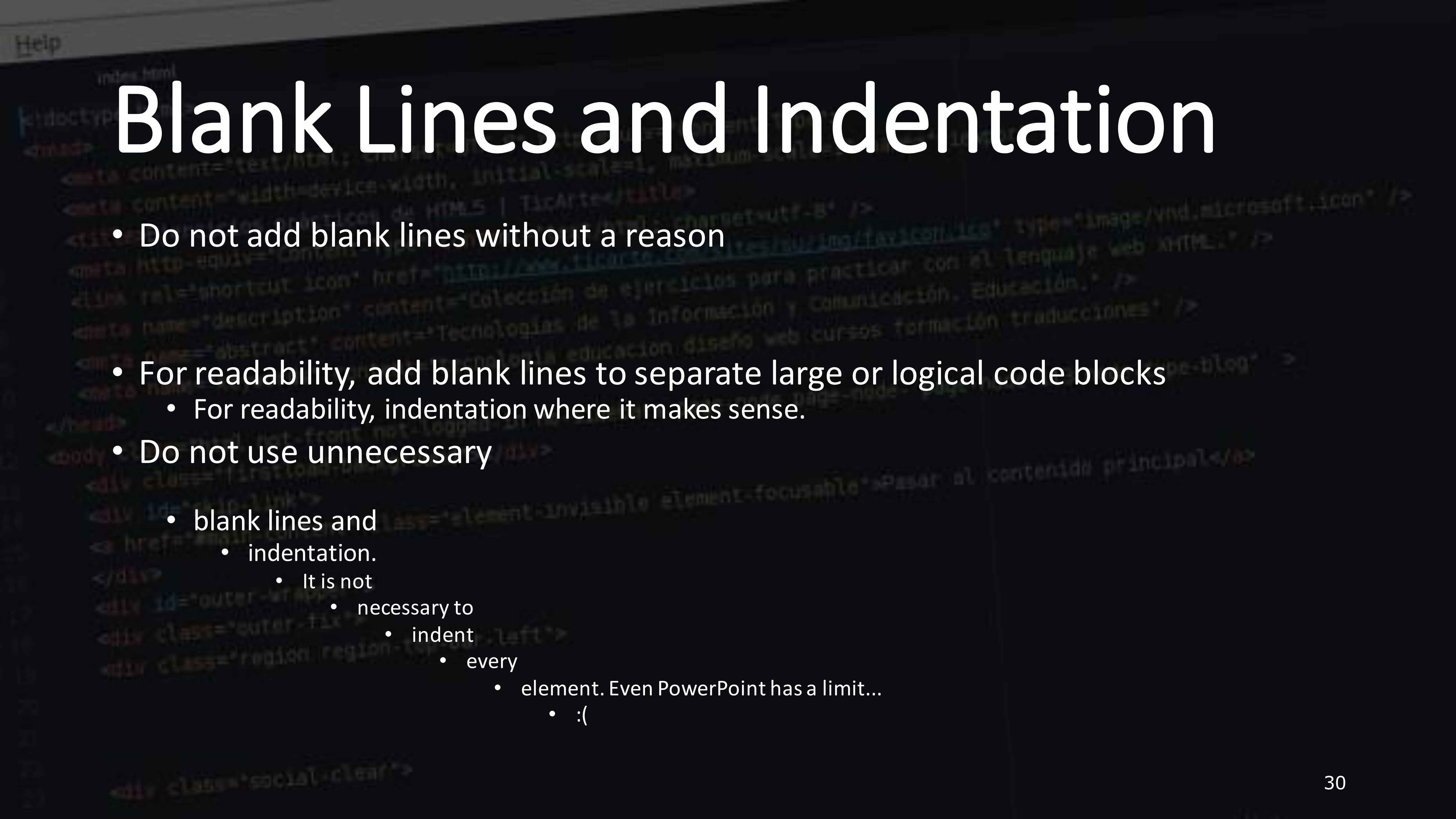
```
<link rel = "stylesheet" href = "styles.css">
```

Good:

```
<link rel="stylesheet" href="styles.css">
```

Avoid Long Code Lines

- Try to avoid code lines longer than 80 characters
- Some editors show a "line too long" mark
- HTML ignores line breaks
- Try writing with only half your screen at a time

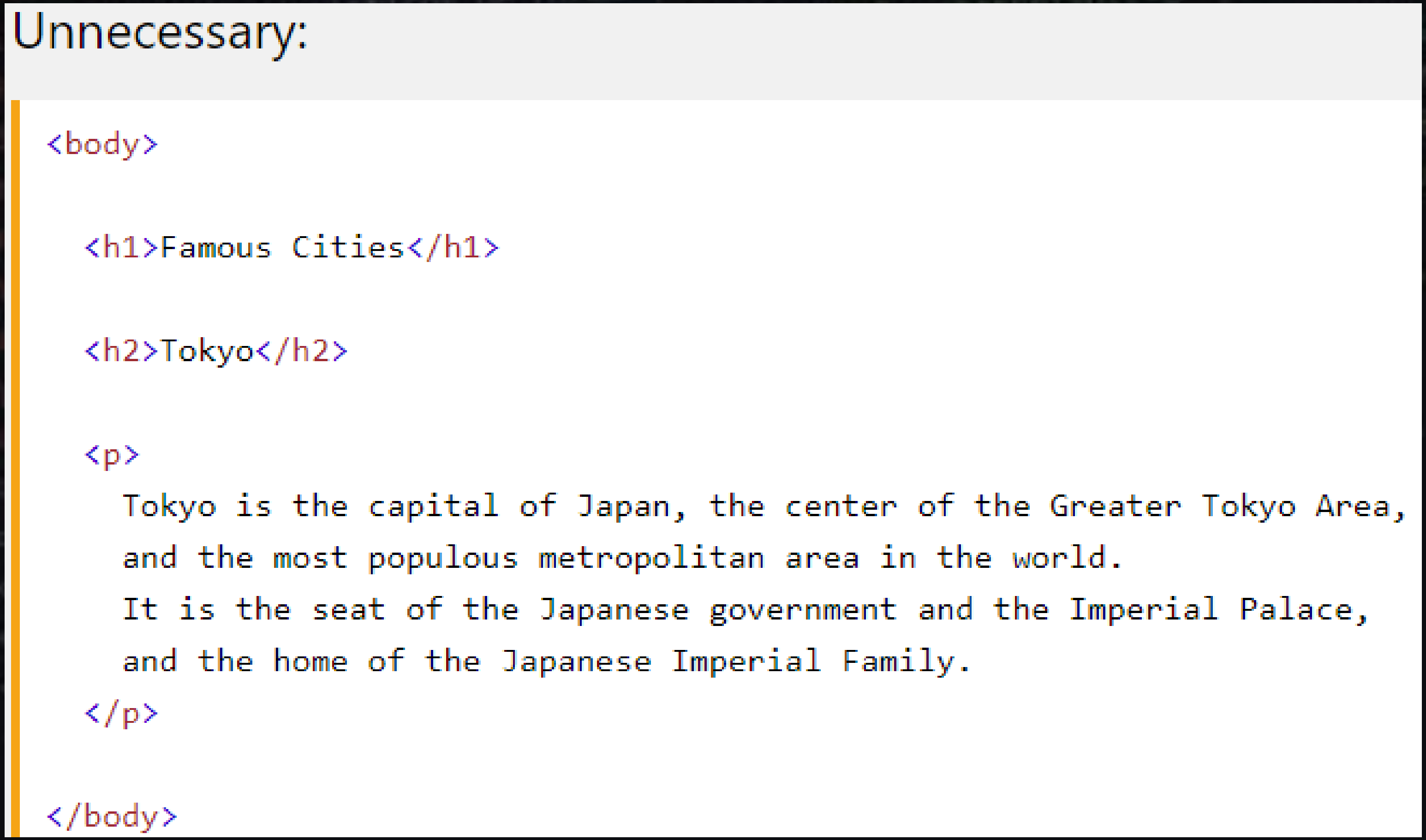


Blank Lines and Indentation

- Do not add blank lines without a reason

- For readability, add blank lines to separate large or logical code blocks
  - For readability, indentation where it makes sense.
- Do not use unnecessary
  - blank lines and
    - indentation.
      - It is not
        - necessary to
          - indent
            - every
              - element. Even PowerPoint has a limit...
                - :(

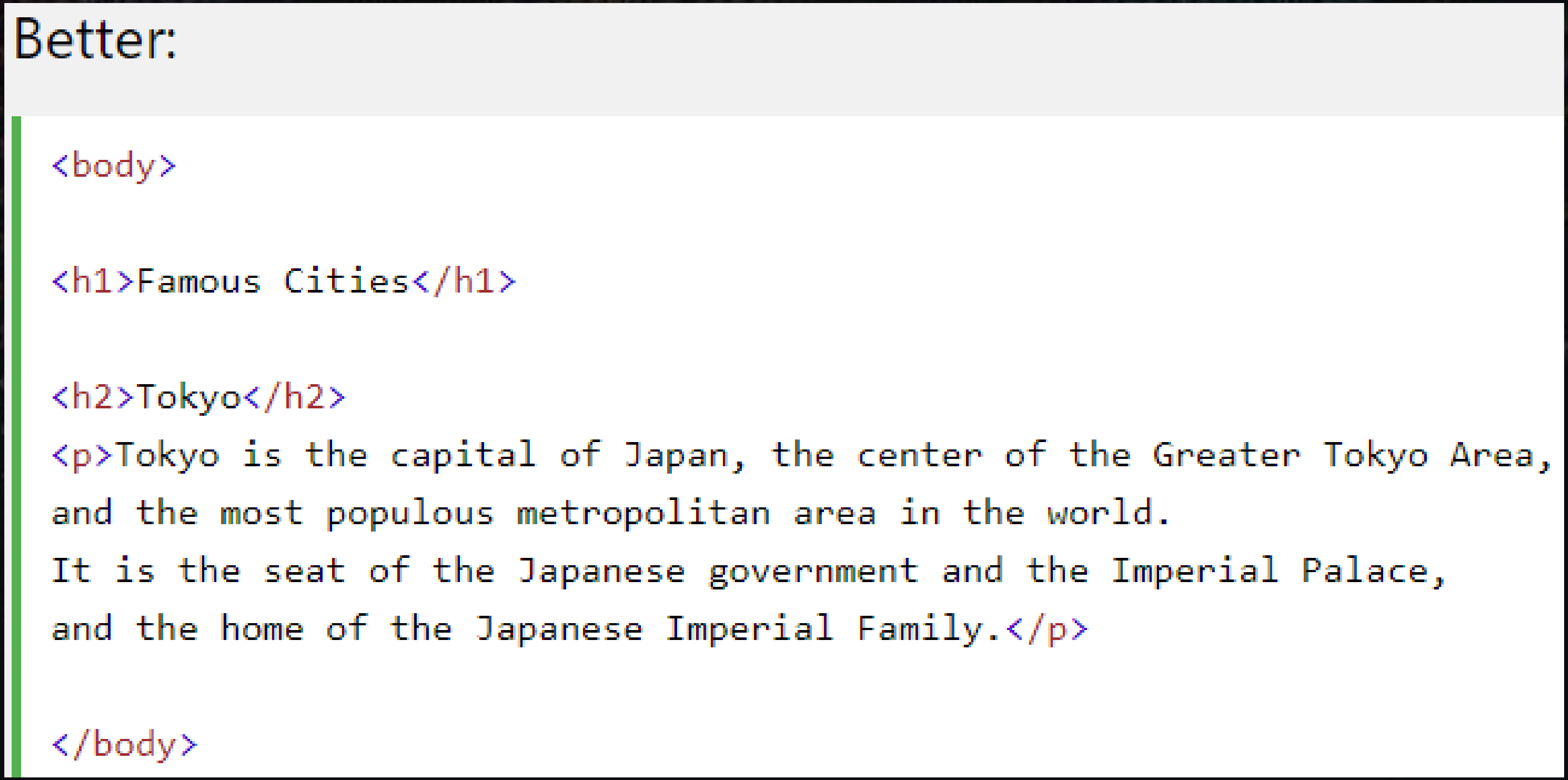
Blank Lines and Indentation



Unnecessary:

```
<body>


  <h1>Famous Cities</h1>


  <h2>Tokyo</h2>


  <p>
    Tokyo is the capital of Japan, the center of the Greater Tokyo Area,
    and the most populous metropolitan area in the world.
    It is the seat of the Japanese government and the Imperial Palace,
    and the home of the Japanese Imperial Family.
  </p>


</body>
```

Blank Lines and Indentation



Better:

```
<body>

<h1>Famous Cities</h1>

<h2>Tokyo</h2>
<p>Tokyo is the capital of Japan, the center of the Greater Tokyo Area,
and the most populous metropolitan area in the world.
It is the seat of the Japanese government and the Imperial Palace,
and the home of the Japanese Imperial Family.</p>

</body>
```

Blank Lines and Indentation

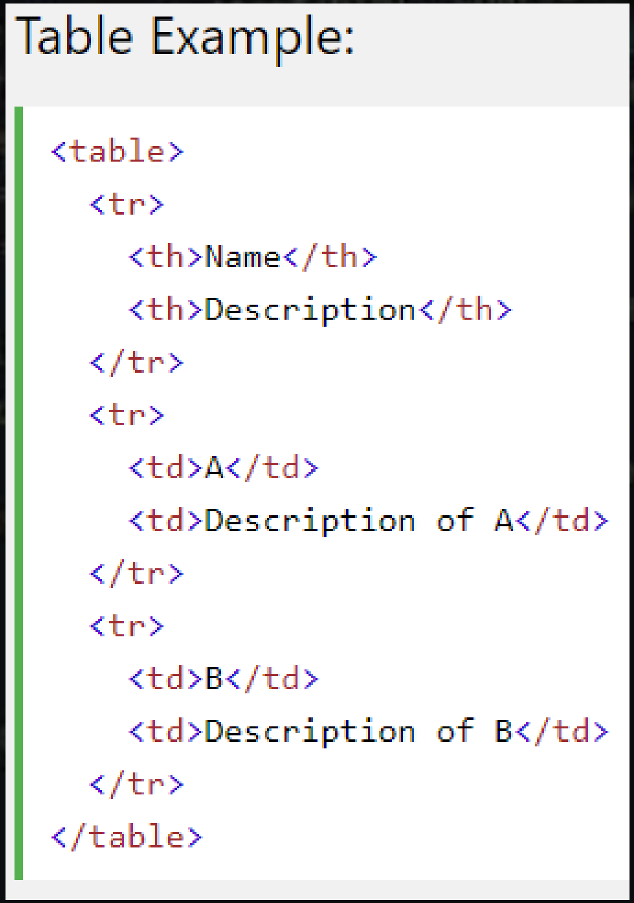
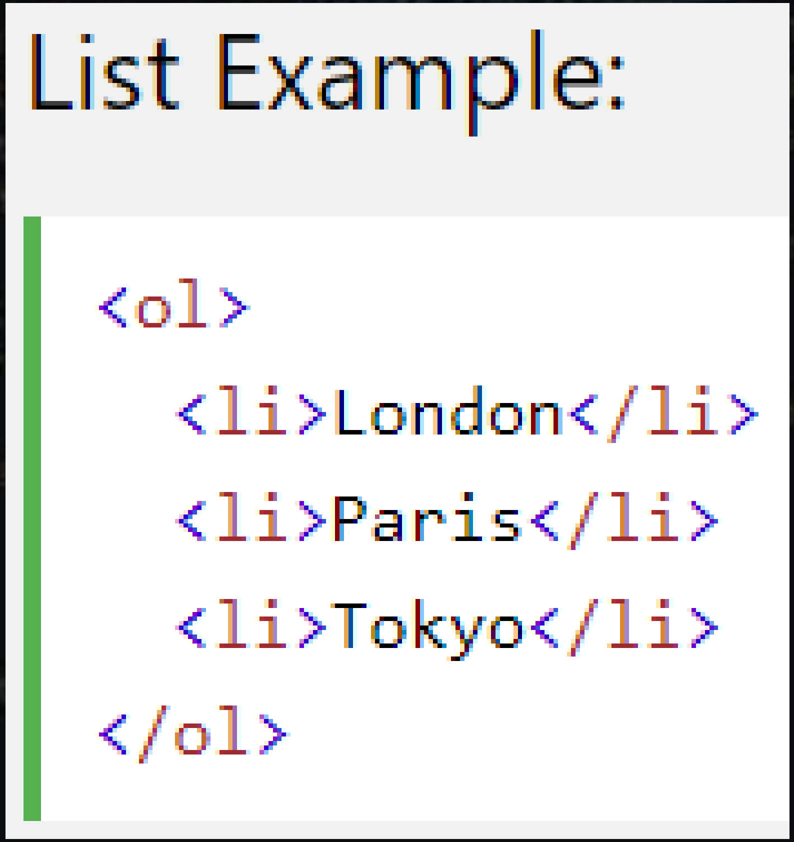


Table Example:

```
<table>
  <tr>
    <th>Name</th>
    <th>Description</th>
  </tr>
  <tr>
    <td>A</td>
    <td>Description of A</td>
  </tr>
  <tr>
    <td>B</td>
    <td>Description of B</td>
  </tr>
</table>
```

Blank Lines and Indentation



List Example:

```
<ol>
  <li>London</li>
  <li>Paris</li>
  <li>Tokyo</li>
</ol>
```

Validating HTML Documents

- A validator checks for errors, indicates where they are located, and suggests corrections
- If the validator detects an error in an HTML code, it displays a warning in the header bar
- A result line below the header bar shows the number of errors in the document
- validator.w3.org
- The best editors have validators built in.

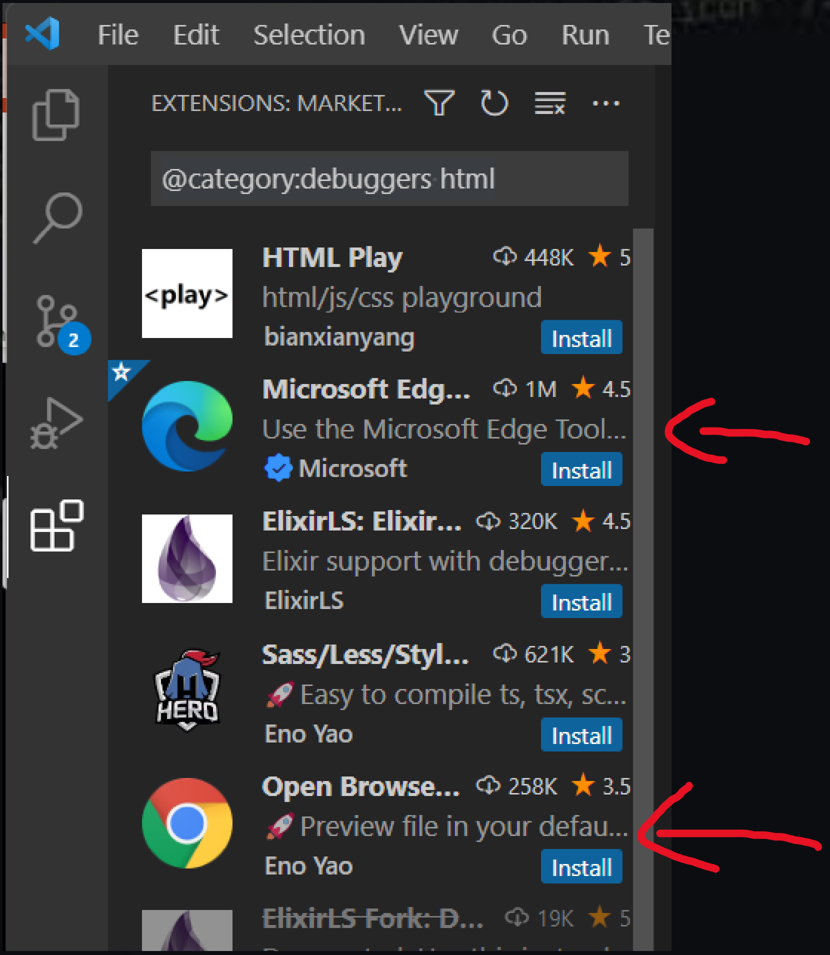
Visual Studio Code

Display Home Page in a Browser

- NotePad++
  - View > View Current File in > select browser
- Visual Studio Code
  - Drag the file name into a browser

  Or
  - Run > Install additional debuggers > "@category:debuggers html"
    - These give you more opening options

Debuggers are an important tool for every developer



@category:debuggers html

HTML Play 448K ★ 5
html/js/css playground
bianxianyang

Microsoft Edg... 1M ★ 4.5
Use the Microsoft Edge Tool...
Microsoft

ElixirLS: Elixir... 320K ★ 4.5
Elixir support with debugger...
ElixirLS

Sass/Less/Styl... 621K ★ 3
Easy to compile ts, tsx, sc...
Eno Yao

Open Browse... 258K ★ 3.5
Preview file in your defau...
Eno Yao

~~ElixirLS Fork: D...~~ 19K ★ 5

File Management

- Websites use several types of files, including HTML files, image files, media such as audio and video files, and CSS files
- The main folder, also called the root folder, contains all files and other folders for the website

- Next week (week 3) – establish file structure on iCloud server
  - Let's make sure we speak with Professor Jim Cooper and ensure we are setup with everything we need to bring our websites to life.

File Management

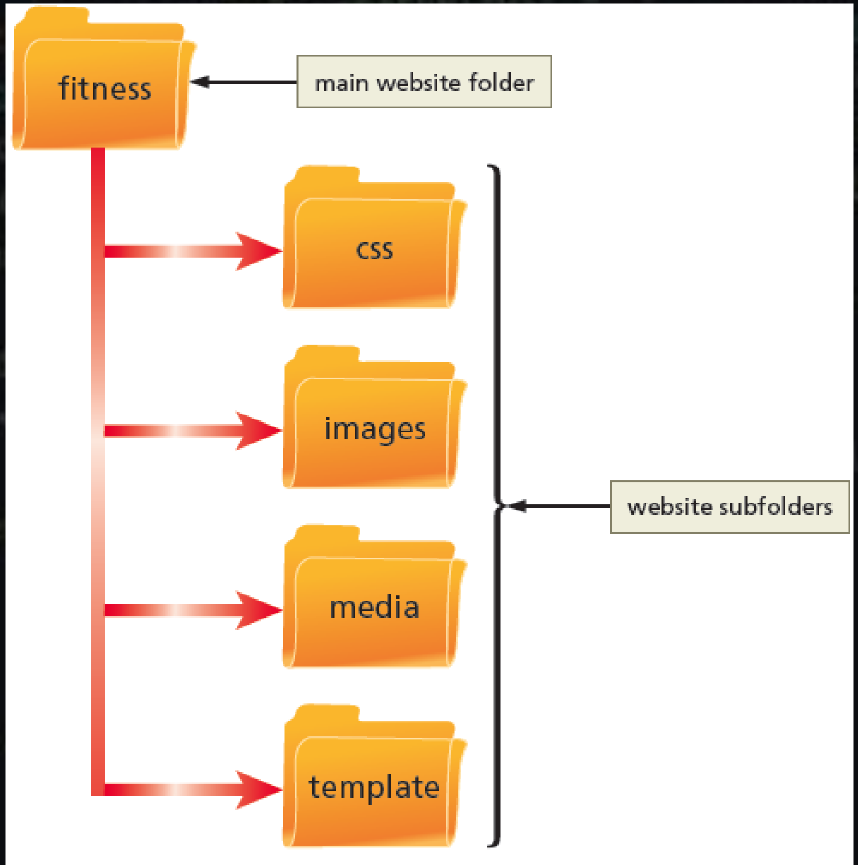


Figure 2–4