

CSCI 1102-Introduction to Computing

HTML Introduction

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Web Site Introduction

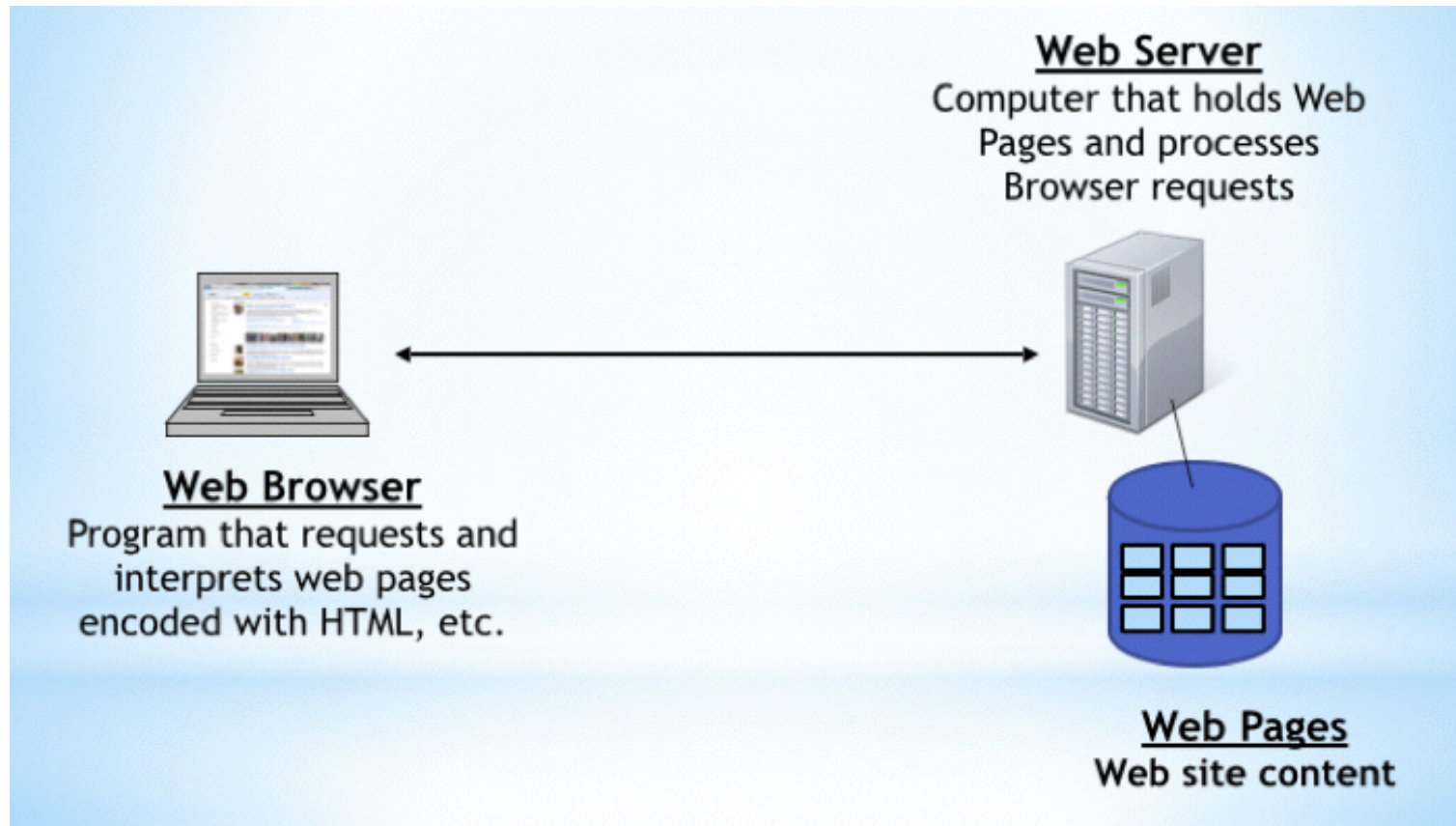
The basic components of a web site are:

- ▶ **Content** - information displayed
 - ▶ **Static**: content that doesn't change for different user interactions.
 - ▶ **Dynamic**: content that varies based on the user, user input.
- ▶ **Instructions**
 - ▶ **Formatting**: how the content is to be displayed.
 - ▶ **Navigation**: path between web pages.
 - ▶ Other Actions: Pop-up windows ...

Web Browsers

- ▶ The purpose of a web browser (Chrome, IE, Firefox, Safari) is to **read** HTML documents and **display** them.
- ▶ The browser does not display the HTML tags, but uses them to determine how to display the document.

Website, Browser, Web Server



Why learn HTML?

- ▶ Every webpage you look at is written in a language called **HTML**.
- ▶ You can think of HTML as the skeleton that gives every **webpage structure**.
- ▶ In this course, we'll use HTML to add paragraphs, headings, images and links to webpage.

What is HTML?

- ▶ HTML is a **markup language** for describing web documents(web pages).
 - ▶ HTML stands for **Hyper Text Markup Language**.
 - ▶ A markup language is a set of markup tags.
 - ▶ HTML documents are described by **HTML tags**.
 - ▶ Each HTML tag describes different document.

HTML Page Structure

There are always two parts to an HTML file: the **head** and the **body**.

- ▶ The head contains information about your HTML file, like its **title**. The title is what we see in the browser's title bar or page tab.
- ▶ The body is where you put your content, such as **text, images, and links**. The content in the body is what will be visible on the actual page.

HTML Page Structure

```
<!DOCTYPE html>
<html>

  <head>
    <title>Page Title </title>
  </head>

  <body>
    <h1>My First Heading</h1>

    <p> My first paragraph.</p>
  </body>

</html>
```


HTML Tags

HTML tags are keywords (tag names) surrounded by angle brackets:

`<tagname> content </tagname>`

- ▶ 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.

Example Explained

- ▶ The **DOCTYPE declaration** defines the document type to be HTML.
- ▶ The text between `<html>` and `</html>` describes an HTML document.
- ▶ The text between `<head>` and `</head>` provides information about the document.
- ▶ The text between `<title>` and `</title>` provides a title for the document.
- ▶ The text between `<body>` and `</body>` describes the visible page content

Pay attention to ...

- ▶ Always put `<!DOCTYPE html>` on the first line. This tells the browser what language it's reading (in this case, HTML).
- ▶ Always put `<html>` on the next line. This starts the HTML document.
- ▶ Always put `</html>` on the last line. This ends the HTML document.

HTML Versions

Version	Year
HTML	1991
HTML 2.0	1995
HTML 3.2	1997
HTML 4.01	1999
XHTML	2000
HTML5	2014

Common Declarations

HTML5

```
<!DOCTYPE html>
```

HTML 4.01

```
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN"  
"http://www.w3.org/TR/html4/loose.dtd">
```

XHTML 1.0

```
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"  
"http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">
```

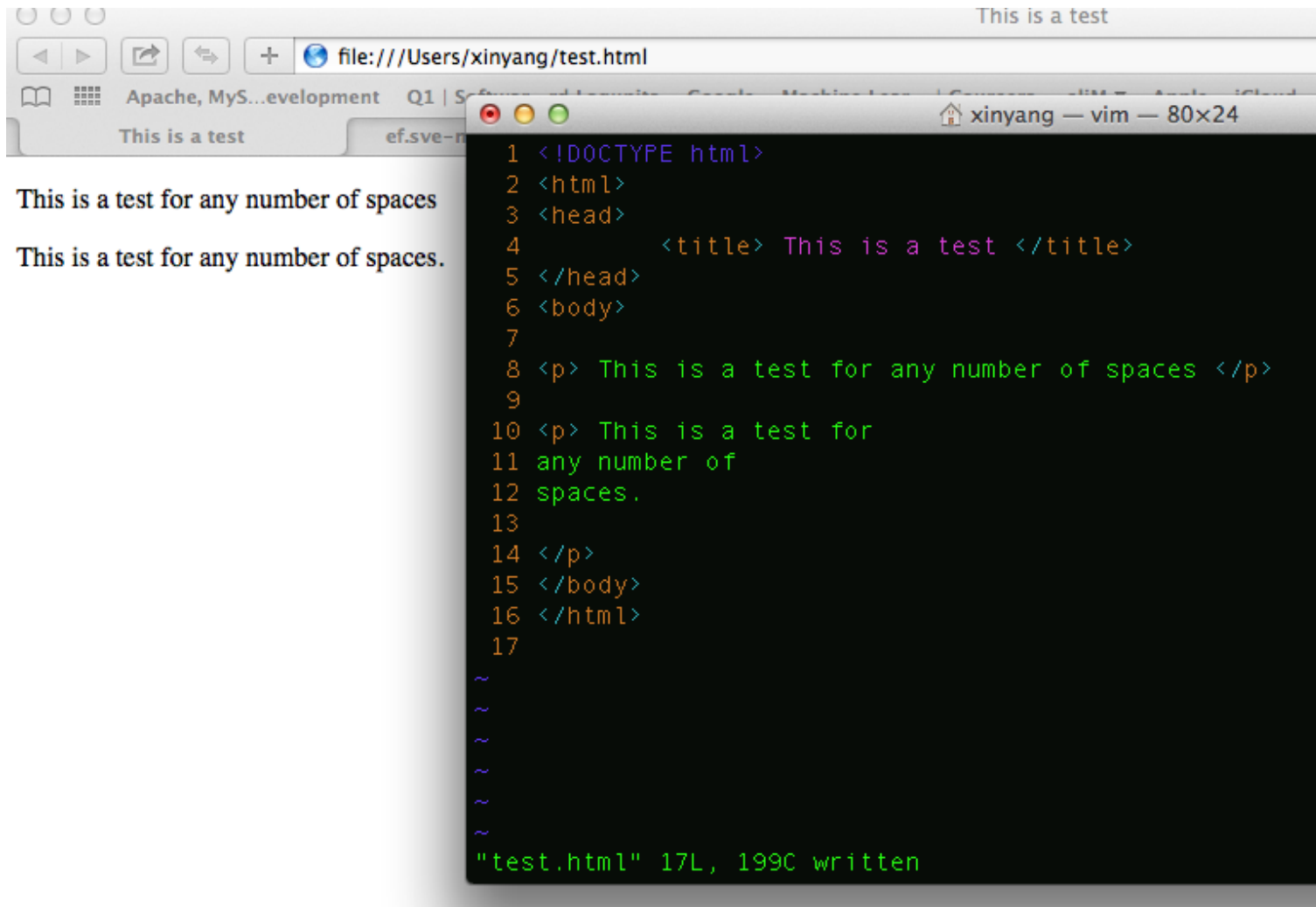
All tutorials and examples in this class use **HTML5**.

HTML Paragraphs

- ▶ HTML paragraphs are defined with the `<p>` tag:
 - ▶ `<p>` This is a paragraph. `</p>`
 - ▶ `<p>` This is another paragraph. `</p>`

HTML Paragraphs

- ▶ Any number of spaces, and any number of new lines, count as only one space.



The screenshot shows a web browser window on the left and a vim editor window on the right. The browser window displays the rendered HTML, showing two paragraphs: "This is a test for any number of spaces" and "This is a test for any number of spaces." The vim editor window shows the source HTML code, which uses the `<p>` tag to create paragraphs. The code is as follows:

```
1 <!DOCTYPE html>
2 <html>
3 <head>
4     <title> This is a test </title>
5 </head>
6 <body>
7
8 <p> This is a test for any number of spaces </p>
9
10 <p> This is a test for
11 any number of
12 spaces.
13
14 </p>
15 </body>
16 </html>
17
~
~
~
~
~
~
"test.html" 17L, 199C written
```

HTML Headings

- ▶ HTML headings are defined with the `<h1>` to `<h6>` tags:
 - ▶ `<h1>` This is a heading `</h1>`.
 - ▶ `<h2>` This is a heading `</h2>`.
 - ▶ `<h3>` This is a heading `</h3>`.
- ▶ `<h1>` defines the most important heading.
- ▶ `<h6>` defines the least important heading.

HTML Elements

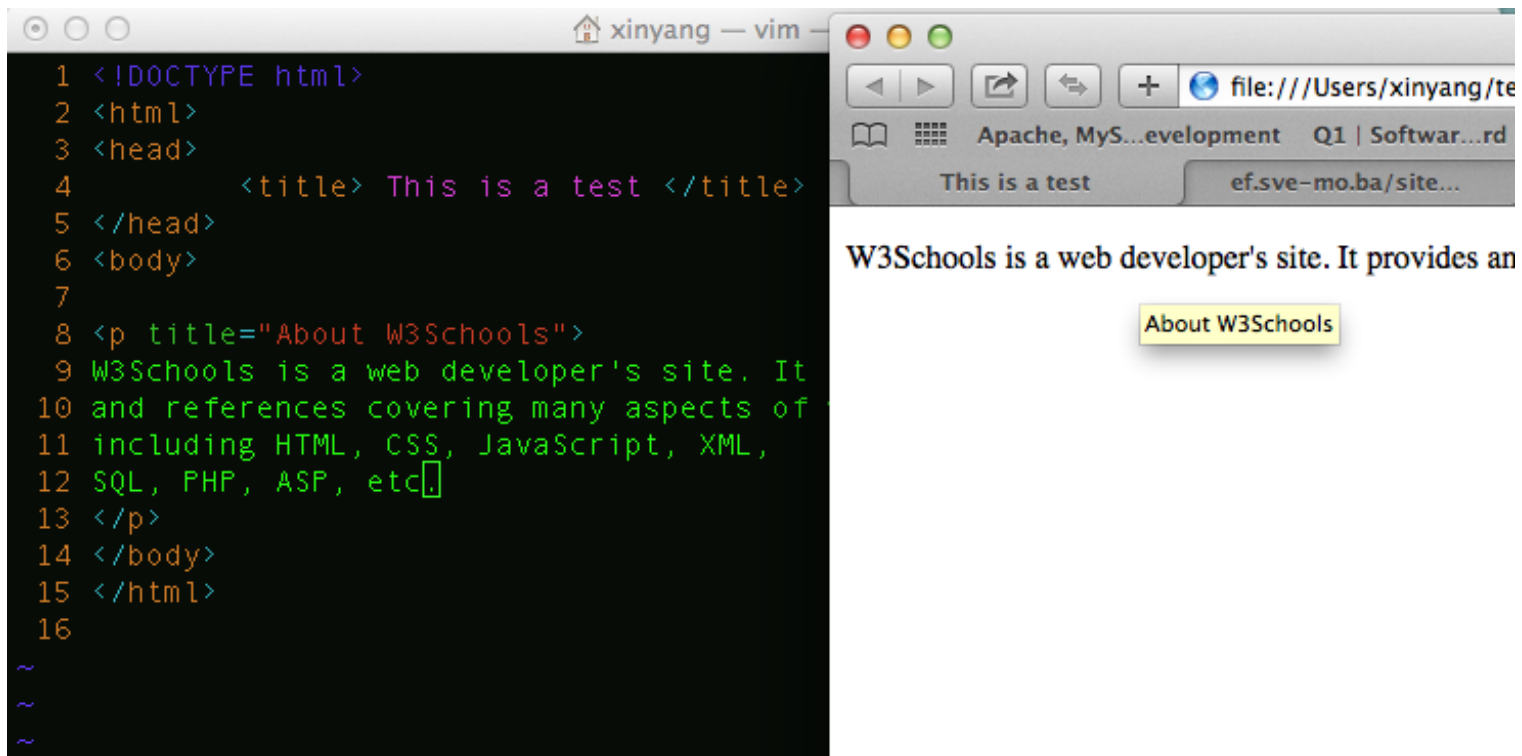
- ▶ HTML element is everything from the start tag to the end tag:

Start tag	Element content	End tag
<code><h1></code>	My First Heading	<code></h1></code>
<code><p></code>	My first paragraph.	<code></p></code>
<code>
</code>		

HTML Attributes

- ▶ HTML elements can have **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'**

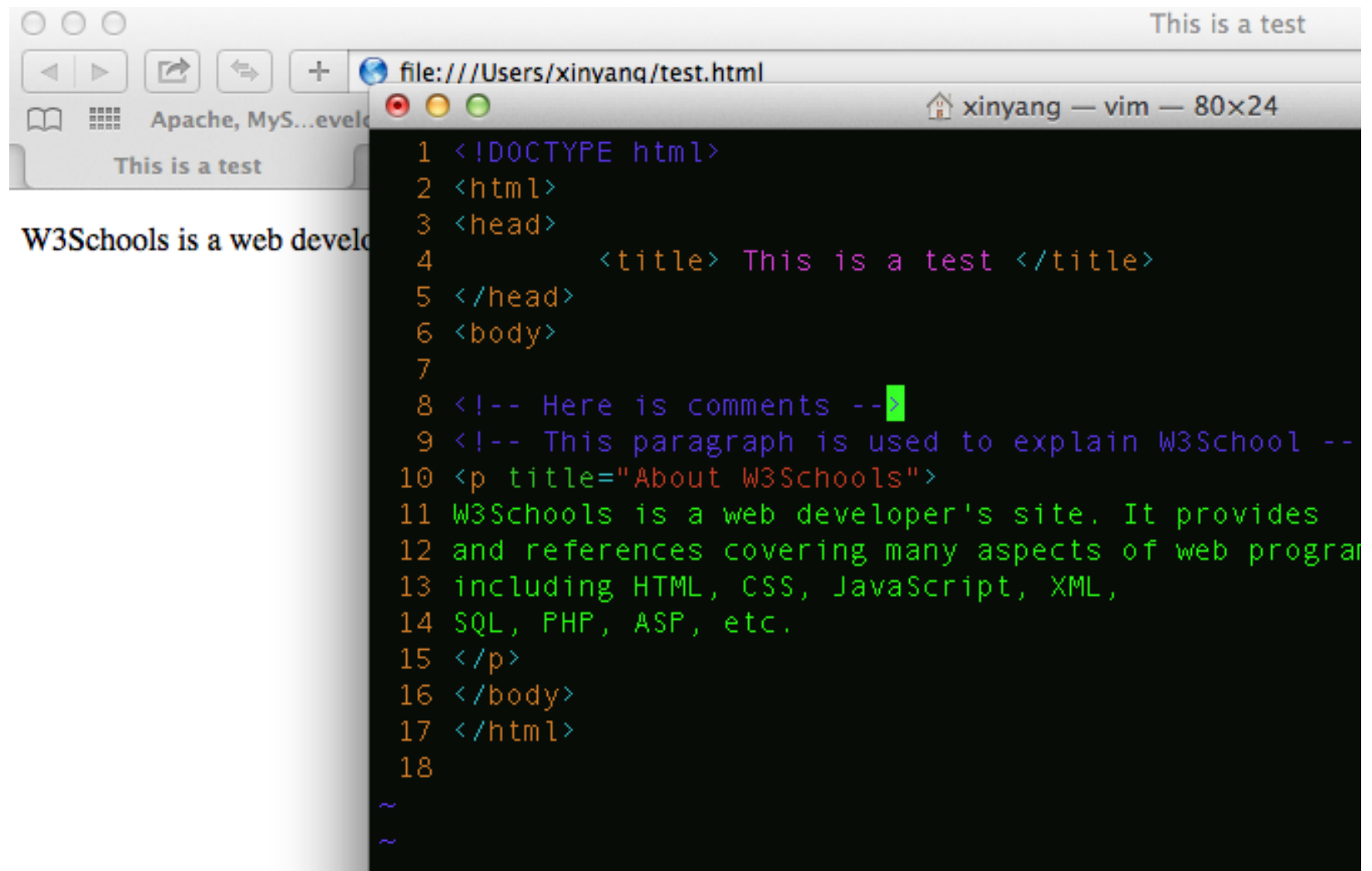
Title Attributes



HTML Comment Tags

- ▶ Comments are not displayed by the browser, but it will help you remember why you did certain things.
- ▶ With comments you can place notifications and reminders in your HTML.
- ▶ Comments tag: `<!-- Comments Here -->`

HTML Comments



The image shows a web browser window on the left and a code editor window on the right. The browser window displays the title "This is a test" and the content "W3Schools is a web developer's site. It provides and references covering many aspects of web programming including HTML, CSS, JavaScript, XML, SQL, PHP, ASP, etc." The code editor window shows the HTML code for the page, with line numbers 1 through 18. The code includes a DOCTYPE declaration, a title tag, and a paragraph tag. Two HTML comments are present: one on line 8 and another on line 9. The code is as follows:

```
1 <!DOCTYPE html>
2 <html>
3 <head>
4     <title> This is a test </title>
5 </head>
6 <body>
7
8 <!-- Here is comments -->
9 <!-- This paragraph is used to explain W3School --
10 <p title="About W3Schools">
11 W3Schools is a web developer's site. It provides
12 and references covering many aspects of web program
13 including HTML, CSS, JavaScript, XML,
14 SQL, PHP, ASP, etc.
15 </p>
16 </body>
17 </html>
18
```

Indentation is your friend

- **Indentation** really helps make your code more readable!

```
1 <!DOCTYPE html>
2 <html>
3 <head>
4 <title>This is a test</title>
5 </head>
6 <body>
7
8 <!-- Bad example: No Indentation -->
9 <h1>Food</h1>
10 <h2>Fruit</h2>
11 <h3>Watermelon</h3>
12 <h3>Banana</h3>
13 <h2>Meat</h2>
14 <h3>Chicken</h3>
15 <h3>Pork</h3>
16
17
18 </body>
19
20 </html>
```

```
1 <!DOCTYPE html>
2 <html>
3 <head>
4     <title>This is a test</title>
5 </head>
6 <body>
7
8 <!-- Good example: Indentation -->
9 <h1>Food</h1>
10     <h2>Fruit</h2>
11         <h3>Watermelon</h3>
12         <h3>Banana</h3>
13     <h2>Meat</h2>
14         <h3>Chicken</h3>
15         <h3>Pork</h3>
16
17 </body>
18
19 </html>
```

HTML Tip: Use Lowercase Tags

- ▶ HTML tags are not case sensitive: `<P>` means the same as `<p>`.

HTML Tip: How to View HTML Source

- ▶ To find out HTML Source, **right-click** in the page and select "View Page Source" (in Chrome) or "View Source" (in IE), or similar in another browser.
- ▶ This will open a window containing the HTML code of the page.

Process for Developing a web site

- ▶ Planning and desian.
- ▶ Create the web pages using an editor.
- ▶ Test the web pages.
- ▶ Publish the web pages by uploading the pages to the web server.

HTML Editors

Write HTML Using **Notepad++** for Windows.

- ▶ Step 1: Open Notepad++
- ▶ Step 2: Write Some HTML
- ▶ Step 3: Save Page with extension **.html**
- ▶ Step 4: View HTML Page in Your Browser.

HTML Editors

Write HTML Using [Atom](#) for Mac.

- ▶ Installing Atom:

```
https://atom.io/
```

References

1 <http://www.w3schools.com>