Teknologi Web Service

02. Pemrograman Web Dasar 1

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Rencana Pembelajaran Semester (RPS) Teknologi Web Service

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Capaian Pembelajaran

- Mahasiswa dapat membuat web dengan syntax HTML.

Pokok Bahasan

- HTML Getting Started
- HTML Fundamentals
- HTML Elements
- HTML Attributes
- HTML Headings
- Rules, & Comments
- HTML Paragraphs
- HTML Text Formatting
- HTML Styles

HTML

What is HTML?

HTML is a language for describing Web pages.

» HTML stands for HyperText Markup Language.

» HTML is not a programming language, it is a markup language.

» A markup language is a collection of markup tags.

» HTML uses markup tags to describe Web pages.

What are Tags?

» HTML markup tags are usually called HTML tags or just tags.

» HTML tags are keywords surrounded by angle brackets like <html>.

» HTML tags normally come in pairs, like and .

» The first tag in a pair is the start tag; the second tag is the end tag.

» Start and end tags are also called opening tags and closing tags.

HTML Documents = Web Pages

▸▸ HTML documents describe Web pages.

▸▸ HTML documents contain HTML tags and plain text.

▸▸ HTML documents are also called Web pages.

```
<html>
<body>

<h1>My First Heading</h1>

<p>My first paragraph</p>

</body>
</html>
```
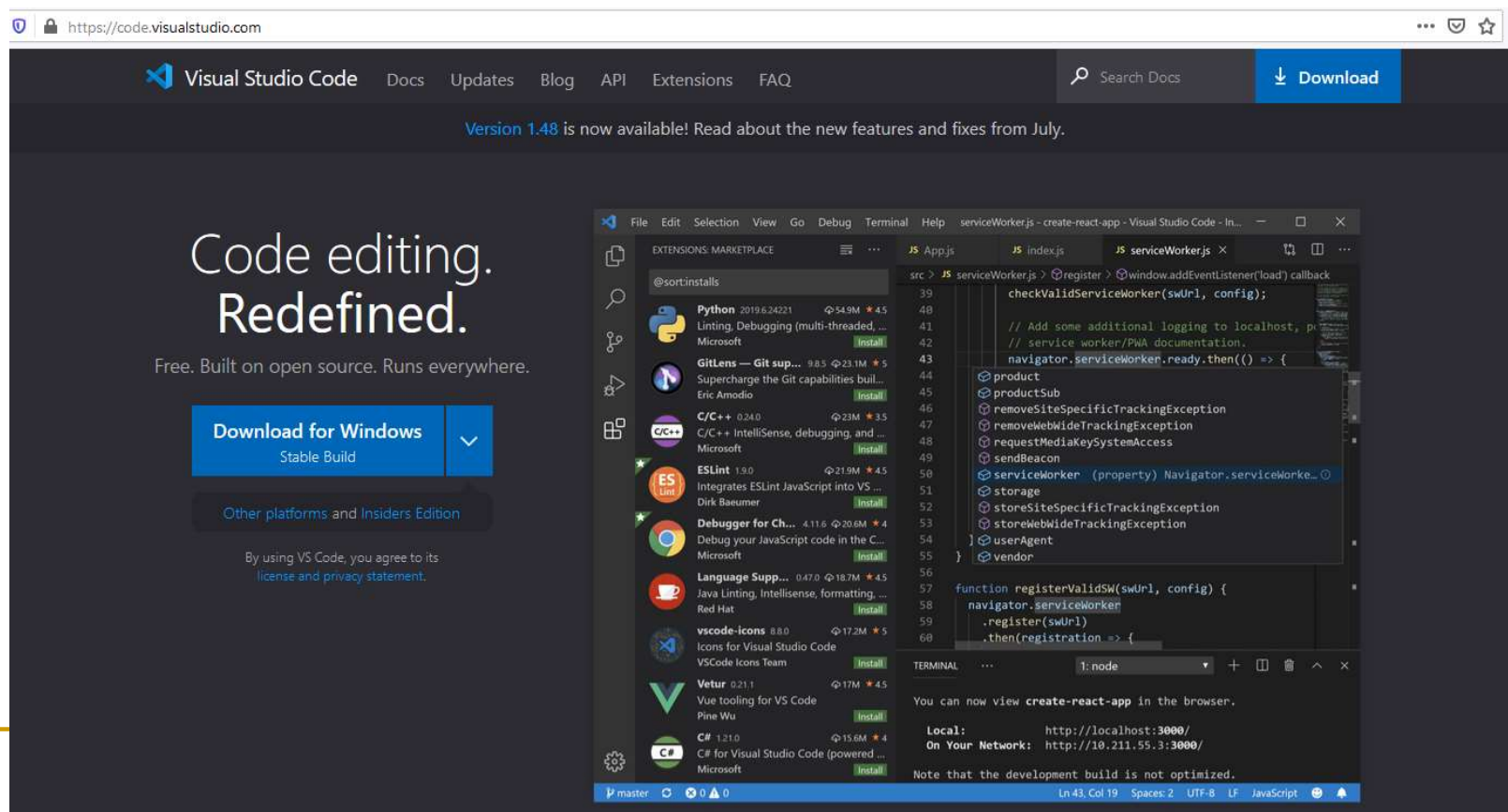
My First Heading

My first paragraph

▸▸ The text between <html> and </html> describes the Web page.

▸▸ The text between <body> and </body> is the visible page content.

▸▸ The text between <h1> and </h1> is displayed as a heading.

▸▸ The text between <p> and </p> is displayed as a paragraph.

HTML Editor

- Visual Studio Code: https://code.visualstudio.com

- Visual Studio Code is a free source-code editor made by Microsoft for Windows, Linux and macOS. Features include support for debugging, syntax highlighting, intelligent code completion, snippets, code refactoring, and embedded Git

.HTM or .HTML Extension?

When you save an HTML file, you can use either the .htm or the .html extension. We use .htm in our examples. It is a habit from the past, when the software only allowed three letters in file extensions.

In most cases, it is perfectly safe to use .html.

HTML Heading

HTML headings are defined with the `<h1>` to `<h6>` tags. The lower the number, the larger the heading size, as shown in Figure 2.1.

Don't worry if the examples use tags you have not learned. You will learn more about tags in the next chapters.

Try it yourself >>

```
<html>
<body>


<h1>This is Heading 1</h1>
<h2>Heading 2 is Smaller</h2>
<h3>Heading 3 is Smaller Still</h3>


</body>
</html>
```

This is Heading 1

Heading 2 is Smaller

Heading 3 is Smaller Still

HTML Link

HTML links are defined with the <a> tag, as shown in Figure 2.3.

Try it yourself >>

```
<html>
<body>

<a href="http://www.w3schools.com">This is a link to the
   w3schools Web site.</a>

</body>
</html>
```

This is a link to the w3schools Web site.

Figure 2.3

HTML Images

HTML images are defined with the <img> tag. It tells the browser where to find the image file and what size to display it, among other things. The results of this code example are shown in Figure 2.4.

Try it yourself >>

```
<html>
<body>

<img src="w3schools.jpg" width="104" height="142" />

</body>
</html>
```
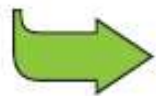
Figure 2.4

The source name and size of the image are attributes of the image element. You will learn about attributes in Chapter 4, "HTML Attributes."

HTML Element

HTML documents are defined by HTML elements. An HTML element is everything between the start tag and the end tag. The start tag is often called the opening tag. The end tag is often called the closing tag.

OPENING TAG	ELEMENT CONTENT	CLOSING TAG
<p>	This is a paragraph.	</p>
	This is a link.	

HTML Element Syntax

HTML elements follow a certain format regardless of how the element is used.

▶▶ An HTML element starts with a start tag/opening tag.

▶▶ An HTML element ends with an end tag/closing tag.

▶▶ The element content is everything between the start and the end tag.

▶▶ Some HTML elements have empty content.

▶▶ Empty elements are closed in the start tag.

▶▶ Most HTML elements can have attributes.

Nested Elements

Most HTML elements can be nested (contain or be contained within other HTML elements). HTML documents consist of nested HTML elements.

The following example contains three HTML elements. Notice that the `<p>` element is nested in the `<body>` element, which in turn is nested in the `<html>` element. The results of these tags are shown in Figure 3.1.

```
<html>
<body>

<p>This is my first paragraph</p>

</body>
</html>
```

This is my first paragraph

Figure 3.1

The \<p> element

The \<p> element is among the most common of elements.

```
<p>This is my first paragraph</p>
```

▶▶ The \<p> element defines a new paragraph in the HTML document.

▶▶ The element has a start tag \<p> and an end tag \</p>.

▶▶ The element content is: This is my first paragraph.

The <body> element

The <body> element defines the body of the HTML document.

```
<body>

<p>This is my first paragraph</p>

</body>
```

▶▶ The element has a start tag <body> and an end tag </body>.

▶▶ The element content is another HTML element (one or more paragraphs). There are usually dozens of elements within the body element.

The <html> element

The <html> element defines the entire HTML document.

```
<html>


<body>
<p>This is my first paragraph</p>
</body>


</html>
```

▶▶ The element has a start tag <html> and an end tag </html>.

▶▶ The element content is another HTML element (the body).

Don't Forget the End Tag

Most browsers will display HTML correctly even if you forget the end tag.

```
<p>This is a paragraph
<p>This is another paragraph
```

Empty HTML Elements

HTML elements without content are called empty elements. Empty elements can be closed within the start tag.

 is an empty element without a closing tag. It defines a line break.

In XML and future versions of HTML, all elements must be closed.

Adding a slash to the end of start tag, like <br/>, is the proper way of closing empty elements, accepted by HTML, and XML.

Even if <br> works in all browsers, writing <br/> instead is more future proof.

Use Lowercase Tags

HTML tags are not case sensitive: <P> means the same as <p>. Plenty of Web sites use uppercase HTML tags in their pages.

w3schools uses lowercase tags because the World Wide Web Consortium (W3C) recommends lowercase in HTML 4.

HTMl Attributes

Standard HTML Attributes

Attributes provide additional information about HTML elements.

▶▶ HTML elements can have attributes.

▶▶ Attributes provide additional information about the element.

▶▶ Attributes are always specified in the start tag.

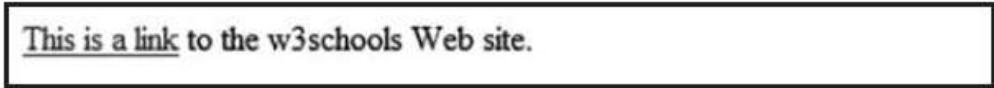▶▶ Attributes come in name/value pairs like: `name="value"`.

Defining Attribute Values

Attribute values should always be enclosed within quotation marks. While "double quotes" are the most common, single-style quotes (also called **primes**) are also allowed. In some rare situations, like when the attribute value itself includes quotation marks, it is necessary to use primes. For example:

```
name='John "Shotgun" Nelson'
```

As another example, HTML links are defined with the <a> tag. The Web address, surrounded by quotation marks, is the value of the attribute of the link element. The results appear in Figure 4.1.

```
<a href="http://www.w3schools.com">This is a link</a> to the
   w3schools Web site.
```

This is a link to the w3schools Web site.

Figure 4.1

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HTML Attributes Reference

Table 4.1 lists some attributes that are standard for most HTML elements.

Table 4.1: Core Attributes

Attribute	Value	Description
class	class_rule or style_rule	The class of the element
id	id_name	A unique id for the element
style	style_definition	An inline style definition
title	tooltip_text	A text to display in a tool tip

HTML Headings

Because users may skim your pages by their headings, it is important to use headings to show the document structure. Headings are defined, from largest to smallest, with the <h1> to <h6> tags.

H1 headings should be used as main headings, followed by H2 headings, then less important H3 headings, and so on. You can compare the appearance of the headings in Figure 5.1.

Try it yourself >>

```
<h1>This is a Heading 1</h1>
<h2>This is a Heading 2</h2>
<h3>This is a Heading 3</h3>
<h4>This is a Heading 4</h4>
<h5>This is a Heading 5</h5>
<h6>This is a Heading 6</h6>
```

This is a Heading 1

This is a Heading 2

This is a Heading 3

This is a Heading 4

This is a Heading 5

This is a Heading 6

HTML Rules (Lines)

The `<hr/>` tag is used to create a horizontal rule (line) across the browser page. Rules are often used to separate sections of a document, as shown in Figure 5.2, or to show a visual break.

Try it yourself >>

```html
<html>
<body>

<p>The hr tag defines a horizontal rule:</p>
<hr />
<p>This is a paragraph</p>
<hr />
<p>This is a paragraph</p>
<hr />
<p>This is a paragraph</p>

</body>
</html>
```

The hr tag defines a horizontal rule:

This is a paragraph

This is a paragraph

This is a paragraph

HTML Comments

Comments can be inserted in the HTML code to make it more readable and under-standable. Comments are ignored by the browser and are not displayed, as demon-strated in Figure 5.3.

Comments are written like this:

Try it yourself >>

```
<html>
<body>

<!--This comment will not be displayed-->
<p>This is a regular paragraph</p>

</body>
</html>
```

This is a regular paragraph

HTML Line Breaks

Use the `<br />` tag if you want a line break (a new line) without starting a new paragraph. The `<br />` element is an empty HTML element. It has no end tag. The results of this code are shown in Figure 6.1.

Try it yourself >>

```
<html>
<body>

<p>This is<br />a para-<br />graph with line breaks</p>

</body>
</html>
```

```
This is
a para-
graph with line breaks
```

Text Formatting

Try it yourself >>

```html
<html>
<body>

<p><b>This text is bold</b></p>
<p><strong>This text is strong</strong></p>
<p><big>This text is big</big></p>
<p><em>This text is emphasized</em></p>
<p><i>This text is italic</i></p>
<p><small>This text is small</small></p>
<p>This is<sub> subscript</sub> and <sup>superscript</sup></p>

</body>
</html>
```

This text is **bold**

This text is **strong**

This text is big

This text is emphasized

This text is italic

This text is small

This is subscript and superscript

Preformatted Text

This example demonstrates how you can control the line breaks, spaces, and character widths with the <pre> tag.

Try it yourself >>

```
<html>
<body>

<pre>
This is
preformatted text.
It preserves      both spaces
and line breaks and shows the text in a monospace font.
</pre>

<p>The pre tag is good for displaying computer code:</p>

<pre>
for i = 1 to 10
    print i
next i
</pre>

</body>
</html>
```

```
This is
preformatted text.
It preserves        both spaces
and line breaks and shows the text in a monospace font.

The pre tag is good for displaying computer code:

for i = 1 to 10
     print i
next i
```
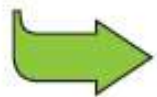
HTML Style

The HTML Style Attribute

The `style` attribute is a new HTML attribute. It introduces the use of CSS in HTML. The purpose of the `style` attribute is to provide a common way to style all HTML elements.

Styles were introduced with HTML 4 as the new and preferred way to style HTML elements. With HTML styles, formatting and attributes can be added to HTML elements directly by using the `style` attribute, or indirectly in separate Cascading Style Sheets (CSS files).

In this book, we use the `style` attribute to introduce you to HTML styles and CSS. You can learn more about styles and CSS in our tutorial, *Learn CSS with w3schools*.

The code in the following example and the results in Figure 8.1 introduce you to a new way of adding formatting to a document.

```
<html>
<body style="background-color:Gray;">

<h1>Look! Styles and colors</h1>

<p style="font-family:verdana;color:red">
This text is in Verdana and red</p>

<p style="font-family:times;color:green">

 This text is in Times and green</p>

<p style="font-size:30px">This text is 30 pixels high</p>

</body>
</html>
```

Look! Styles and colors

This text is in Verdana and red

This text is in Times and green

This text is 30 pixels high

Common HTML Styles

Background Color

```
<body style="background-color:gray">
```

The `style` attribute defines a style for the `<body>` element. The results of the style code appear in Figure 8.2.

Try it yourself >>

```
<html>
<body style="background-color:gray">
<h2>Look: Colored Background!</h2>


</body>
</html>
```

Look: Colored Background!

Font Family, Color, and Size

The `style` attribute defines a style for the `<p>` element, as shown in Figure 8.4:

Try it yourself >>

```html
<html>
<body>

<h1 style="font-family:verdana">A heading</h1>
<p style="font-family:courier new; color:red; font-
   size:20px;">A paragraph</p>

</body>
</html>
```

A heading

A paragraph

Text Alignment

```
<h1 style="text-align:center">
```

The `style` attribute defines a style for the `<h1>` element. The results appear in Figure 8.6.

Try it yourself >>

```
<html>
<body>

<h1 style="text-align:center">This is heading 1</h1>

<p>The heading above is aligned to the center of this page.
    The heading above is aligned to the center of this page.
    The heading above is aligned to the center of this page.
    </p>

</body>
</html>
```

This is heading 1

The heading above is aligned to the center of this page. The heading above is aligned to the center of this page. The heading above is aligned to the center of this page.

Next

HTML Dasar (Lanjutan)

Referensi

- https://www.w3schools.com/