1420-7001

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Web Programming

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Summary of the Previous Lesson [2nd Lecture]
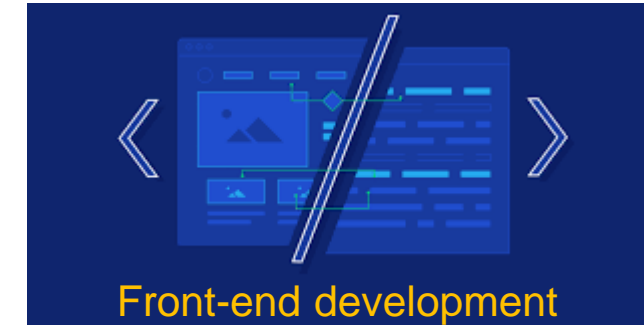
- ☐ HTML Basics
  - ◻ HTML Heading
  - ◻ HTML Paragraphs
  - ◻ HTML Colors
  - ◻ Lines
- ☐ HTML Text Formatting
  - ◻ Bold, italic, underlines
  - ◻ Strike
  - ◻ Monospaced
  - ◻ Superscript
  - ◻ Subscript
  - ◻ Inserted
  - ◻ Deleted
  - ◻ Large & smaller
  - ◻ Grouping contents
  - ◻ Div & Span

- ❑ Web program execution
  - ❑ Double click
  - ❑ Via XAMP

Front-end development

- ❑ Software setup
  - ❑ Notepad ++
  - ❑ XAMP

Note: Mainly we studied the simple HTML tags.

Class Activity #: 01

○ Identify the basic HTML tags that are used in the given web page.

○ **How many singular and paired tags are used in this figure?**

○ **What is the difference between singular and paired tags.**

Writing Code in Two HTML Files

- Create two files
- Add code in each file
- Link them via the <a> tag
- Execute the code

Writing Code in Two HTML Files

File # 1

```html
<!-- index.html -->
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Index Page</title>
</head>
<body>
    <h1>Welcome to the Index Page</h1>
    <p>This is the first HTML file. Click the link below to go to the second page:</p>
    <a href="second.html">Go to Second Page</a>
</body>
</html>
```

File # 2

```html
<!-- second.html -->
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Second Page</title>
</head>
<body>
    <h1>Welcome to the Second Page</h1>
    <p>This is the second HTML file. Click the link below to go back to the first page:</p>
    <a href="index.html">Go back to Index Page</a>
</body>
</html>
```

Writing Code in Two HTML Files-Output of the Codes

(first page)

Welcome to the Index Page

This is the first HTML file. Click the link below to go to the second page:

Go to Second Page

(2nd page)

Welcome to the Second Page

This is the second HTML file. Click the link below to go back to the first page:

Go back to Index Page

Writing Code in Two HTML Files- Editable Code

File # 1

```
<!-- index.html -->
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width,
initial-scale=1.0">
    <title>Index Page</title>
</head>
<body>
    <h1>Welcome to the Index Page</h1>
    <p>This is the first HTML file. Click the link below to go to the
second page:</p>
    <a href="second.html">Go to Second Page</a>
</body>
</html>
```

File # 2

```
<!-- second.html -->
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width,
initial-scale=1.0">
    <title>Second Page</title>
</head>
<body>
    <h1>Welcome to the Second Page</h1>
    <p>This is the second HTML file. Click the link below to
go back to the first page:</p>
    <a href="index.html">Go back to Index Page</a>
</body>
</html>
```

HTML Phrase Tags

HTML Concepts- HTML Phrase Tags

⌘ The phrase tags have been desicolgned for specific purposes, though they are displayed in a similar way as other basic tags like **<b>, <i>, <pre>**, and **<tt>**, you have seen in previous lecture.

⌘ The next few slides will take you through all the important phrase tags, so let's start seeing them one by one.

HTML Phrase tag

- Abbreviation tag : <abbr>
- Acronym tag: <acronym> (not supported in HTML5)
- Marked tag: <mark>
- Strong tag: <strong>
- Emphasized tag :
- Definition tag: <dfn>
- Quoting tag: <blockquote>
- Short quote tag : <q>

HTML Coding Example- Phrase Tags-Emphasized Text

⌘ Anything that appears within ... element is displayed as emphasized text.

```
<!DOCTYPE html>
<html>

    <head>
        <title>Emphasized Text Example</title>
    </head>

    <body>
        <p>The following word uses an <em>emphasized</em> typeface.</p>
    </body>

</html>
```

This will produce the following result —

The following word uses an *emphasized* typeface.

HTML Coding Example- Phrase Tags-Marked Text

⌘ Anything that appears with-in <mark>...</mark> element, is displayed as marked with yellow ink.

```
<!DOCTYPE html>
<html>

    <head>
        <title>Marked Text Example</title>
    </head>

    <body>
        <p>The following word has been <mark>marked</mark> with yellow</p>
    </body>

</html>
```

This will produce the following result −

The following word has been marked with yellow

HTML Coding Example- Phrase Tags-Strong Text

⌘ Anything that appears within **...** element is displayed as important text.

```
<!DOCTYPE html>
<html>

  <head>
    <title>Strong Text Example</title>
  </head>

  <body>
    <p>The following word uses a <strong>strong</strong> typeface.</p>
  </body>

</html>
```

This will produce the following result −

The following word uses a **strong** typeface.

HTML Coding Example- Phrase Tags-Abbreviated Text

⌘ You can abbreviate a text by putting it inside opening <abbr> and closing </abbr> tags. If present, the title attribute must contain this full description and nothing else.

```
<!DOCTYPE html>
<html>

    <head>
        <title>Text Abbreviation</title>
    </head>

    <body>
        <p>My best friend's name is  <abbr title = "Abhishek">Abhy</abbr>.</p>
    </body>

</html>
```

This will produce the following result −

My best friend's name is Abhy.

HTML Coding Example- Phrase Tags-Text Direction

⌘ The **<bdo>...</bdo>** element stands for Bi-Directional Override, and it is used to override the current text direction.

```
<!DOCTYPE html>
<html>

    <head>
        <title>Text Direction Example</title>
    </head>

    <body>
        <p>This text will go left to right.</p>
        <p><bdo dir = "rtl">This text will go right to left.</bdo></p>
    </body>

</html>
```

This will produce the following result −

This text will go left to right.

.tfel ot thgir og lliw txet sihT

HTML Coding Example- Phrase Tags-Special Terms

⌘ The **<dfn>...</dfn>** element (or HTML Definition Element) allows you to specify that you are introducing a special term. It's usage is similar to italic words in the midst of a paragraph.

⌘ Typically, you would use the <dfn> element the first time you introduce a key term. Most recent browsers render the content of a <dfn> element in an italic font.

```
<!DOCTYPE html>
<html>

    <head>
        <title>Special Terms Example</title>
    </head>

    <body>
        <p>The following word is a <dfn>special</dfn> term.</p>
    </body>

</html>
```

This will produce the following result −

The following word is a *special* term.

HTML Coding Example- Phrase Tags-Quoting Text

⌘ When you want to quote a passage from another source, you should put it in between **<blockquote>...</blockquote>** tags.

⌘ Text inside a <blockquote> element is usually indented from the left and right edges of the surrounding text, and sometimes uses an italicized font.

```
<!DOCTYPE html>
<html>

    <head>
        <title>Blockquote Example</title>
    </head>

    <body>
        <p>The following description of XHTML is taken from the W3C Web site:</p>

        <blockquote>XHTML 1.0 is the W3C's first Recommendation for XHTML,following on
            from earlier work on HTML 4.01, HTML 4.0, HTML 3.2 and HTML 2.0.</blockquote>
    </body>

</html>
```

Live De

This will produce the following result −

The following description of XHTML is taken from the W3C Web site:

> XHTML 1.0 is the W3C's first Recommendation for XHTML, following on from earlier work on HTML 4.01, HTML 4.0, HTML 3.2 and HTML 2.0.

HTML Coding Example- Phrase Tags-Short Quoting Text

⌘ The <q>...</q> element is used when you want to add a double quote within a sentence.

```
<!DOCTYPE html>
<html>

    <head>
        <title>Blockquote Example</title>
    </head>

    <body>
        <p>The following description of XHTML is taken from the W3C Web site:</p>

        <blockquote>XHTML 1.0 is the W3C's first Recommendation for XHTML,following on
            from earlier work on HTML 4.01, HTML 4.0, HTML 3.2 and HTML 2.0.</blockquote>
    </body>

</html>
```
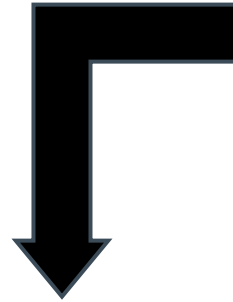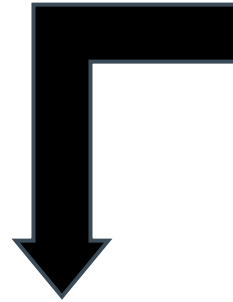
Live De

This will produce the following result −

Amit is in Spain, "I think I am wrong".

HTML Coding Example- Phrase Tags-Computer Code

⌘ Any programming code to appear on a Web page should be placed inside **<code>...</code>** tags.

⌘ Usually, the content of the <code> element is presented in a monospaced font, just like the code in most programming books.

```
<!DOCTYPE html>
<html>

   <head>
      <title>Computer Code Example</title>
   </head>

   <body>
      <p>Regular text. <code>This is code.</code> Regular text.</p>
   </body>

</html>
```

This will produce the following result −

Regular text. `This is code.` Regular text.

HTML Coding Example- Phrase Tags-Key Board Text

⌘ When you are talking about computers, if you want to tell a reader to enter some text, you can use the **<kbd>...</kbd>** element to indicate what should be typed in, as in this example.

```
<!DOCTYPE html>
<html>

    <head>
        <title>Keyboard Text Example</title>
    </head>

    <body>
        <p>Regular text. <kbd>This is inside kbd element</kbd> Regular text.</p>
    </body>

</html>
```

This will produce the following result −

Regular text. This is inside kbd element Regular text.

HTML Coding Example- Phrase Tags-Programming Variables

⌘ This element is usually used in conjunction with the **<pre>** and **<code>** elements to indicate that the content of that element is a variable.

```
<!DOCTYPE html>
<html>

    <head>
        <title>Variable Text Example</title>
    </head>

    <body>
        <p><code>document.write("<var>user-name</var>")</code></p>
    </body>

</html>
```

This will produce the following result −

```
document.write("user-name")
```

HTML Coding Example- Phrase Tags-Program Output

⌘ The **<samp>...</samp>** element indicates sample output from a program, and script etc. Again, it is mainly used when documenting programming or coding concepts.

```
<!DOCTYPE html>
<html>

    <head>
        <title>Program Output Example</title>
    </head>

    <body>
        <p>Result produced by the program is <samp>Hello World!</samp></p>
    </body>

</html>
```

This will produce the following result −

Result produced by the program is Hello World!

HTML Coding Example- Phrase Tags-Address Text

The **<address>...</address>** element is used to contain any address.

```html
<!DOCTYPE html>
<html>

    <head>
        <title>Address Example</title>
    </head>

    <body>
        <address>388A, Road No 22, Jubilee Hills -  Hyderabad</address>
    </body>

</html>
```
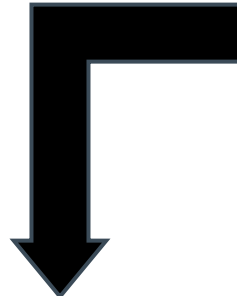
This will produce the following result −

388A, Road No 22, Jubilee Hills - Hyderabad

HTML Attributes & Examples

HTML Concepts- HTML Attributes

⌘ We have seen few HTML tags and their usage like heading tags **<h1>, <h2>,** paragraph tag **<p>** and other tags.

⌘ We used them so far in their simplest form, but most of the HTML tags can also have attributes, which are extra bits of information.

An attribute is used to define the characteristics of an HTML element and is placed inside the element's opening tag. All attributes are made up of two parts – a **name** and a **value**

- The **name** is the property you want to set. For example, the paragraph **<p>** element in the example carries an attribute whose name is **align**, which you can use to indicate the alignment of paragraph on the page.

- The **value** is what you want the value of the property to be set and always put within quotations. The below example shows three possible values of align attribute: **left, center** and **right**.

Attribute names and attribute values are case-insensitive. However, the World Wide Web Consortium (W3C) recommends lowercase attributes/attribute values in their HTML 4 recommendation.

HTML Coding Example- Paragraph Attributes

⌘ Sometimes, we want our output to be displayed in different locations.

Example

```
<!DOCTYPE html>
<html>

    <head>
        <title>Align Attribute  Example</title>
    </head>

    <body>
        <p align = "left">This is left aligned</p>
        <p align = "center">This is center aligned</p>
        <p align = "right">This is right aligned</p>
    </body>

</html>
```

This will display the following result −

This is left aligned

This is center aligned

This is right aligned

HTML Concepts- HTML Core Attributes

Core Attributes

The four core attributes that can be used on the majority of HTML elements (although not all) are −

- Id
- Title
- Class
- Style

The above four types of attributes are widely used in the html coding.

HTML Concepts- HTML Core Attributes-ID

The Id Attribute

The **id** attribute of an HTML tag can be used to uniquely identify any element within an HTML page. There are two primary reasons that you might want to use an id attribute on an element –

- If an element carries an id attribute as a unique identifier, it is possible to identify just that element and its content.

- If you have two elements of the same name within a Web page (or style sheet), you can use the id attribute to distinguish between elements that have the same name.

We will discuss style sheet in separate tutorial. For now, let's use the id attribute to distinguish between two paragraph elements as shown below.

Example

```
<p id = "html">This para explains what is HTML</p>
<p id = "css">This para explains what is Cascading Style Sheet</p>
```

HTML Concepts- HTML Core Attributes-Title

⌘ The **title** attribute gives a suggested title for the element. They syntax for the **title** attribute is similar as explained for **id** attribute –

⌘ The behaviour of this attribute will depend upon the element that carries it, although it is often displayed as a tooltip when cursor comes over the element or while the element is loading.

```
<!DOCTYPE html>
<html>

    <head>
        <title>The title Attribute Example</title>
    </head>

    <body>
        <h3 title = "Hello HTML!">Titled Heading Tag Example</h3>
    </body>

</html>
```
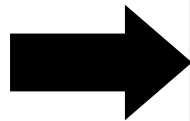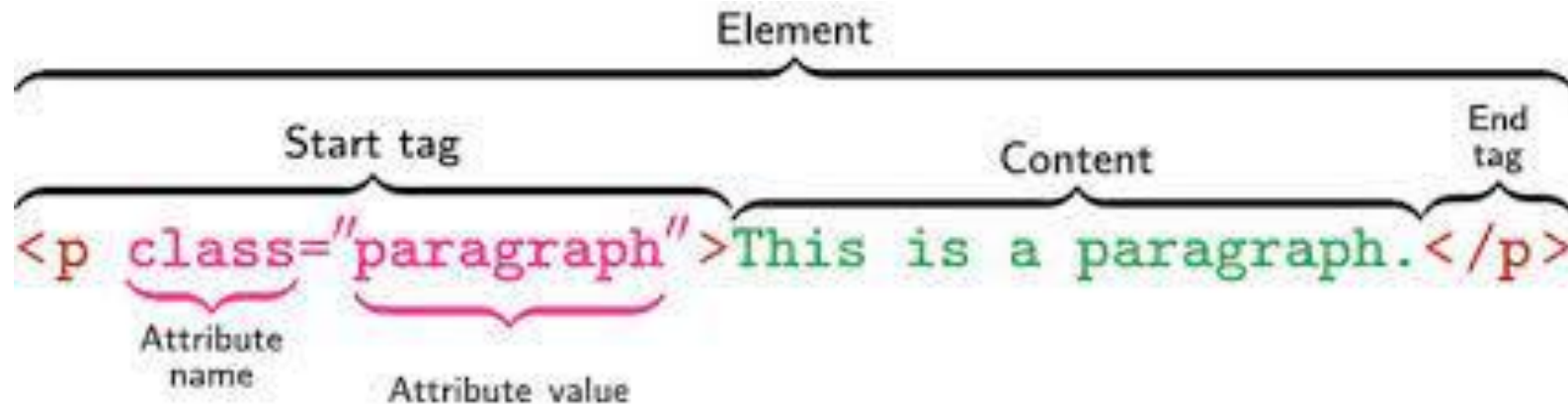
This will produce the following result –

Titled Heading Tag Example

HTML Concepts- HTML Core Attributes-Class

The **class** attribute is used to associate an element with a style sheet, and specifies the class of element. You will learn more about the use of the class attribute when you will learn Cascading Style Sheet (CSS). So for now you can avoid it.

The value of the attribute may also be a space-separated list of class names. For example −

```
class = "className1 className2 className3"
```

HTML Concepts- HTML Core Attributes-Style

⌘ The style attribute allows you to specify Cascading Style Sheet (CSS) rules within the element.

```
<!DOCTYPE html>
<html>

    <head>
        <title>The style Attribute</title>
    </head>

    <body>
        <p style = "font-family:arial; color:#FF0000;">Some text...</p>
    </body>

</html>
```

This will produce the following result −

Some text...

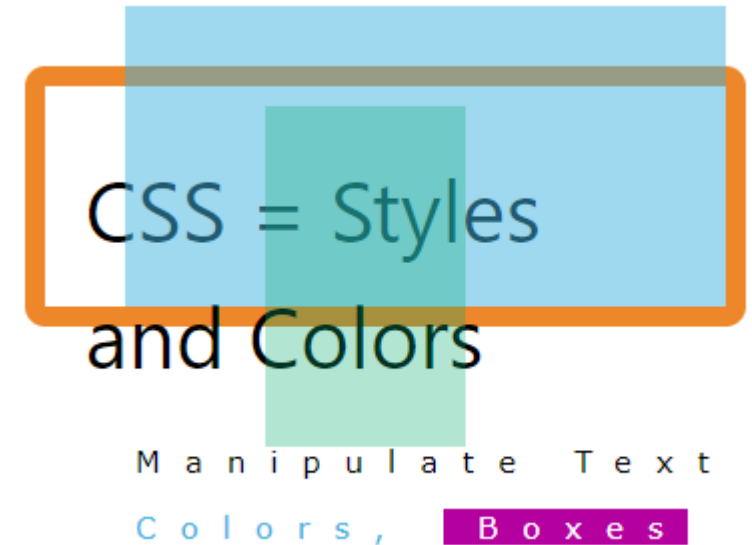❑ Here, you need to understand what are HTML attributes and how they can be used while formatting content.

For all tags in HTML/Html5: https://www.tutorialspoint.com/html/html_tags_reference.htm

CSS Addition to Web Pages

CSS Introduction

⌘ CSS stands for Cascading Style Sheets.

⌘ CSS saves a lot of work. It can control the layout of multiple web pages all at once.

CSS = Styles and Colors

Manipulate Text
Colors,   Boxes

⌘ With CSS, you can control the color, font, the size of text, the spacing between elements, how elements are positioned and laid out, what background images or background colors are to be used, different displays for different devices and screen sizes, and much more.

How to Add CSS into your HTML Code

CSS can be added to HTML documents in 3 different ways:

⌘ **Inline** - by using the style attribute inside HTML elements

⌘ **Internal** - by using a \<style\> element in the \<head\> section

⌘ **External** - by using a \<link\> element to link to an external CSS file

Mostly followed in companies due to convenience.

CSS = Styles and Colors

Manipulate Text

Colors, Boxes

CSS Coding Example- Inline Example

⌘ An inline CSS is used to apply a unique style to a single HTML element.

⌘ An inline CSS uses the style attribute of an HTML element.

⌘ The following example sets the text color of the <h1> element to blue, and the text color of the <p> element to red.

Output of the code

```
<!DOCTYPE html>
<html>
<body>

<h1 style="color:blue;">A Blue Heading</h1>

<p style="color:red;">A red paragraph.</p>

</body>
</html>
```

→

A Blue Heading

A red paragraph.

CSS Coding Example- Internal Example

⌘ An internal CSS is used to define a style for a single HTML page.

⌘ An internal CSS is defined in the `<head>` section of an HTML page, within a `<style>` element.

⌘ The following example sets the text color of ALL the `<h1>` elements (on that page) to blue, and the text color of ALL the `<p>` elements to red. In addition, the page will be displayed with a "powderblue" background color.

```
<!DOCTYPE html>
<html>
<head>
<style>
body {background-color: powderblue;}
h1   {color: blue;}
p    {color: red;}
</style>
</head>
<body>

<h1>This is a heading</h1>
<p>This is a paragraph.</p>

</body>
</html>
```

Output of the code

This is a heading

This is a paragraph.

CSS Coding Example- External Example

⌘ An external style sheet is used to define the style for many HTML pages.

⌘ To use an external style sheet, add a link to it in the <head> section of each HTML page.

Output of the code

```
<!DOCTYPE html>
<html>
<head>
  <link rel="stylesheet" href="styles.css">
</head>
<body>

<h1>This is a heading</h1>
<p>This is a paragraph.</p>

</body>
</html>
```

⟶

This is a heading

This is a paragraph.

CSS Coding Example- External Example

- The external style sheet can be written in any text editor.

- The file must not contain any HTML code and must be saved with a .css extension.

- Here is what the "styles.css" file looks like.

```
"styles.css":

body {
    background-color: powderblue;
}
h1 {
    color: blue;
}
p {
    color: red;
}
```

Important Note: With an external style sheet, you can change the look of an entire web site, by changing one file!

CSS Coding Example- CSS Summary

✖ Use the HTML style attribute for inline styling

✖ Use the HTML <style> element to define internal CSS

✖ Use the HTML <link> element to refer to an external CSS file

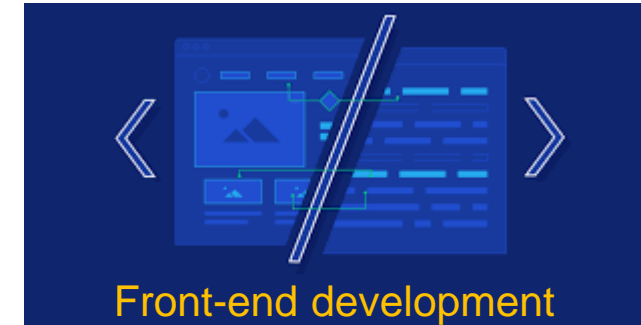✖ Use the HTML <head> element to store <style> and <link> elements

Summary of the Today's Lesson

Part I

- CSS Basics
  - Inline
  - Internal
  - External
- CSS Application to Text
  - Simple examples

Part II

- HTML Phrase Tags
  - Strong
  - Emphasized
  - Codes
  - Variables
  - Inputs
  - Etc.

Front-end development

Note: Please execute all codes at least once on your computers.