

COMPLETE NOTES ON HTML.

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WRITTEN BY :
NIDHI WANKHEDE
(Software Engineer).

What is HTML?

- HTML stands for Hyper Text Markup Language.
- HTML is the Standards Markup Language for creating web pages.
- HTML describes the structures of a web pages.
- HTML consists of a series of elements.
- HTML elements tell the browser how to display the content.
- HTML elements label pieces of content such as "this is a heading", "this is a paragraph", "this is a link", etc.

Example:

```
<html>
<head>
<title> page title </title>
</head>
<body>

<h1> My First Heading </h1>
<p> My First Paragraph. </p>

</body>
</html>
```

Output:-

My First Heading.

My First Paragraph.

Example Explained.

- The `<!DOCTYPE html>` declaration defines that this document is an HTML 5 document.
- The `<html>` element is the root element of an HTML page.
- The `<head>` element contains meta information about the HTML page.
- The `<title>` element specifies a title for the HTML page.
- The `<body>` element defines the document's body, and is a container for all the visible contents.
- The `<h1>` element defines a large heading.
- The `<p>` element defines a paragraph.

HTML Page Structure

<html>

<head>

<title>Page title </title>

</head>

<body>

<h1> This is a heading </h1>

<p> This is a paragraph </p>

</body>

</html>

HTML Attributes

- All HTML elements can have attributes.
- Attributes provide additional information about elements.
- Attributes are always specified in the start tags.
- Attributes usually come in name/value pairs like: name = "value".

The href Attributes

The `<a>` tag defines a hyperlink. The href attribute specifies the URL of the page the link goes to;

Example

```
<html>
  <body>

    <h2> The href Attribute </h2>

    <p> HTML Links are define with the a tag.
    the link address is specified in the href attribute.
  </p>

  visit <a href="https://www.HDFCSchools.com">
    HDFCSchool </a>

  </body>
</html>
```


Outputs:-

The href Attribute

HTML links are defined with the `a` tag. The link address is specified in the `href` attribute:

Visit HDFC School

The Src Attribute

The `<img>` tag is used to embed an image in an HTML page. The `src` attribute specifies the path to the image to be displayed:

Example

```
<html>
```

```
<body>
```

```
<h2> The Src Attribute </h2>
```

`<p>` HTML images are defined with the `img` tag, and the ~~link~~ with the filename of the image source is specified in the `src` attribute: `</p>`

```

```

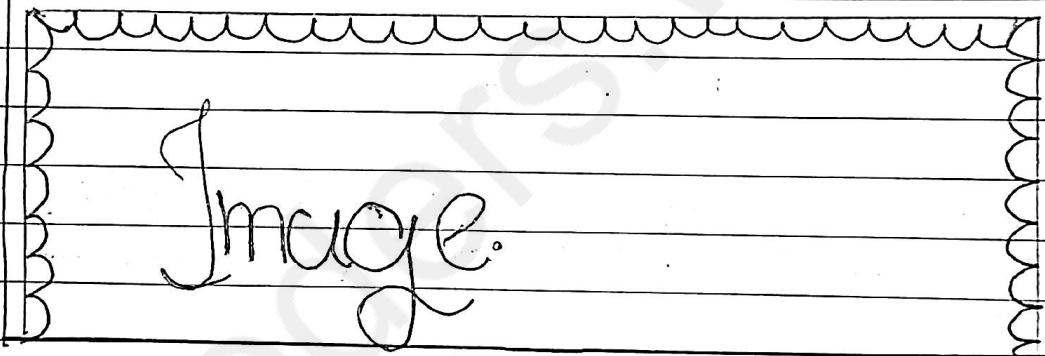
```
</body>
```

```
</html>
```

Output :

The Src Attribute.

HTML images are defined with the `img` tag, and the filename of the image source is specified in the `src` attributes:



There are two ways to specify the URL in the `src` attributes:

1. Absolute URL : ~ Links to an external image that is hosted on another website.

* Example :

`src = "https://www.RajSchools.com/images/img-school.jpg"`

* Notes:

External img might be under copyright. If you do not get permission to use it, you may be in violation of copyright laws.

In addition; It cannot control external images; It can suddenly be removed or changed.

2. Relative URL: ~ Links to an image that is hosted with in the website. Here the URL does not include the domain name. If the URL begins without a slash, it will be relative to the current page.

* Example:

`src="img-girl.jpg"`

If the URL begins with a slash, it will be relative to the domain.

* Example:

`src="/images/img-girl.jpg"`

* Tip:

It is almost always best to use relative URLs. They will not break if you change domain.

The width and height Attributes.

The `<img>` tag should also contain the width and height attributes, which specify the width & height of the image.

Example.

```
<html>
```

```
<body>
```

```
<h2>Width and Height Attributes</h2>
```

```
<p>The width and height attributes of the img tag,  
defines the width and height of the image:</p>
```

```

```

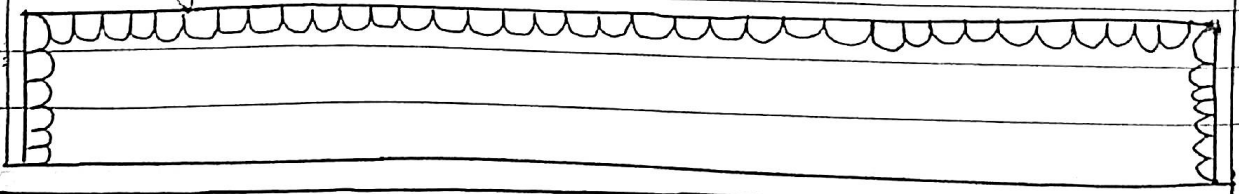
```
</body>
```

```
</html>
```

Output:

Width and height Attributes

The width and height attributes of the `img` tag defines the width and height of the image:



The alt Attributes.

The required alt attributes for the `img` tag specifies an alternate text for an image, if the image for some reason cannot be displayed. This can be due to a slow connection, an error in the `src` attributes, or if the user uses a screen reader.

Example

```
<html>
```

```
<body>
```

```
<h2> The alt Attribute </h2>
```

<p> The alt Attribute should reflect the image content, so users who cannot see the image get an understanding of what the image contains: </p>

```

```

```
</body>
```

```
</html>
```

Output:

The alt Attribute

The alt Attribute should reflect the image content, so users who cannot see the image get an understanding of what the image contains:

The Style Attribute.

The style attribute is used to add styles to an element, such as color, font, size, and more.

Example

```
<html>
```

```
<body>
```

```
<h2> The Style Attribute </h2>
```

```
<p> The style attribute is used to add styles to  
an element, such as color; </p>
```

```
<p style = " color: red; " This is a red paragraph
```

```
</body>
```

```
</html>
```

Output :

The Style Attribute

The style attribute is used to add style to an element,
such as color:

This is a red paragraph!

The Lang Attribute

You should always include the lang attribute inside the `<html>` tag, to declare the language of the web page. This is meant to assist search engines and browsers.

```
<html lang = "en">
<body>
:
:
</body>
</html>
```

Country code can also be added to the language code in the lang attribute. So, the first two characters define the language of the HTML page, and the last two characters define the country.

- The following example specific English as the language and United state as the country:

```
<html lang = "en-US">
<body>
:
:
</body>
</html>
```


The Title Attribute.

The title attribute defines some extra information about an element.

The value of the title attribute will be displayed as a tooltip when you mouse over the elements.

Example:

```
<html>
```

```
<body>
```

```
<h2 title="I'm a header">The title attribute </h2>
```

```
<p title="I'm a tooltip">Mouse over this paragraph,  
to display the title attribute as a tooltip.</p>
```

```
</body>
```

```
</html>
```

Output:

The title attribute

Mouse over this paragraph, to display the title attribute as a tooltip.

HTML Headings

HTML headings are titles or subtitles that you want to display on a webpage.

Example

Heading 1

Heading 2

Heading 3

Heading 4

Heading 5

Heading 6

HTML headings are defined with the `<h1>` to `<h6>` tags.

`<h1>` defines the most important heading. `<h6>` defines the least important heading.

Bigger headings

Each HTML heading has a default size. However, you can specify the size for any heading with the style attribute, using the CSS font-size property:

Example

```
<html>
<body>
  <h1 style="font-size: 60px;">Heading 1 </h1>
  <p> You can change the size of a heading with the
  style attribute, using the font-size property. </p>
</body>
</html>
```

Output

Heading 1

you can change the size of a heading with the style attribute, using the font-size property.

#

HTML Paragraphs.

The HTML `<p>` element defines a paragraph.

A paragraph always starts on a new line, and browsers automatically add some white space before and after a paragraph.

#

Example:

```
<html>
<body>
<p>This is a paragraph</p>
<p>This is a second paragraph</p>
</body>
</html>
```

Output.

This is a paragraph.
This is a second paragraph.

HTML Horizontal Rules

The `<hr>` tag defines a thematic break in an HTML page, and is most often display as a horizontal rule.

The `<hr>` element is used to separate content in an HTML page:

Example:

```
<html>
<body>
<h1> This is heading 1 </h1>
<p> This is some text. </p>
<hr>
<h2> This is heading 2 </h2>
<p> This is some other text. </p>
</body>
</html>
```

Output

This is a heading 1
This is some text.

This is a heading 2
This is some other text.

HTML Line Breaks

The HTML `<br>` element defines a line break.

Use `<br>` if you want a line break without starting a new paragraph.

The `<br>` tag is an empty tag, which means that it has no end tag.

Example

```
<html>
```

```
<body>
```

```
<p> This is <br> a paragraph <br> with line breaks.
```

```
</body>
```

```
</html>
```

Output:

This is
a paragraph
with line breaks.

The HTML `<pre>` Element.

The HTML `<pre>` element defines preformatted text.

The text inside a `<pre>` element is displayed in a fixed-width font, and it preserves both spaces and line breaks.

Example:

```
<html>
  <body>
    <pre>The pre tag preserves both spaces and
line breaks: </pre>
  </pre>
    My Bonnie lies over the sea.
  </pre>
</body>
</html>
```

Output

```
The pre tag preserves both spaces and line breaks:
My Bonnie lies over the sea.
```

Tag

`<p>` Defines a paragraph.

`<br>` Defines a thematic change the content.

`<br>` Inserts a single line break.

`<p style=>` Defines pre-formatted text.

#

HTML Styles

The HTML Styles attributes is used to add style to an element, such as color, font, size and more.

#

Example.

I am Blue.

I am Big.

HTML Style Attribute.

Setting the style of an HTML element, can be done with the style attribute.

```
<tagname style="property: value;">
```

The property is a CSS property. The value is a CSS value.

Background Color.

The CSS background-color property defines the background color for an HTML element.

Example

```
<html>  
<body style="background-color: powderblue;">  
<p> This is a way. </p>  
</body>  
</html>
```

Output

This is a way.

Text color

The CSS color property defines the text color for an HTML element.

example:

```
<html>
<body>
<h1 style="color: blue;">This is a heading </h1>
<p style="color: red;">This is a paragraph.</p>
</body>
</html>
```

Output:

This is a heading.

This is a Paragraph.

Fonts

The CSS font-family property defines the font to be used for an HTML element:

example:

```
<html>
<body>
<h1 style="font-family: verdana;">This is a
heading </h1>
```

```
<p style="font-family: cursive;">This is a  
paragraph.</p>  
</body>  
</html>
```

Output:

This is a heading

This is a paragraph.

Text Size

The CSS font-size property defines the text size for an HTML element:

Example

```
<html>  
<body>  
<h1 style="font-size: 300%;">This is a heading</h1>  
<p style="font-size: 160%;">This is a paragraph.</p>  
</body>  
</html>
```

Output

This is a
heading

This is a paragraph.

#

Text Alignment

The CSS text-align property defines the horizontal text alignment for an HTML element:

#

Example

```
<html>
<body>
<h1 style="text-align: center;"> centered heading </h1>
<p style="text-align: center;"> centered paragraph. </p>
</body>
</html>
```

Output

Centered Heading
Centered paragraph.

HTML Text formatting

HTML contains several elements for defining text with a special meaning.

HTML Formatting Elements

Formatting elements were designed to display special types of text:

- `<b>` . Bold text .
- `<strong>` **Important text.**
- `<i>` . Italic text .
- `<em>` Emphasized text.
- `<mark>` Marked text .
- `<small>` Smaller text .
- `<del>` Deleted text .
- `<ins>` Inserted text .
- `<sub>` Subscript text .
- `<sup>` Superscript text .

 Elements.

The HTML `<b>` element defines bold text, without any extra importance.

Example

```
<html>
<body>
<p>This text is normal. </p>
<p><b>This text is bold. </b></p>
</body>
</html>
```

Outputs

This text is normal.

This text is bold.

 Elements.

The HTML `<strong>` element defines text with strong important. The content inside is typically displayed in bold.

Example

```
<html>  
<body>  
<p> This text is normal. </p>  
<p><strong> This text is important! </strong></p>  
</body>  
</html>
```

Output.

This text is normal.

This text is important!

This text is important!

<i> Elements

The HTML *<i>* element defines a part of text in an altered voice or mood. The content inside is typically displayed in italic.

Note: The *<i>* tag is often used to indicate a technical term, a phrase from another language, a through, a ship, name

Example

```
<html>
<body>
<p><i>This text is italic.</i>
</body>
</html>
```

Output.

This *is* text is italic.

 Element.

The HTML `<em>` element defines emphasized text. The content inside is typically displayed in italic.

Tip: A screen reader will pronounce the words in `<em>` with an emphasis, using verbal stress.

Example

```
<html>
<body>
<p><em>This text is emphasized.</em></p>
</body>
</html>
```

Output.

This text is emphasized.

<small> Element.

The HTML `<small>` Element defines smaller text:

Example

```
<html>
<body>
  <p><small> This is some smaller text. </small></p>
</body>
</html>
```

Output.

This is some smaller text.

<mark> Element.

The HTML `<mark>` Element defines text that should be marked or highlighted.

Example

```
<html>
  <body>
    <p> Do not forget to buy
    <mark> milk </mark> today. <p>
  </body>
</html>
```

Output:

Do not forget to buy milk today.

 Element.

The HTML `<del>` element defines text that has been deleted from a document. Browsers will usually strike a line through deleted text:

Example.

```
<html>
  <body>
    <p> My favorite color is <del>
    blue </del> red. </p>
  </body>
</html>
```

Output:

My favorite color is ~~blue~~ red.

<ins> Element.

The HTML <ins> element defines a text that has been inserted into a document. Browsers will usually underline inserted text.

Example

```
<html>
<body>
<p> My favorite color is <del>blue</del>
<ins>red</ins>.
</body>
</html>
```

Output

My favorite color is ~~blue~~ red.

<sub> Element.

The HTML <sub> element defines subscript text. Subscript text appears half a character below the normal line, and is sometimes rendered in a smaller font.

Subscript text can be used for chemical formulas, like H₂O:

Example

```
<html>
<body>
<p> This is <sub> subscripted</sub> text. </p>
</body>
</html>
```

Output

This is subscripted text.

<Sup> Elements.

The HTML <sup> element defines superscript text. Superscript text appears half a character above the normal line, and is sometimes rendered in a smaller font.

Superscript text can be used for footnotes, like
www.

Example

```
<html>
<body>
<p> This is <sup> superscripted</sup> text. </p>
</body>
</html>
```

Output

This is superscripted text.

HTML Text Formatting Elements

- `<b>` Defines bold text.
- `<em>` Defines emphasized text.
- `<i>` Defines a part of text in an alternate voice or style.
- `<small>` Defines smaller text.
- `<strong>` Defines important text.
- `<sub>` Defines subscripted text.
- `<sup>` Defines superscripted text.
- `<ins>` Defines inserted text.
- `<del>` Defines deleted text.
- `<mark>` Defines marked / highlighted text.

HTML Comments

HTML Comments are not displayed in the browser, but they can help document your HTML source code.

HTML Comment tag

You can add comments to your HTML source by using the following syntax:

```
<!-- Write your comments here -->
```

Add Comments

With Comments you can place notifications and reminders in your HTML code:

Example

```
<html>  
<body>  
<!-- This is a comment -->  
<p> This is a paragraph. </p>  
<!-- Comments are not displayed in the browser -->  
</body>  
</html>
```

Output

This is a paragraph

#

Hide Comments

Comments can be used to hide content.

This can be ~~helpful~~ helpful if you hide content temporarily.

#

Example:

```
<html>
<body>
  <p> This is a paragraph. </p>
  <!-- <p> This is another paragraph </p> -->
  <p> This is a paragraph too. </p>
</body>
</html>
```

Output:

This is a paragraph.

This is a paragraph.

You can also hide more than one line.
Everything between the `<!--` and the `-->` will be hidden from the display.

Hide Inline Content

Comments can be used to hide parts in the middle of the HTML code.

Example

```
<html>  
<body>  
<p>This <!-- great text --> is a paragraph. </p>  
</body>  
</html>
```

Output

This is a paragraph.

#

HTML Colors.

HTML Colors are specified with pre-defined color names, or with RGB, HEX, HSL, RGBA or HSLA values.

#

Color Name.

In HTML, a color can be specified by using a color name:

Tomato

Orange

Dodger Blue

Medium Sea Green.

Gray

Steel Blue

Violet

Light Gray

Background Color

You can set the background color for HTML element:

Example

```
<html>
<body>
<h1 style="background-color: Dodger Blue;">
  Hello world </h1>
</body>
</html>
```

Output

Hello World.

#

Text Color

You can set color of text:

#

Example

```
<html>
<body>
  <h3 style="color: DodgerBlue;">Hello world </h3>
</body>
</html>
```

Output:

Hello World

#

Border Color

You can set the color of border:

#

Example

```
<html>
<body>
  <h3 style="border: 2px solid DodgerBlue;">
    Hello world </h3>
</body>
</html>
```


output

Hello World.

Color Values

In HTML, Colors can also be specified using RGB values, HEX values, HSL values, RGBA values, and HSLA values.

The following three <div> elements have their background color set with RGB, HEX, and HSL values:

rgb (255, 99, 71)

#ff6347

hsl (9, 100%, 64%)

The following two `<div>` elements have their background color set with RGBA and HSLA values, which add an Alpha channel to the color:

```
rgba (255, 99, 71, 0.5)
```

```
hsla (9, 100%, 64%, 0.5)
```

RGB and RGBA Colors

In RGB color value represents RED, GREEN & BLUE light sources.

In RGBA color value is an extension of RGB with an Alpha channel.

RGB Color Values

In HTML, a color can be specified as an RGB value, using this formula:

```
rgb (red, green, blue)
```

Each Parameter (red, green, and blue) define the

Intensity of the color with a value between 0 and 255. This means that there are $256 \times 256 \times 256 = 16777216$ possible colors.

Experiment by mixing the RGB values belows:

rgb (255, 77, 0)

RED

255

GREEN

77

BLUE

0

RGBA Color Values.

RGBA color values are an extension of RGB color values with an Alpha channel-which specifies that opacity for a color.

An RGBA color value is specified with:

rgba (red, green, blue, alpha)

The alpha parameter is a number between 0.0 and 1.0.

Experiment by mixing the RGBA values below:-

rgba (255, 99, 71, 0.5)

RED

GREEN

BLUE

ALPHA

0.5

HEX Colors.

A hexadecimal color is specified with: #RRGGBB, where RR (red), GG (green), BB (blue) hexadecimal integers specify the components of the color.

#rr gg bb

When rr (red), gg (green) and bb (blue) are hexadecimal values between 00 and ff.

Experiment by mixing the HEX values below:

00 00 00

RED

00

GREEN

00

Blue

00