



ST. LAWRENCE HIGH SCHOOL

A Jesuit Christian Minority Institution



STUDY MATERIAL - 8

Subject: COMPUTER SCIENCE

Class - 12

Chapter: Hypertext Markup Language

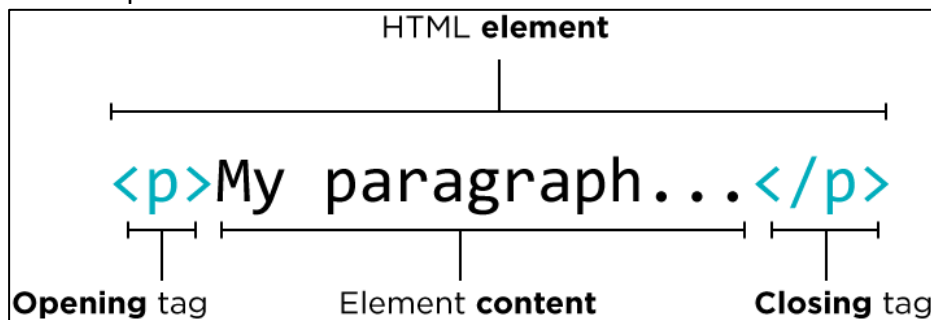
Date: 15/06/2020

Introduction to HTML

- HTML stands for Hyper Text Markup Language
- HTML is the standard markup language for creating Web pages
- HTML describes the structure of a Web page
- 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.

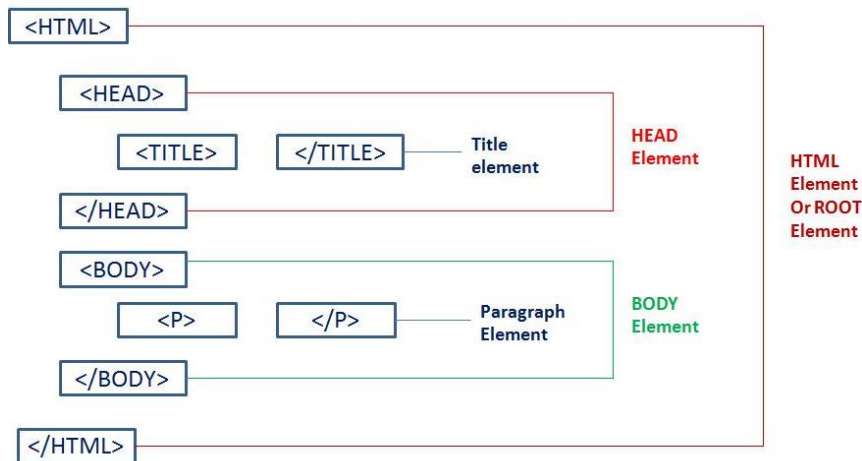
HTML tags and element

- HTML tags are used to mark-up HTML **elements**
- HTML tags are surrounded by the **two characters < and >**
- The surrounding characters are called **angle brackets**
- 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**
- The text between the start and end tags is the **element content**
- HTML tags are not case sensitive, means the same as
- For example:



- The HTML element starts with a **start tag**: <p>
- The **content** of the HTML element is: My paragraph ...
- The HTML element ends with an **end tag**: </p>
- The purpose of the <p> tag is to define a paragraph. A paragraph always starts on a new line, and browsers automatically add some white space (a margin) before and after a paragraph.

HTML document structure/ HTML skeleton



- 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 (which is shown in the browser's title bar or in the page's tab)
- The **<body>** element defines the document's body, and is a container for all the visible contents, such as headings, paragraphs, images, hyperlinks, tables, lists, etc.
- The **<p>** element defines a paragraph

Basic HTML tags

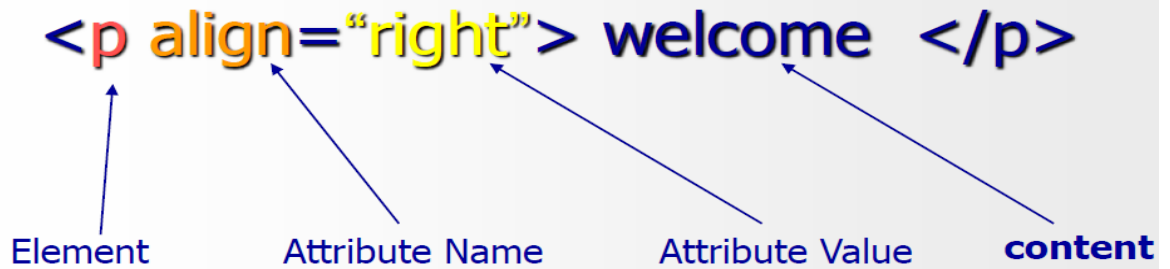
- ✓ **Paragraphs** : `<p>` tag is used to define a paragraph in HTML document (*already discussed*).
- ✓ **Headings**: `<h1>`, `<h2>`, `<h3>` ... `<h6>` HTML tags used for titles or subtitles that you want to display on a webpage.
- ✓ **Line break**: `
` tag stands for break line; it breaks the line of the code.
- ✓ **Horizontal rule**: `<hr>` tag is used to put a line across the webpage.

HTML Text Formatting

Tag	Description
<code></code>	Defines bold text
<code></code>	Defines emphasized text
<code><i></code>	Defines italic text
<code><small></code>	Defines smaller text
<code></code>	Defines important text
<code><sub></code>	Defines subscripted text
<code><sup></code>	Defines superscripted text
<code><ins></code>	Defines inserted text
<code></code>	Defines deleted text
<code><mark></code>	Defines marked/highlighted text

HTML tag attributes

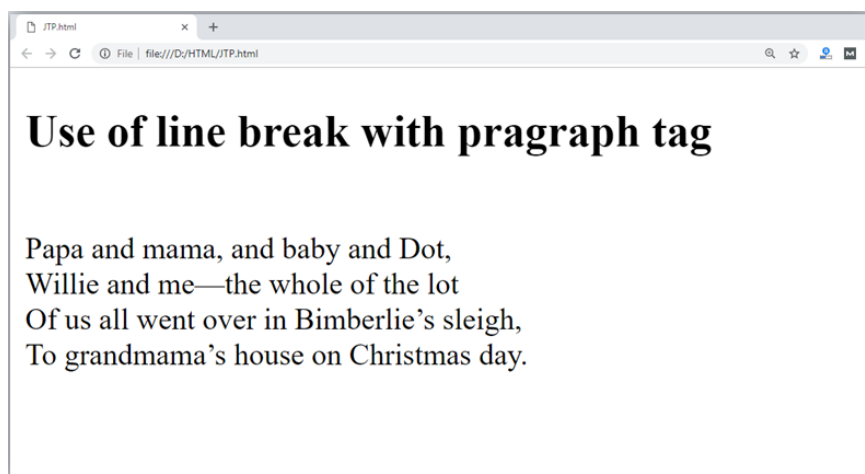
- All HTML elements can have **attributes**
- Attributes provide **additional information** about elements
- Attributes are always specified in **the start tag**
- Attributes usually come in name/value pairs like: **name="value"**
- **Example:**



An simple HTML example and its output

```
<html>
  <head>
  </head>
  <body>
    <h2> Use of line break with paragraph tag</h2>
    <p><br>Papa and mama, and baby and Dot,
    <br>Willie and me-the whole of the lot
    <br>Of us all went over in Bimberlie's sleigh,
    <br>To grandmama's house on Christmas day.
    </p>
  </body>
</html>
```

OUTPUT:



HTML lists

A list is a record of short pieces of information, such as people's names, usually written or printed with a single thing on each line and ordered in a way that makes a particular thing easy to find.

HTML offers three ways for specifying lists of information. All lists must contain one or more list elements. The types of lists that can be used in HTML are:

Tag	Purpose
	An unordered list. This will list items using plain bullets.
	An ordered list. This will use different schemes of numbers to list your items.
<dl>	A definition list. This arranges your items in the same way as they are arranged in a dictionary.

The unordered HTML list

An unordered list starts with the "ul" tag. Each list item starts with the "li" tag. The list items are marked with bullets i.e small black circles by default.

Example:

```
<html>
<body>

<h2>Grocery list</h2>

<ul>
  <li>Bread</li>
  <li>Eggs</li>
  <li>Milk</li>
  <li>Coffee</li>
</ul>

</body>
</html>
```

Output :

Grocery List

- Bread
- Eggs
- Milk
- Coffee

The HTML Unordered List has various List Item Markers:-

1. **Disc** : Sets the list item marker to a bullet i.e default.
 - **Syntax:** < ul style="list-style-type:disc">
2. **Circle** : Sets the list item marker to a circle.
 - **Syntax:** < ul style="list-style-type:circle">
3. **Square** : Sets the list item marker to a square.
 - **Syntax:** < ul style="list-style-type:square">

The HTML Ordered List

An ordered list starts with the “ol” tag. Each list item starts with the “li” tag. The list items are marked with numbers by default.

Example:

```
<html>
<body>

<h2>Grocery List</h2>

<ol>
  <li>Bread</li>
  <li>Eggs</li>
  <li>Milk</li>
  <li>Coffee</li>
</ol>

</body>
</html>
```

Output :

Grocery List

1. Bread
2. Eggs
3. Milk
4. Coffee

The HTML Ordered List has various List Item Markers:

The type attribute of the tag, defines the type of the list item marker.

1. **Type="1"** : The list items will be numbered with numbers i.e default.
2. **Type="A"** : The list items will be numbered with uppercase letters.
 - **Syntax** : <ol type="A">
3. **Type="a"** : The list items will be numbered with lowercase letters.
4. **Type="I"** : The list items will be numbered with uppercase roman numbers.
5. **Type="i"** : The list items will be numbered with lowercase roman numbers.

The HTML Description List

A description list is a list of terms, with a description of each term.

The <dl> tag defines the description list, the <dt> tag defines the term name, and the <dd> tag describes each term.

Example:

```
<html>
<body>

<h2>A Description List</h2>

<dl>
  <dt>Coffee</dt>
  <dd>- 500 gms</dd>
  <dt>Milk</dt>
  <dd>- 1 ltr Tetra Pack</dd>
</dl>

</body>
</html>
```

Output :

A Description List

Coffee
- 500 gms
Milk
- 1 ltr Tetra Pack

HTML Images

- Images can improve the design and the appearance of a web page.
- In HTML, images are defined with the tag.
- The tag is empty; it contains attributes only, and does not have a closing tag.
- The src attribute is a necessary attribute that describes the source or path of the image. It instructs the browser where to look for the image on the server. The location of image may be on the same directory or another server.
- The alt attribute provides an alternate text for an image, if the user for some reason cannot view it (because of slow connection, an error in the src attribute, or if the user uses a screen reader).
- We can use the width and height attributes to specify the width and height of an image.
- Example:

```

```

- Here, "animal.jpg" file must be present in the same directory where our HTML document is saved. And height and width of the image is specified in pixels.

Answer the following questions:

1. What is HTML?

Ans: HTML stands for Hyper Text Markup Language. It is a language of World Wide Web. It is a standard text formatting language which is used to create and display pages on the Web. It makes the text more interactive and dynamic. It can turn text into images, tables, links.

2. What are tags?

Ans: HTML tags are composed of three things: an opening tag, content and ending tag. Some tags are unclosed tags.

HTML documents contain two things:

- a. content, and
- b. tags

When a web browser reads an HTML document, the browser reads it from top to bottom and left to right. HTML tags are used to create HTML documents and render their properties. Each HTML tags have different properties.

Syntax : <tag> content </tag>

Content is placed between tags to display data on the web page.

3. What is formatting in HTML?

Ans: The HTML formatting is a process of format the text for a better look and feel. It uses different tags to make text bold, italicized, underlined, etc.

4. How many types of heading does an HTML contain?

Ans: The HTML contains six types of headings which are defined with the <h1> to <h6> tags. Each type of heading tag displays different text size from another. So, <h1> is the largest heading tag and <h6> is the smallest one. For example:

- <h1>Heading no. 1</h1>
- <h2>Heading no. 2</h2>
- <h3>Heading no. 3</h3>
- <h4>Heading no. 4</h4>
- <h5>Heading no. 5</h5>
- <h6>Heading no. 6</h6>

5. What are some common lists that are used when designing a page?

Ans: There are many common lists used for design a page. You can choose any or a combination of the following list types:

- **Ordered list** – The ordered list displays elements in a numbered format. It is represented by tag.
- **Unordered list** – The unordered list displays elements in a bulleted format. It is represented by tag.
- **Definition list** – The definition list displays elements in definition form like in a dictionary. The <dl>, <dt> and <dd> tags are used to define description list.

6. What is the difference between HTML elements and tags?

Elements	Tags
The element is an individual component of the HTML web page or document. It represents semantics or meaning. For example, the title element represents the title of the document.	It is the root of the HTML document which is used to specify that the document is HTML. For example, the Head tag is used to contain the entire head element in the HTML file.

7. What are attributes? Explain with the help of an example.

Ans: Each tag has additional attributes that change the way the tag behaves or is displayed. For example, a <input> tag has a type attribute, which you can use to specify whether it's a text field, checkbox, radio button or one of many more options.

Attributes are specified directly after the name of the tag, inside the two angled brackets. They should only ever appear in opening tags or in self-closing tags. But, they can never be in closing tags.

Example:

```
<input type="text" />
```

```
<input type="checkbox" />  
<input type="radio" value="on" />
```

8. Describe the following tags:

- a. **
** - produces a line break in text
- b. **** - is used to embed *an image* in an *HTML* page.
- c. **<hr>** - is used to insert a horizontal rule in an HTML page
- d **** - defines the bold text
- e. **<head>** - is a container for metadata (data about data) and is placed between the **<html>** tag and the **<body>** tag.