CSE 3101
Web Programming

Lecture 6

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HTML Elements

An HTML file is made of elements. These elements are responsible for creating web pages and define content in that webpage. An element in HTML usually consist of a start tag <tag name>, close tag </tag name> and content inserted between them. **Technically, an element is a collection of start tag, attributes, end tag, content between them**.

Note: Some elements does not have end tag and content, these elements are termed as empty elements or self-closing element or void elements.

Such as:
<p> Hello world!!! **</p>**

Example

```html
<!DOCTYPE html>
<html>
<head>
    <title>WebPage</title>
</head>
<body>
    <h1>This is my first web page</h1>
    <h2> How it looks?</h2>
    <p>It looks Nice!!!!!</p>
</body>
</html>
```

Void element: All the elements in HTML do not require to have start tag and end tag, some elements does not have content and end tag such elements are known as Void elements or empty elements. **These elements are also called as unpaired tag**.

**Some Void elements are
 (represents a line break) , <hr>(represents a horizontal line), etc.**

Nested HTML Elements: HTML can be nested, which means an element can contain another element.

Block-level and Inline HTML elements

For the default display and styling purpose in HTML, all the elements are divided into two categories:
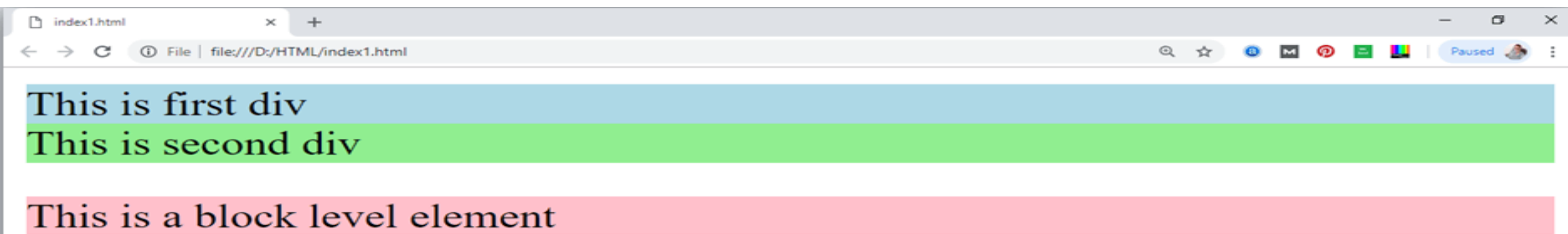•Block-level element
•Inline element

Block-level element:

•These are the elements, which structure main part of web page, by dividing a page into coherent blocks.

•A block-level element always start with new line and takes the full width of web page, from left to right.

•These elements can contain block-level as well as inline elements.

Following are the block-level elements in HTML.

<address>, <article>, <aside>, <blockquote>, <canvas>, <dd>, <div>, <dl>, <dt>, <fieldset>, <figcaption>, <figure>, <footer>, <form>, <h1>-<h6>, <header>, <hr>, <li>, <main>, <nav>, <noscript>, <ol>, <output>, <p>, <pre>, <section>, <table>, <tfoot>, <ul> and <video>.

Example:

```
<!DOCTYPE html>
<html>
        <head>
    </head>
<body>
    <div style="background-color: lightblue">This is first div</div>
    <div style="background-color: lightgreen">This is second div</div>
    <p style="background-color: pink">This is a block level element</p>
</body>
</html>
```


In the above example we have used
tag, which defines a section in a web page, and takes full width of page.
We have used style attribute which is used to styling the HTML content, and the background color are showing that it's a block level element.

Inline elements:

•Inline elements are those elements, which differentiate the part of a given text and provide it a particular function.
•These elements does not start with new line and take width as per requirement.
•The Inline elements are mostly used with other elements.

<a>, <abbr>, <acronym>, <b>, <bdo>, <big>, <br>, <button>, <cite>, <code>, <dfn>, <em>, <i>, <img>, <input>, <kbd>, <label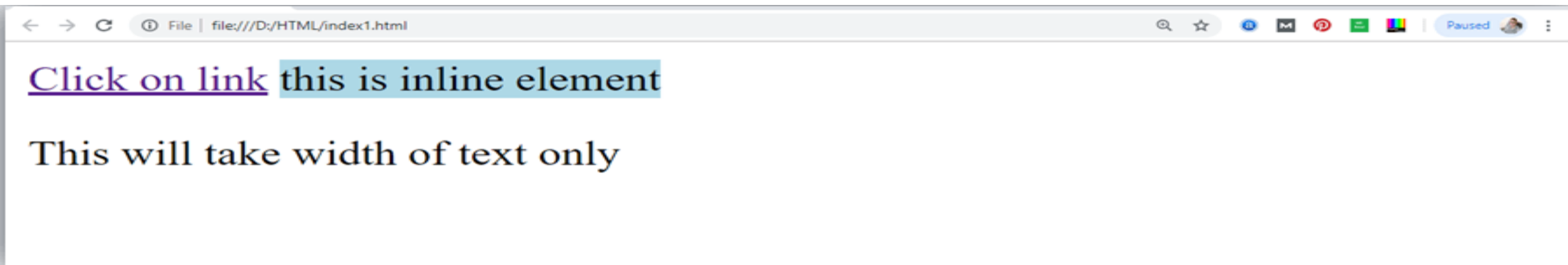>, <map>, <object>, <q>, <samp>, <script>, <select>, <small>, <span>, <strong>, <sub>, <sup>, <textarea>, <time>, <tt>, <var>.

Example:

```html
<!DOCTYPE html>
<html>
   <head>
   </head>
<body>
   <a href="https://www.javatpoint.com/html-tutorial">Click on link</a>
   <span style="background-color: lightblue">this is inline element</span>
   <p>This will take width of text only</p>
</body>
</html>
```

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Click on link this is inline element

This will take width of text only

Following is the list of the some main elements used in HTML:

Start tag	Content	End tag	Description
<h1> ...... <h6>	These are headings of HTML	</h1>??..</h6>	These elements are used to provide the headings of page.
<p>	This is the paragraph	</p>	This element is used to display a content in form of paragraph.
<div>	This is div section	</div>	This element is used to provide a section in web page.
 			This element is used to provide a line break. (void element)
<hr>			This element is used to provide a horizontal line. (void element)

HTML Formatting

HTML Formatting is a process of formatting text for better look and feel. HTML provides us ability to format text without using CSS. There are many formatting tags in HTML. These tags are used to make text bold, italicized, or underlined. There are almost 14 options available that how text appears in HTML and XHTML.

In HTML the formatting tags are divided into two categories:

•Physical tag: These tags are used to provide the visual appearance to the text.

•Logical tag: These tags are used to add some logical or semantic value to the text.

NOTE: There are some physical and logical tags which may give same visual appearance, but they will be different in semantics.

Here, we are going to learn 14 HTML formatting tags. Following is the list of HTML formatting text.

Element name	Description
<b>	This is a physical tag, which is used to bold the text written between it.
<strong>	This is a logical tag, which tells the browser that the text is important.
<i>	This is a physical tag which is used to make text italic.
<em>	This is a logical tag which is used to display content in italic.
<mark>	This tag is used to highlight text.
<u>	This tag is used to underline text written between it.
<tt>	This tag is used to appear a text in teletype. (not supported in HTML5)
<strike>	This tag is used to draw a strikethrough on a section of text. (Not supported in HTML5)
<sup>	It displays the content slightly above the normal line.
<sub>	It displays the content slightly below the normal line.
<del>	This tag is used to display the deleted content.
<ins>	This tag displays the content which is added
<big>	This tag is used to increase the font size by one conventional unit.
<small>	This tag is used to decrease the font size by one unit from base font size.

HTML Heading

A HTML heading or HTML h tag can be defined as a title or a subtitle which you want to display on the webpage. When you place the text within the heading tags <h1>.........</h1>, it is displayed on the browser in the bold format and size of the text depends on the number of heading.
There are six different HTML headings which are defined with the <h1> to <h6> tags, from highest level h1 (main heading) to the least level h6 (least important heading).
h1 is the largest heading tag and h6 is the smallest one. So h1 is used for most important heading and h6 is used for least important.
Headings in HTML helps the search engine to understand and index the structure of web page.

See this 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>**

```
<!DOCTYPE html>
<html>
 <head>
   <title>Heading elements</title>
 </head>
 <body>
   <h1>This is main heading of page. </h1>
   <p>h1 is the most important heading, which is used to display the keyword of page </p>
   <h2>This is first sub-heading</h2>
   <p>h2 describes the first sub heading of page. </p>
   <h3>This is Second sub-heading</h3>
   <p>h3 describes the second sub heading of page.</p>
   <p>We can use h1 to h6 tag to use the different sub-heading with their paragraphs if
           required.
           </p>
  </body>
</html>
```
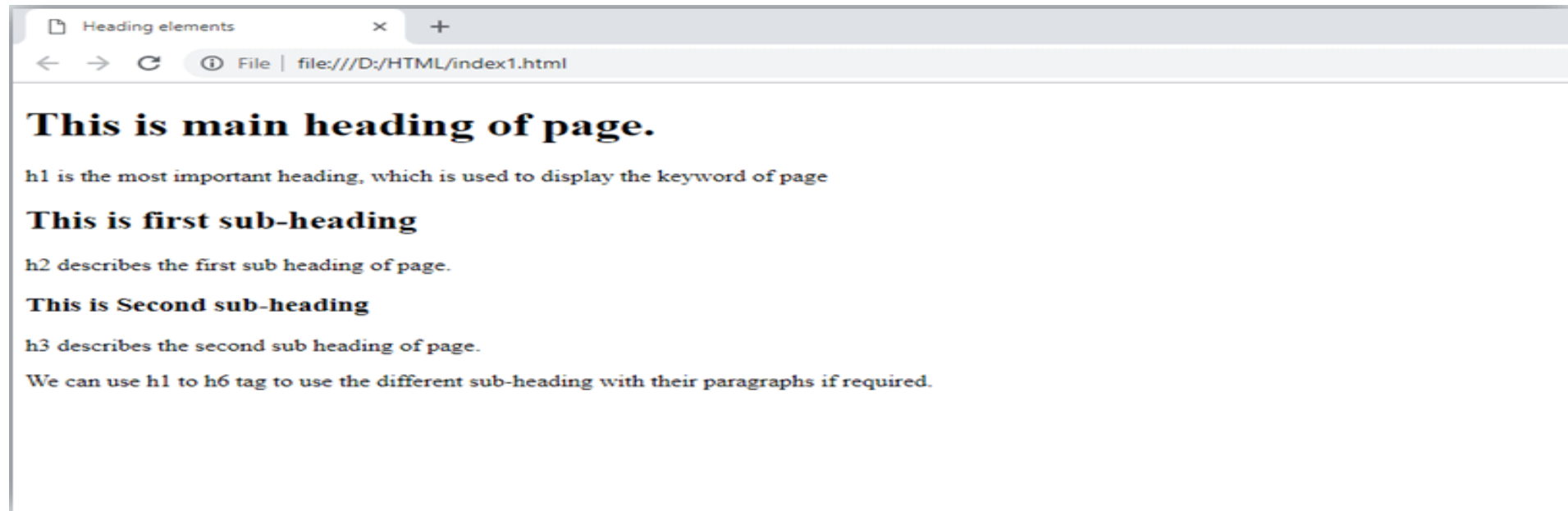
Heading elements × +

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This is main heading of page.

h1 is the most important heading, which is used to display the keyword of page

This is first sub-heading

h2 describes the first sub heading of page.

This is Second sub-heading

h3 describes the second sub heading of page.

We can use h1 to h6 tag to use the different sub-heading with their paragraphs if required.

HTML Anchor

The **HTML anchor tag** defines *a hyperlink that links one page to another page*. It can create hyperlink to other web page as well as files, location, or any URL. The "href" attribute is the most important attribute of the HTML a tag. and which links to destination page or URL.

href attribute of HTML anchor tag

The href attribute is used to define the address of the file to be linked. In other words, it points out the destination page.

The syntax of HTML anchor tag is given below.

 Link Text

```
<!DOCTYPE>
<html>
<body>
<a href="second.html">Click for Second Page</a>
</body>
</html>
```

Click for Second Page

Specify a location for Link using target attribute

If we want to open that link to another page then we can use target attribute of <a> tag. With the help of this link will be open in next page.

Example:
```
<!DOCTYPE html>
<html>
<head>
    <title></title>
</head>
<body>
<p>Click on<a href="https://www.javatpoint.com/" target="_blank"> this link </a>to go on home page of JavaTpoint.</p>
</body>
</html>
```

Click on <u>this-link</u> to go on home page of JavaTpoint.

Note:

•The **target** attribute can only use with href attribute in anchor tag.

•If we will not use target attribute then link will open in same page.

Appearance of HTML anchor tag

An **unvisited link** is displayed underlined and blue.

A **visited link** displayed underlined and purple.

An **active link** is underlined and red.