Frames,Iframes, character entities, semantic elements, html5 elements

Frames

- HTML frames are used to divide your browser window into multiple sections where each section can load a separate HTML document. A collection of frames in the browser window is known as a frameset. The window is divided into frames in a similar way the tables are organized: into rows and columns.

- Not supported in HTML5. Instead use HTML iframes

Creating a Frame Layout

- To create a frameset document, first you need the <frameset> element, which is used instead of the <body> element.
- The frameset defines the rows and columns your page is divided into, which in turn specify where each individual frame will go.
- Each frame is then represented by a <frame> element.

Creating Frames - <frameset> Element

- The <frameset> tag replaces the <body> element in frameset documents.
- The <frameset> tag defines how to divide the window into frames.
- Each frameset defines a set of rows **or** columns. If you define frames by using rows then horizontal frames are created. If you define frames by using columns then vertical frames are created.
- The values of the rows/columns indicate the amount of screen area each row/column will occupy.
- Each frame is indicated by <frame> tag and it defines what HTML document to put into the frame.

The <frameset> Element Attributes

- **cols:** specifies how many columns are contained in the frameset and the size of each column. You can specify the width of each column in one of four ways:
  - Absolute values in pixels. For example to create three vertical frames, use *cols="100, 500,100"*.
  - A percentage of the browser window. For example to create three vertical frames, use *cols="10%, 80%,10%"*.
  - Using a wildcard symbol. For example to create three vertical frames, use *cols="10%, *,10%"*. In this case wildcard takes remainder of the window.
  - As relative widths of the browser window. For example to create three vertical frames, use *cols="3*,2*,1*"*. This is an alternative to percentages. You can use relative widths of the browser window. Here the window is divided into sixths: the first column takes up half of the window, the second takes one third, and the third takes one sixth.

The <frameset> Element Attributes

- **rows:** attribute works just like the cols attribute and can take the same values, but it is used to specify the rows in the frameset. For example to create two horizontal frames, use *rows="10%, 90%"*. You can specify the height of each row in the same way as explained above for columns.
- **border:** attribute specifies the width of the border of each frame in pixels. For example border="5". A value of zero specifies that no border should be there.
- **frameborder:** specifies whether a three-dimensional border should be displayed between frames. This attrubute takes value either 1 (yes) or 0 (no). For example frameborder="0" specifies no border.
- **framespacing:** specifies the amount of space between frames in a frameset. This can take any integer value. For example framespacing="10" means there should be 10 pixels spacing between each frames.

Example

```
<html>
<head>
<title>Frames example</title>
 </head>
<frameset rows="10%,80%,10%“>
    <frame src="/html/top_frame.htm" />
    <frame src="/html/main_frame.htm" />
    <frame src="/html/bottom_frame.htm" />
<noframes>
     <body> Your browser does not support
frames. </body> </noframes>
</frameset>
</html>
```

Disadvantages

Disadvantages of Frames

There are few drawbacks with using frames, so it's never recommended to use frames in your webpages.

- Some smaller devices cannot cope with frames often because their screen is not big enough to be divided up.
- Sometimes your page will be displayed differently on different computers due to different screen resolution.
- The browser's back button might not work as the user hopes.
- There are still few browsers that do not support frame technology.
- Bookmarks only bookmark the top level pages (the framesets themselves). A user is unable to bookmark any of the Web pages viewed within a frame.

Resources

- https://html.com/frames/
- https://www.w3.org/TR/html401/present/frames.html

HTML Iframes

- <iframe src="demo_iframe.htm" width="200" height="200"></iframe>

- Iframe - Remove the Border

<iframe src="demo_iframe.htm" frameborder="0"></iframe>

Use iframe as a Target for a Link

- <iframe src="demo_iframe.htm“ name="iframe_a">
- </iframe>

```
<p>
    <a href=http://www.w3schools.com target="iframe_a">W3Schools.com</a>
</p>
```

Style iframe

- Inline
- *<iframe src=”www.amrita.edu” style=”border: 3px dotted; width: 300px; height: 300px;”> </iframe>*

- *Other attributes*

- *https://www.w3schools.com/tags/tag_iframe.asp*

Character Entities

Character Entities

Some characters have a special meaning in HTML, like the angle bracket (<) that defines the start of an HTML tag. If we want the browser to actually display these characters we must insert character entities in the HTML source, instead of the character itself.

Character Entities

A character entity has three parts:

- an ampersand (&)
- an entity name or a # and an entity number
- and finally a semicolon (;).

To display a less than sign in an HTML document we must write: < or <

Character Entities

The advantage of using a name instead of a number is that a name is easier to remember. The disadvantage is that not all browsers support the newest entity names, while the support for entity numbers is very good in almost all browsers.

Note that the entities are case sensitive.

HTML Character Entities

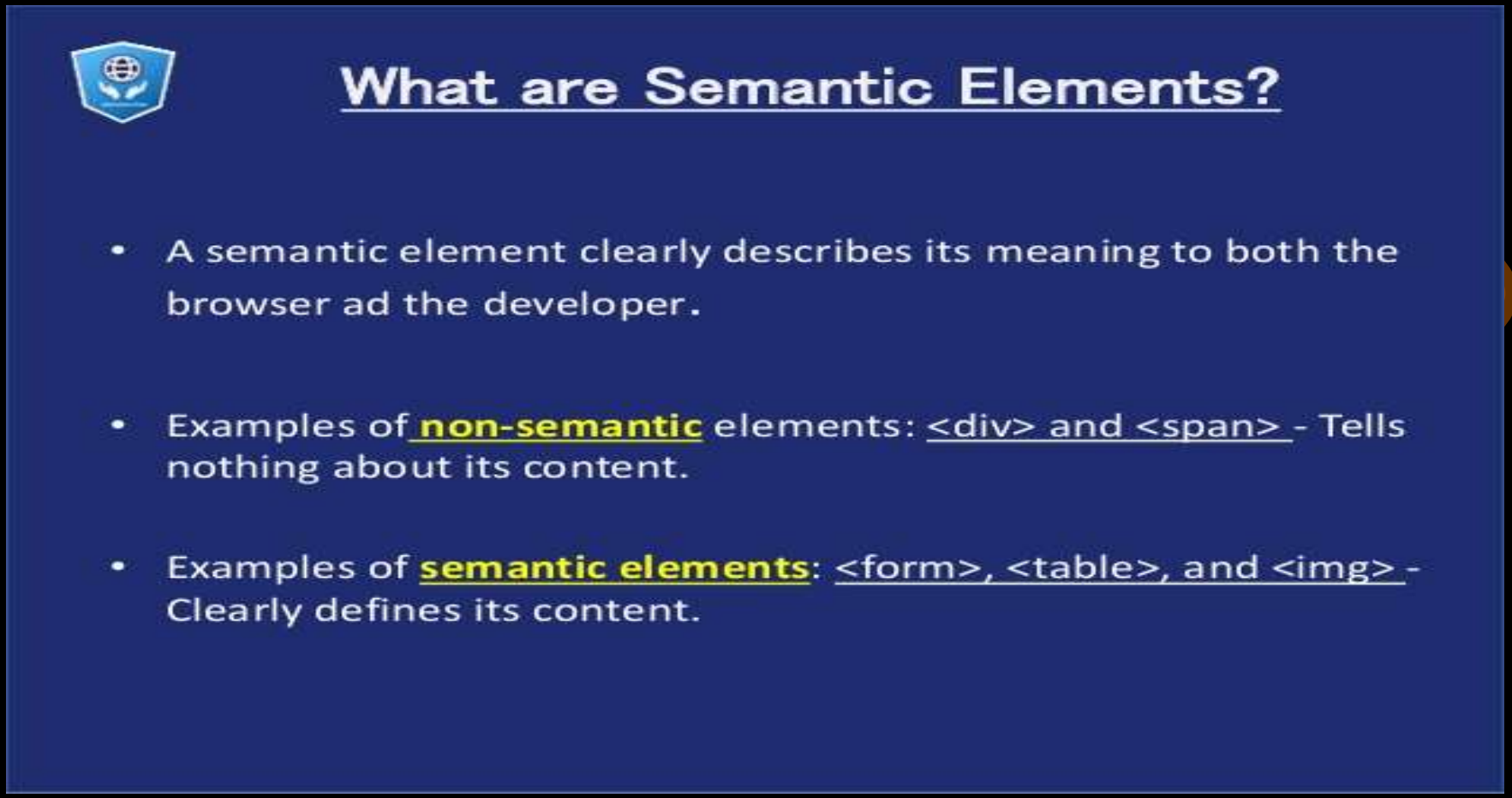
Result	Description	Entity Name
	non-breaking space	
<	less than	&lt;
>	greater than	&gt;
&	ampersand	&amp;
¢	cent	&cent;
£	pound	&pound;
¥	yen	&yen;
€	euro	&euro;
©	copyright	&copy;
®	registered trademark	&reg;

Character Entities

For a comprehensive list of character entities, visit:

http://www.w3schools.com/html/html_entitiesref.asp

https://dev.w3.org/html5/html-author/charref

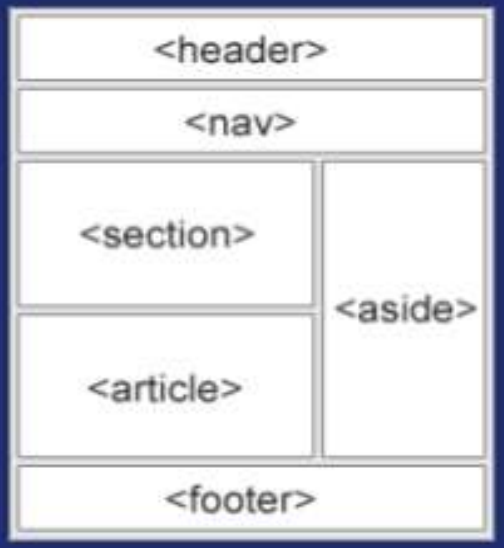


- A **div** is a block-level element and a **span** is an inline element.
- The **div** should be used to wrap sections of a document, while use **spans** to wrap small portions of text, images, etc.
- The <**div**> element is used while creating CSS based layouts in **html**, whereas <**span**> element is used to stylize texts.

New Semantic Elements in HTML5

HTML5 offers new semantic elements to define different parts of a web page:

- <article>
- <aside>
- <details>
- <figcaption>
- <figure>
- <footer>
- <header>
- <main>
- <mark>
- <nav>
- <section>
- <summary>
- <time>



https://www.w3schools.com/html/html5_semantic_elements.asp

Why Semantic HTML5 Elements?

- With HTML4, developers used their own favorite attribute names to style page elements:
- header, top, bottom, footer, menu, navigation, main, container, content, article, sidebar, topnav, ...
- This made it impossible for search engines to identify the correct web page content.

Why Semantic HTML5 Elements?

- With HTML5 elements like:
- <header> <footer> <nav> <section> <article>, this will become easier.
- "Allows data to be shared and reused across applications, enterprises, and communities."

New HTML5 Tags

- ***<canvas>*** defines graphic drawing using JavaScript
- ***<audio>*** defines sound or music content
- ***<video>*** defines video or movie content
- ***<header>*** defines a header for the document or a section
- ***<nav>*** defines navigation links in the document

New HTML5 Tags

- ***<section>*** defines a section in the document
- ***<main>*** defines the main content of a document
- ***<article>*** defines an article in the document
- ***<footer>*** defines a footer for the document or a section
- ***<figure>*** defines self-contained content, like illustrations, diagrams, photos etc.