Session 7

Creating Navigational Aids and Division-Based Layout

Session Overview

In this session, you will be able to:

- Explain semantic tags - structural and text-level
- Explain the elements of a semantic layout and use them in HTML
- Explain navigation bars - text-based and graphical
- Explain and use image map
- Explain divisions and its positioning and formatting

Introduction

- While designing a Website, a number of elements and principles are used to get the desired result.
- These principles and elements help to develop a rich, attractive, efficient, and aesthetically pleasing Website.
- As a proper navigation is necessary for user interactivity.
- Navigation bar is important to make a Web page user-friendly.

HTML5 Semantic Tags

- HTML5 has evolved by introducing new elements, which pushed semantics to a higher level.
- New tags were developed to create stable semantic structure.
- The earlier version of HTML had a universal tag of *div*, which was used to accomplish various tasks in the HTML structure.
- Now HTML5 has introduced two types of semantic tags. They are structural and text-level semantic tags.

Structural Semantic Tags

Structural Semantic Tags are block level elements and are used to structure pages. Its elements are:

- *section*: The *section* element represents a section of a Web document. It is used for grouping related content and is different from other content groups present on Web page. It is similar to the tag.
- *header*: The *header* element represents the header of a Web page. It can be used either at the top of the document or at the top of a section.
- *footer*: The *footer* element is similar to the header and can be present either for the document or for the section. Typical components of a footer are as follows:
  - Author(s) information
  - Copyright information
  - Text-based navigation bar

Structural Semantic Tags

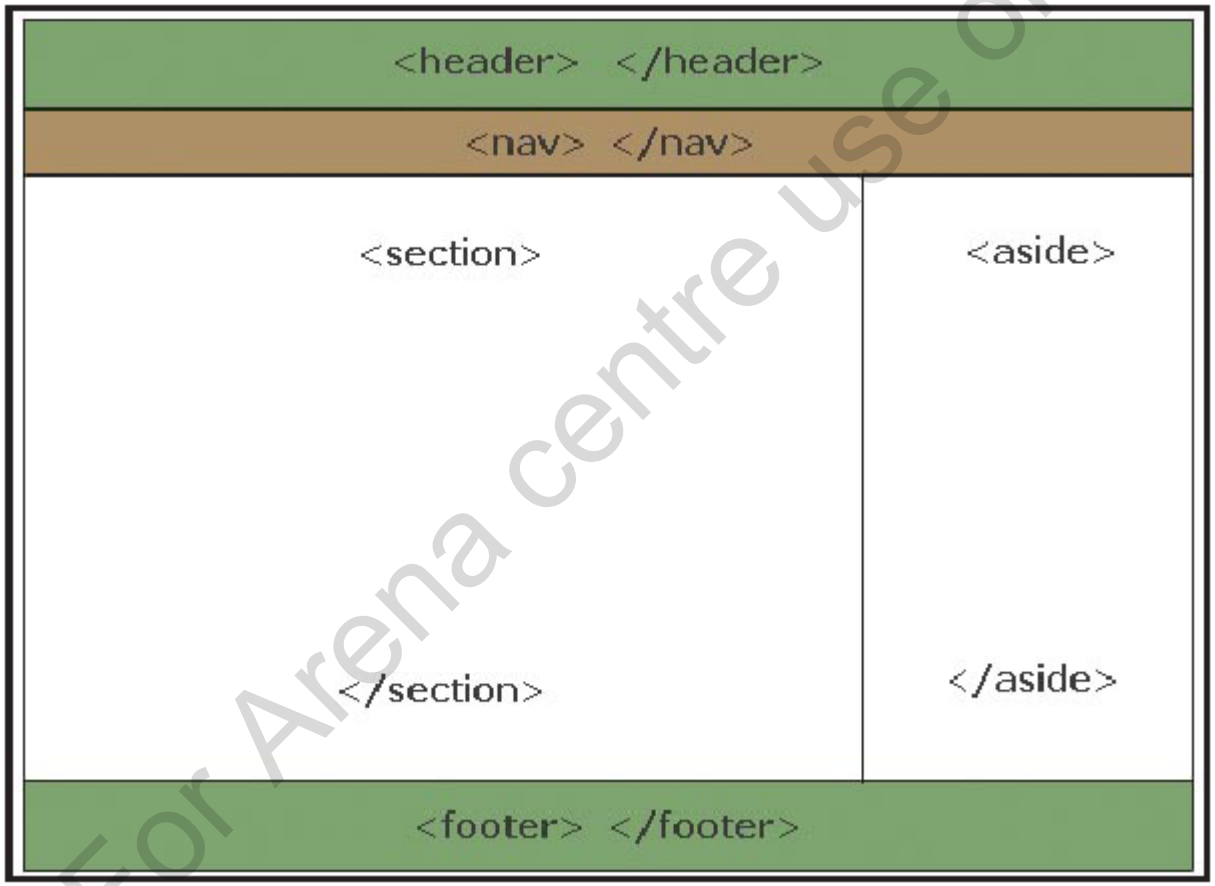
- *aside*: The *aside* element is used for representing the content that is related to the main text of the document. It aligns itself as a sidebar.
- *nav*: The *nav* element represents a section of a Web page that contains navigation links/menus to link other Web pages or to other parts within the same Web page.
- *article*: The *article* element represents a section of content that is independent of a Web page or site content. The possible sources for the <article> tag are as follows:
  - Blog post
  - News story
  - Comment
  - Review
  - Forum post

Text Level Semantic Tags

The text-level semantic tags are inline elements, which are as follows:

- *mark*: The <*mark*> tag is used for defining marked or highlighted text because of its relevance. For example, a <*mark*> tag can be used for highlighting words on a Web page that a visitor has searched for.
- *time*: The <*time*> tag is used for defining either the time or a date in the Gregorian calendar. It is used optionally with a time and a time-zone offset.
- *meter*: The <*meter*> tag displays markup or scalar measurement within a defined range. Absolute scalar values such as height or weight are not represented automatically by the <meter> tag.
- *progress*: The <*progress*> tag can be used with JavaScript to display the progress of a task.

HTML Semantic Layout



HTML5 Semantic Layout and its Elements

Navigation Bar

- Navigation is one of the most important elements in a Web design.
- Web layouts do not have any specific physical representation that a user can depend on, except for a consistent navigation menu.
- It is one of the most important design elements that provide the users with a sense of orientation and guide them through the Website.
- In Web designing, a navigation menu is always on the navigation bar, which can be horizontal or vertical.
- A navigation bar is a section of a Website or online page intended to support visitors in browsing through the online document.

Text-Based Navigation Bar

- Text-based navigation bars are not associated with icons but are easy to create and can be displayed in any Web browser.
- The advantage of using a text-based navigation bar is that it reduces the loading time of a page.
- Although a text-based navigation bar is easy to create, it is not interesting because there is very less interaction or visual appeal to the visitor.
- Moreover, text links are hard to distinguish from the regular text that appears on a Web page.
- The font, color, and link colors can be determined by the user by using the Font pane.

Graphical Navigation Bar

- The graphical navigation bar is more captivating than a text-based navigation bar as it uses icons.
- The usability of the page increases with a good choice of icons for the navigation bar.
- It also makes a Website more noticeable for the user who visits a Website.
- Graphical navigation bar is better than text-based navigation as it gives visual appeal to the users.
- The disadvantage of a graphical bar is that since it uses images, it takes longer time for the page to load.
- In addition to this, Web page will be of no use for those users who use a non-graphical browser.

Image Map

- Image maps are images with clickable areas.
- The areas in image maps when clicked will link to another page.
- The image maps have to be used intelligently to make it effective. If they are not used appropriately they can confuse the users.
- The <*map*> tag is used to define an image map. The <*map*> element contains a number of <*area*> elements for defining the clickable areas in the image map.
- In HTML5, if the id attribute of the <*map*> tag is specified, then it must have the same value as the name attribute.

Image Map

The following steps help to create an image map:

- Use the <*img*> tag to insert and link an image. In the <*img*> tag, use the usemap attribute to define the image map name.
- Use the <*map*> tag to create a map with the same name. Inside this <*map*> tag, define the clickable areas with the <*area*> tag.

Image Map

Output of an Image Map

Divisions

- The <*div*> tag defines a division in an HTML page.
- It is used to group block-elements and format them with CSS.
- The new structural semantic tags reasonably reduce a lot of <*div*> tag's usage, but <*div*> tag is still important in the HTML5 world.
- The <*div*> tag can be used when there is no other semantically appropriate element left that suits the purpose in a Web page development.
- It can be commonly used for stylistic purposes such as wrapping some semantically marked-up content in a CSS-styled container.

Divisions

Following points should be kept in mind while working with <*div*> tag in Website development:

- The <*div*> tag is a block-level element
- The <*div*> tag can contain any other tag
- In HTML5, the tag can be found inside any element that can contain flow elements such as other <*div*>, <*address*>, <*section*>, and <*table*>

Positioning and Formatting of Divisions

- Elements can be positioned using the top, bottom, left, and right alignment properties.
- However, these properties will not work unless the position of the property is set.
- They also work differently depending upon the positioning method.
- There are five positional properties of DIV elements—namely, static, relative, absolute, fixed, and inherit.
- The default position for a block element (DIV) is static.

Summary

- HTML5 has introduced two types of semantic tags namely, structural and text-level semantic tags.
- Structural semantic elements include section, header, footer, aside, nav, and article.
- The text-level semantic tags include <*mark*> tag, <*time*> tag, <*meter*> tag, and <*progress*> tag.
- Web layouts do not have any specific physical representation that a user can depend on, except for a consistent navigation menu. The two types of navigation bars are text-based navigation bar and graphical navigation bar.
- Image maps are images with clickable areas. The <*map*> tag is used to define an image map.
- The <*div*> tag defines a division in an HTML page. Divisions can be formatted by using the same character, paragraph, and page formatting styles.