CSS (Cascading Style Sheets)

The CSS stands for (Cascading Style Sheets) is a style sheet language used for describing the presentation of a document written in a markup language such as HTML. CSS allows you to create great looking web pages. CSS describes how HTML elements are to be displayed on screen or other media.
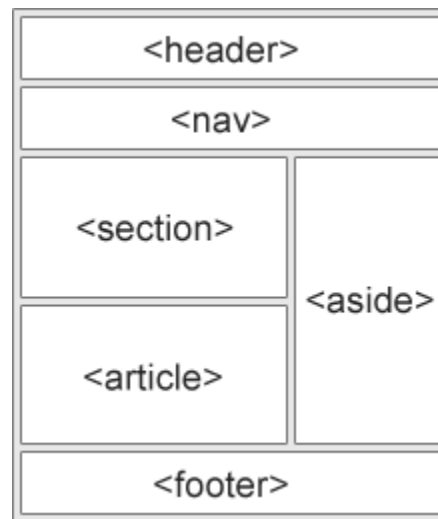
Semantic element HTML 5

Semantic element clearly describes its meaning to both human- and machine-readable way (developer and browser). Examples of non-semantic elements: **<div>** and **<span>** Tells nothing about its content. Examples of semantic elements: **<form>**, **<table>**, and **<article>** clearly defines its content.

Many web sites contain HTML code like: **<div id="nav">** **<div class="header">** **<div id="footer">** to indicate navigation, header, and footer.

In HTML there are some semantic elements that can be used to define different parts of a web page:

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

<header>

The **<header>** element represents a container for introductory content or a set of logo, icon authorship information and navigational links.

<nav>

The **<nav>** element defines a set of navigation links. Notice that NOT all links of a document should be inside a **<nav>** element. The **<nav>** element is intended only for major block of navigation links.

<aside>

The <aside> element defines some content aside from the content it is placed in (like a sidebar). The <aside> content should be indirectly related to the surrounding content.

<article>

The <article> element specifies independent, self-contained content.

<section>

The <section> element defines section in a document.

Can we use the definitions to decide how to nest those elements? No, we cannot! So, you will find HTML pages with <section> elements containing <article> elements, and <article> elements containing <section> elements.

<footer>

The <footer> element defines a footer for a document or section. A <footer> element typically contains copyright information, contact information, sitemap, and back to top links related documents.

<figure>

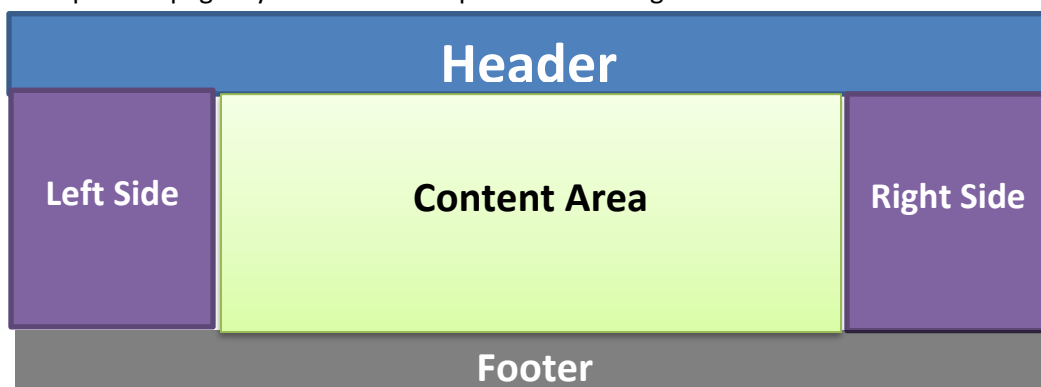The <figure> tag specifies self-contained content, like illustrations, diagrams, photos, code listings, etc.

<figcaption>

The *<figcaption>* tag defines a caption for a *<figure>* element. The *<figcaption>* element can be placed as the first or as the last child of a <figure> element. The *<img>* element defines the actual image/illustration.

Why we use semantic Elements?

According to the W3C: "A semantic Web allows data to be shared and reused across applications, enterprises, and communities.

Example-1

We develop home page layout with the help of semantic tags of HTML.

Header		
Left Side	Content Area	Right Side
Footer		

```html
<!DOCTYPE html>
<head>
<meta http-equiv="Content-Type"
content="text/html; charset=utf-8" />
<title>Web Layout</title>
<style>
 main{
         width:100%;
         height:800px;
         background-color:#066;
 }
 header{
   width:98%;
   height:105px;
   background-color:#06F;
   margin-left:1%;
   border-radius:10px;
 }
 nav{
   width:98%;
   height:50px;
   background-color:#0F0;
   margin-left:1%;
   border-radius:10px;
 }
 aside{
   width:20%;
   height:400px;
   background-color:#039;
   margin-left:1%;
   border-radius:10px;
   float:left;
 }
 section{
   width:56%;
   height:400px;
   background-color:#63C;
   margin-left:1%;
   border-radius:10px;
   display:inline-block;
   }
 article{
   width:20%;
   height:400px;
   background-color:#099;
   margin-left:1%;
   border-radius:10px;
   float:right;
   margin-right:1%;
 }
footer{
   width:98%;
   height:105px;
   background-color:#00F;
   margin-left:1%;
   border-radius:10px;
 }
 h1{
         text-align:center;
 }
</style>
</head>

<body>
<main>
  <header>
     <h1> Header </h1>
  </header>

  <nav>
     <h1> Navigation </h1>
  </nav>

  <aside>
     <h1> Left Side </h1>
  </aside>

  <section>
      <h1> Section </h1>
  </section>

  <article>
     <h1> Right Side </h1>
  </article>

  <footer>
     <h1> Footer </h1>
  </footer>


</main>
</body>
</html>
```

Out Put

Universal Selector

The Universal Selector is the ***** in CSS. Literally the asterisk character. It is essentially a type selector that matches any type. Type meaning an HTML tag like **<div>**, **<body>**, **<button>**, or literally any of the others.

A common use is in the universal reset of all elements padding and margin, like this:

* {

  margin: 0;

  padding: 0;

}

Select all elements inside **<div>** elements and set their background color to green:

div * {

  background-color: green;

}

Example-2

How we use image (tag) and heading (tag) elements within Header element (tag) with the help of CSS class.

```
<!DOCTYPE html>
<head>
<meta http-equiv="Content-Type"
content="text/html; charset=utf-8" />
<title>Web Layout</title>
<style>
* {
  margin: 0;
  padding: 0;
}

main{
        width:100%;
        height:800px;
        background-color:#066;
}
header{
  width:98%;
  height:105px;
  background-color:#06F;
  margin-left:1%;
  border-radius:10px;
}
header img{
        float:left;
        width:100px;
        height:100px;
}
header h1{
        display:inline-block;
        font-family:"Palatino Linotype";
        font-size:36px;
         color:red;
         margin-left:100px;
}

</style>
</head>
```
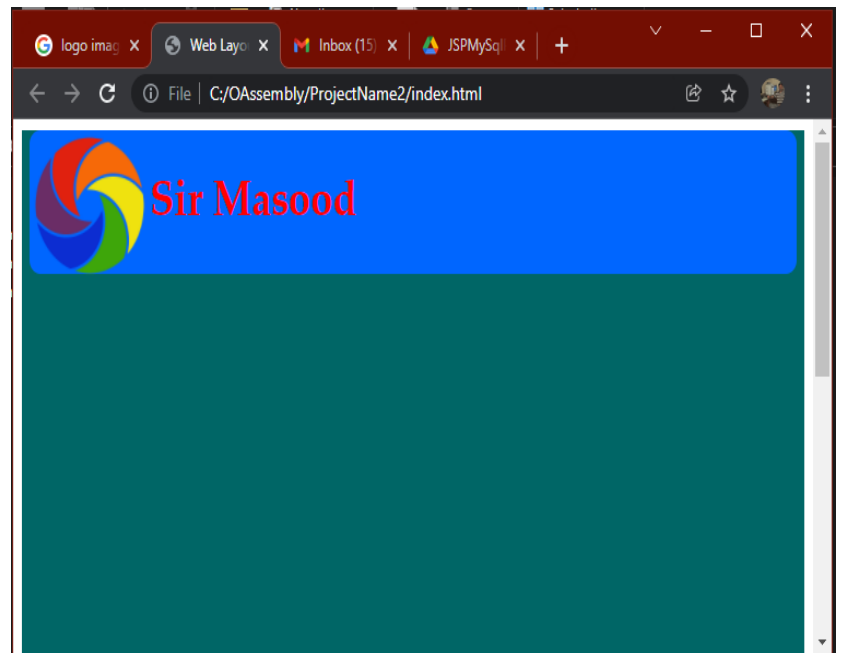
```
<body>
<main>
  <header>
    <img src="images/logo1.png" >
    <h1> Sir Masood </h1>
  </header>


</main>

</body>
</html>
```

Exercise

Theory Question

1) What is Semantic elements?
2) List of semantic elements with description.
3) What is non-semantic elements with example?

Practical Question

1) Write a HTML program to develop website layout same as given above example-1

Objective and MCQ

1) Which is non-semantic elements.
   a) <table>
   b) <header>
   c) <section>
   d) <div>

2) Which is semantic element.
   a) <div>
   b) <header>
   c) <span>
   d) <b>

3) The _____element represents a container for introductory content or a set of logo, icon authorship information.
   a) <footer>
   b) <section>
   c) <header>
   d) <nav>

4) The _____ element specifies independent, self-contained content.
   a) <article>
   b) <footer>
   c) <header>
   d) <link>

5) A _____ element typically contains copyright information, contact information and sitemap.
   a) <header>
   b) <span>
   c) <section>
   d) <footer>