

# **(TR-102) MASTERING THE SEMANTIC WEB –**

## **Training Day 3 Report :**

13 June 2024

### **Creating Navigation Bar using HTML and CSS:**

A navigation bar, also known as a navbar, is used to provide navigation links or menus on a website. It allows users to easily navigate the content of a website.

#### **Key Characteristics of a CSS Navigation Bar:**

- It is developed and styled using CSS properties and rules.
- It can enhance the user experience and make it simple for visitors to navigate a website's content.
- It is a crucial part of web design, as it improves the presentation and styling of a web page.

## Steps to Create a Horizontal Navigation Bar:

### HTML Structure:

Create an unordered list (<ul>) with list items (<li>) containing the navigation links.

```
<div class="topnav">  
  <a class="active" href="#home">Home</a>  
  <a href="#news">News</a>  
  <a href="#contact">Contact</a>  
  <a href="#about">About</a>  
</div>
```

### CSS Styling:

Set the background color of the navigation bar.

Float the list items to the left to create a horizontal layout.

Style the links (font, color, padding, etc.).

Add hover effects to change the background color or text color when the user hovers over a link.

Optionally, add an "active" class to the current page's link to indicate the user's location.

```
.topnav {  
  background-color: #333;  
  overflow: hidden;}
```

```
.topnav a {
```

```
float: left;  
color: #f2f2f2;  
text-align: center;  
padding: 14px 16px;  
text-decoration: none;  
font-size: 17px;  
}
```

```
.topnav a:hover {  
    background-color: #ddd;  
    color: black;  
}
```

```
.topnav a.active {  
    background-color: #04AA6D;  
    color: white;  
}
```

## **Hover Effect Using CSS:**

A hover effect is a visual change that occurs when a user hovers over an element with their mouse pointer. It is used to enhance the user experience by adding interactive and responsive design elements to a web page. The hover effect is triggered by the :hover pseudo-class in CSS, which applies styles to an element when the cursor hovers over it.

### **Examples of CSS Hover Effects:**

- **Color Change:** Changing the color of a link or button when hovered over.
- **Text Replacement:** Replacing the text of a link with another text when hovered over.
- **Image Zoom:** Zooming in on an image when hovered over.
- **Text Underline:** Adding an underline to text when hovered over.
- **Background Color Change:** Changing the background color of an element when hovered over.

### **Syntax:**

```
element:hover {  
    /* CSS declarations */  
}
```

## **Padding and Margin Properties:**

Padding and margin are two fundamental CSS properties used to control the spacing and layout of elements on a web page.

Padding: The space between the content of an element and its border.

There are four ways of specifying the padding property that are as follows:

(i). padding: 50px 100px 150px 200px;

It signifies that top padding value is 50px, right padding value is 100px, bottom padding value is 150px, and left padding value is 200px.

(ii). padding: 50px 100px 150px;

It signifies that top padding value is 50px, left and right padding value is 100px, and bottom padding value is 150px.

(iii). padding: 50px 100px;

It signifies that top and bottom padding value is 50px, left and right padding value is 100px.

(iv). padding: 50px;

It sets the equal value of top, right, bottom, and left padding.

Example

```
<!DOCTYPE html>
```

```
<html>
```

```
<head>
```

```
<style>
```

```
p {
background-color: lightskyblue;
font-size: 20px;
border: 3px solid red;
}
p.padding {
padding: 100px 100px 150px 50px;
}
</style>
</head>
<body>
<p>This paragraph is displayed without specified padding.
</p>
<p class = "padding">This paragraph is displayed with
specified padding.<br>
<b>padding: 100px 100px 150px 50px; </b>
</p>
</body>
</html>
```

## When to Use Padding?

- Increase space between content and its border: Padding gives an opportunity to control a breathing room around the element.
- Adjust the size of the element: Padding can increase or decrease the white space around making it more visible and clickable.
- Create space between an element and the edge of the container or border: Padding is useful in the requirement of changing the size of the element.

Margin: The space around an element, outside its border.

There are four ways of specifying the margin property that are as follows:

(i). `margin: 50px 100px 150px 200px;`

It signifies that top margin value is 50px, right margin value is 100px, bottom margin value is 150px, and left margin value is 200px.

(ii). `margin: 50px 100px 150px;`

It signifies that top margin value is 50px, left and right margin value is 100px, and bottom margin value is 150px.

(iii). `margin: 50px 100px;`

It signifies that top and bottom margin value is 50px, left and right margin value is 100px.

(iv). `margin: 50px;`

It sets the equal value of top, right, bottom, and left margin.

## Example

```
<!DOCTYPE html>
```

```
<html>
```

```
<head>
```

```
<style>
```

```
p {
```

```
background-color: lightskyblue;
```

```
font-size: 20px;
```

```
border: 3px solid red;
```

```
}
```

```
p.margin {
```

```
margin: 50px 100px 150px 200px;
```

```
}
```

```
</style>
```

```
</head>
```

```
<body>
```

```
<p>This paragraph is displayed without specified margin. </p>
```

```
<p class = "padding">This paragraph is displayed with  
specified margin.<br>
```

```
margin: 50px 100px 150px 200px;
```

```
</p>
```

```
</body>
```

```
</html>
```



## **When to Use Margin?**

- Change element's position on the page: Margin can be used to set the element right or left, up or down on the page.
- Add distance between two elements: Margin is used to make the elements' arrangement on the web page visually appealing by adding spacing between them.

## **What is a Fluid Box?**

A fluid box is a container that adapts its size and layout based on the available space. It is designed to be responsive and flexible, allowing the content to adjust to different screen sizes and devices. Fluid boxes are commonly used in web design to create responsive and adaptive layouts that work well across various devices and screen sizes.

### Key Characteristics of Fluid Boxes:

- Responsive Design: Fluid boxes are designed to adapt to different screen sizes and devices.
- Flexible Layout: They can adjust their size and layout based on the available space.
- Content-Driven: The content within the fluid box determines its size and layout.