



Key Concepts in Using Advanced Techniques to Enhance Web Pages Session 2

Session: Using Advanced Techniques to Enhance Web Pages

Question Discussion

- What is the full form of CSS?
- Importance of using CSS in designing web pages.

Syntax of CSS

- p is a selector in CSS
- colour is a property and red is the property value
- text-align is a property and centre is the property value

Types of CSS

❑ Inline CSS

- It is a kind of style sheet in which styles can be applied to HTML tags
- The styles are applied within HTML tags
- One can add style attributes to the HTML tag without using selectors

```
<html>  
  <head>  
    <title>Inline CSS</title>  
  </head>  
  
  <body>
```

```

<p style = "color:red; font-size:60px;
font-style:bold; text-align:left;">
inline css
</p>
</body>
</html>

```

Advantages

- By using an online style sheet, we can apply uniform styles on tags for the whole document
- There is no need to create and upload a separate document in inline CSS

Disadvantages

- One cannot use quotations within inline CSS
- These styles cannot be reused anywhere else
- These styles are tough to be edited because they are not stored in a single place

❑ Internal or Embedded CSS

- An internal CSS is defined in the <head> section of an HTML page, within a <style> element
- Styles are applied to every element defined in the HTML page
- By writing the <style> tag in the head section, the browser will come to know that the programme is making use of cascading styles
- The attributes of <style> tag are media and type

```

<html>
<head>
<title>Internal Style Sheet</title>
<style>
body {background-color: pink;}
h1 {color: blue;}
p {color: red;}
</style>
</head>
<body>
<h1>Heading</h1>
<p>INTERNAL STYLE SHEETS</p>
</body>
</html>

```

Advantages

- The internal style sheets are applied to only a single page
- They do not require you to upload multiple files
- This type of style sheet is useful when we want to apply a unique style sheet for each web page

Disadvantages

- They affect only the page they are on
- This style sheet is of no use when the user wants to apply styles to more than one page at a time

❑ External CSS

- The external style sheet is generally used to make changes on multiple pages
- It is used to apply styles to many web pages
- By changing one file, the user can change the styles of the entire website
- The external style sheets are created in separate documents

- The external style sheet may be written in any text editor
- The file must be saved with a .css extension
- This file should not contain HTML elements
- This file only contains a listing of CSS rules
- To link the external style sheet, make use of the <link> tag in the head section
- It uses the <link> tag on every page
- Some of the attributes of the <link> tag:
 - href- *URL*, specifies the location of the linked document
 - rel- required, specifies the relationship between the current document and the linked document
 - type- specifies the media type of the linked document

styles.css

```
body {
    background-color: lightblue;
}
h1 {
    color: navy;
    margin-left: 20px;
}
p{
    color: red;
}
```

External.html

```
<html>
<head>
<link rel="stylesheet" href="styles.css">
</head>
<body>
<h1>CSS</h1>
<p>External style sheets</p>
</body>
</html>
```

Advantages

- The styles of multiple web pages are controlled from one file
- The selecting and grouping methods are used to apply styles
- By changing one file, a user can change the look of the entire web site

Disadvantages

- The download time increases when multiple CSS files are linked to a web page
- .css file is needed to apply styles to multiple documents
- For small style definitions, external style sheets are not useful

CSS Selectors

- A CSS selector selects the HTML element you want to style
- Selectors are part of CSS
- Selectors are defined in several ways

Types of selectors

- Element Selector
- ID Selector
- Class Selector
- Universal Selector

❑ Element of Selector

- The element selector in CSS tries to match the HTML elements having the same name
- It is also known as the type selector

```
<html>
<head>
<style>
p {
  text-align: center;
  color: green;
  font-size: 25px;
}
</style>
</head>
<body>
<p>Every paragraph will be affected by the style.</p>
<p id="para1">Me too!</p>
<p>And me!</p>
</body>
</html>
```

❑ ID Selector

- The ID selector uses the ID attribute of an HTML element to select a specific element
- The ID of an element is unique within a page, so the ID selector is used to select one unique element
- The hash character (#) is followed by the ID.
- The styles are applied to elements only when the ID attribute of the element matches the value given in the selector

```
<html>
<head>
<style>
#para1 {
    text-align: center;
    color: red;
}
</style>
</head>
<body>
<p id="para1">Hello World!</p>
<p>This paragraph is not affected by the style.</p>
</body>
</html>
```

❑ Class Selector

- The class selector is a useful selector among all the other selectors
- The class selector selects the HTML elements to be styled using a class attribute
- It is defined using (.) dot, followed by the class name
- Declare a class selector using a dot followed by the name of the class
- The class selector applies styles to the element having an attribute value same as the class name, without the dot

```
<html>
<head>
<style>
.center {
    text-align: center;
    color: red;
}
</style>
</head>
<body>
<h1 class="center">Red and center-aligned heading</h1>
<p class="center">Red and center-aligned paragraph.</p>
</body>
</html>
```

- ❖ Moreover, using the class selectors you can also apply styles to the specific HTML elements

```
<html>
<head>
<style>
p.center {
```

❑ Universal Selector

- The CSS universal selector selects all the elements on a web page
- The universal selector (*) selects all HTML elements on the page
- Styles are applied to all the elements in the web page
- The style attributes which are specified in between the curly braces affect all the elements present on the HTML page
- The universal selector can also be combined and used with the other selectors

```

<html>
<head>
<style>
* {
  text-align: center;
  color: blue;
}
</style>
</head>
<body>
<h1>Hello world!</h1>
<p>Every element on the page will be affected by the style.</p>
<p id="para1">Me too!</p>
<p>And me!</p>
</body>
</html>

```

❑ Group Selector

- The grouping selector is used to group all the elements with the same style definitions
- The grouping selector is used to minimise the code

```

<html>
<head>
<style>
h1, h2, p {
  text-align: center;

```

CSS Basic Properties

❖ CSS Fonts

- One of the basic CSS properties is font
- The font CSS property sets the style, variant, boldness, size/line height and the font family for an element's text content

❖ CSS properties

- The **font-family** property is used to change the face of a font
- The **font-style** property is used to make a font italic or oblique
- The **font-variant** property is used to create a small-caps effect
- The **font-weight** property is used to increase or decrease how bold or light a font appears
- The **font-size** property is used to increase or decrease the size of a font
- The **font** property is used as shorthand to specify the number of other font properties

```
<html>
```

```
<head>
```

```
<style>
```

```
p.a {
```

```
    font: 15px Arial, sans-serif;
```

```
}
```

```
p.b {
```



```

font: italic small-caps bold 12px/30px Georgia, serif;
}
</style>
</head>
<body>
<h1>The font Property</h1>
<p class="a">This is a paragraph1. </p>
<p class="b">This is a paragraph2. </p>
</body></html>

```

❖ CSS Colours

- The CSS colour property is used to set the colour of HTML elements
- This property is used to set the font colour, background colour, etc.
 - The colour elements are defined as
 - **Built-In Colour:** These are a set of predefined colours that are used by their name
- **RGB Format:** The RGB (Red, Green & Blue) format is used to define the colour of an HTML element by specifying the R, G & B values range between 0 to 255
- **RGBA Format:** The RGBA format is similar to the RGB, but the difference is RGBA contains A (Alpha) which specifies the transparency of elements.
- **Hexadecimal Notation:** The hexadecimal notation begins with the # symbol followed by 6 characters; each range from 0 to F
- **HSL:** HSL stands for Hue, Saturation and Lightness. This format uses the cylindrical coordinate system
- **HSLA:** The HSLA colour property is similar to the HSL property, but the difference is HSLA contains A (Alpha) which specifies the transparency of the elements. 0.0 is for fully transparent and 1.0 is for not transparent

Text Colour: It sets the colour of the text.

Syntax:

```

h1
{
color: color_name;
}

```

Background Color: It sets the background colour of an element.

Syntax:

```

h1
{

```

```
background-color: color_name;
}
```

Border Color: It sets the border colour of an element. The border-style is used to set the type of border.

Syntax:

```
h1
{
border-style: solid/dashed/dotted
border-color: color_name;
}
```

❖ CSS Background Colours

```
<html>
  <head>
    <title>CSS background color property</title>
    <style>
      h1 {
        background-color: green;
        text-align: center;
      }
    </style>
  </head>
  <body>
    <h1>
      CASCADING STYLE SHEETS
    </h1>
  </body>
</html>
```

❖ The **CSS Background and Borders** properties define the background effects for elements

❖ The CSS background properties are as follows :

- Background-colour
- Background-image
- Background-repeat
- Background-attachment
- Background-position

❖ The **CSS border** properties allow us to set the style, colour and width of the border

❖ Some of the properties of CSS borders are

❖ **Border Style:** The border-style property specifies the type of the border. None of the other border properties will work without setting the border style

Following are the types of borders:

- dotted – defines a dotted border

```
<html>  
<head>  
  <style>  
    .center {  
padding: 70px 0;  
border: 3px solid green;  
text-align: center;
```

```

    }

</style>
</head>
<body>
    <h1 style="color: green;">
        CASCADING STYLE SHEETS
    </h1>
<p>Here we use padding and text-align
to center the div element vertically
and horizontally.</p>
<div class="center">
    <p>This text is vertically
    and horizontally centered.</p>
</div>
</body>
</html>

```

❖ CSS Align

- It is used to align the elements horizontally or vertically
- Various methods and techniques are used to centre them, take care of the left and the right margin, etc.
- Some of the methods are
 - **margin: auto-** used to align a block element into centre
 - **text-align: centre-** align any text written in HTML at centre, we can use this property in various kinds of tags
 - **padding:** to vertically align items, we can use padding.
 - **padding & text-align:** to align the text, both vertically and horizontally using a combination of padding and text-align: centre

```

<html>
<head>
    <style>
        .center {

```

```
padding: 70px 0;
border: 3px solid green;
text-align: center;
    }
</style>
</head>
<body>
    <h1 style="color: green;">
        CASCADING STYLE SHEETS
    </h1>
<p>Here we use padding and text-align
to center the div element vertically
and horizontally:</p>
<div class="center">
    <p>This text is vertically
    and horizontally centered.</p>
</div>
</body>
</html>
```

Activity:

- _____ selector in CSS tries to match the HTML elements having the same name.
- What kind of CSS is useful to apply a unique style sheet for web pages?

How to apply background image?

Syntax: <body background="img_girl.jpg">

JavaTpoint

Html Tutorial

In HTML, we can change the colour of the background of a web page using the following different ways:

Using bgcolor attribute

</body>

How to apply all types of font sizes?

Syntax: <body>

HTML Font Tag

 HTML Font Tag

 HTML Font Tag

 HTML Font Tag

 HTML Font Tag

 HTML Font Tag

 HTML Font Tag

</body>

How to apply all types of font types or faces?

Syntax: <body>

HTML Font Types

HTML Font Types

HTML Font Types


```
<font face = "WildWest" size = "6">
```

```
HTML Font Types</font><br />
```

```
<font face = "Bedrock" size = "6">
```

```
HTML Font Types</font><br />
```

```
</body>
```

How to apply font colour?

Syntax: <body>

```
<font color = "#009900">HTML code for Font Color</font><br />
```

```
<font color = "green"> HTML code for Font Color </font>
```

```
</body>
```

How to apply special characters?

Syntax: <body bgcolor="#F0F0F0">

```
<p> This is sample paragraph for displaying the special characters </p>
```

```
<hr>
```

An example of a CopyrightSymbol ©

```
<br>
```

An example of a Trademark symbol ™

```
<br>
```

An example of a Registered Trademark symbol ®

```
</body>
```

Activity

- What is the Hex code of lighter black in HTML?

- What is an attribute?
- What will be the syntax in HTML to set a text in green colour?
