Unit 7 Cascading Style Sheets (CSS)

Structure:

7.1 Introduction

In previous units, you have learned about HTML concepts for designing webpages. HTML is used to structure content. If you want to make structured content more attractive, the best way is to use Cascading Style sheet (CSS)in HTML. Cascading Style sheets are collection of formatting rules that control the appearance of the content on web page. By using style sheets, you can achieve greater consistency across your website. CSS styles provide you with wide range of options for formatting web page. In this unit, you will start by learning the concept of cascading style sheets, types of style sheets, style placement, text and font properties and finally advance CSS properties.

Objectives:

After studying this unit, you should be able to:

- create a class and IDs for style sheets
- describe types of style sheets
- describe header style sheets
- define Text and font style attributes
- describe advance CSS properties

7.1.1 Cascading Style Sheet

CSS is used to style HTML elements such as layering and positioning the content. CSS is designed primarily to enable the separation of document content from document presentation. This separation can improve content accessibility, provide more flexibility and control in the specification of presentation characteristics, and reduce complexity and repetition in the structural content.

Some of the tags of HTML, for example, **<i>** specify presentation details, or style. Style sheets can be used more precisely to do these presentations. So, more tags and attributes used for describing presentation have been deprecated in favor of style sheets.

As we have seen earlier HTML tags have associated properties, which store presentation information for the browsers. If the source code does not provide any associated properties the browsers use the default value. For example, the <h2> tag has the font-size property, for which a browser could have the default value of 30 points. A style sheet could specify that the font-size property for <h2> be set to 26 points, which would override the default value. The new value could apply to one occurrence of an <h2> element or all such occurrences in the document. depending on how the property value is set.

The benefit of style sheets is their capability of striking consistency on the style of Web documents. Style sheet allow the author to specify all occurrences of a particular tag use the same presentation style. HTML style sheets are called Cascading Style Sheets because to specify the style of the document it is defined at three different levels, so the style of the content of a tag is determined through a cascade of style-sheet applications.

7.1.2 History of CSS

In 1990, Berners-Lee created HTML, which is used to generate electronic pages that are displayed on the World Wide Web. Each page has a number of hyperlinks, which are connections to other pages. A style sheet, which is a set of style guidelines that instructs a browser how the different styles are to be applied to the HTML tags to present the document, was needed to hold the style and design of a web page as a separate concern because HTML was specifically designed to hold the content of a web page.

While collaborating with Tim Berners-Lee at CERN, Hkon Wium Lie originally proposed CSS (Cascading Style Sheets) on October 10, 1994. Although though CSS wasn't the only styling language being developed at the time, its use of cascading and developing sequence made it stand out from the competition.

A declarative computer language called CSS is used to control the layout, colours, and fonts of several web pages at once. It is a domain-specific language that dictates how HTML elements are to be displayed on screens, paper, or in other media.

Understanding Stylesheet Origin:

An explanation of a rule's origin provides information about its creation and where it originated.

- There are three different types.
- **Author styles:** According to the rules of the document language, the author designates style sheets for a source document.
- **User style:** A user might be able to provide style details for a specific document.
- **User agent styles:** A default style sheet must be applied before any other style sheets for a document by conforming user agents, or they must act as if they did.

- The declaration dispute cannot be settled solely on the basis of their origin
- As a result, the browser resolves specificity, which is crucial
- The specificity of a selector with two class names is greater than that of a selector with just one class name

Understanding Source Order:

Source order

- The declaration that is added to the link is determined by the source order
- To style a featured link, you can change the source order
- Cascade value for a certain property that has been added to an element as a result of cascade

Source order refers to the order in which CSS rules are defined in the CSS file or embedded within the HTML document using **<style>** tags. When two or more CSS rules target the same HTML element with conflicting styles, the rule that appears later in the source order takes precedence.

Thumb Rules to work with cascade:

Thumb rules to work with cascade:

- Don’t use IDs in your selector
- Don’t use important tag

Special values to help manipulate the cascade:

Cascade can be manipulated in two ways using special values.
Special Values

- Using the inherit keyword
- Using the initial keyword

Shorthand Properties:

- Shorthand should be avoided. overriding all styles invisibly

- Knowing how to put shorthand values in the right order is important

Power of Relative Values:

Power of Relative Values

- The search for pixel perfection in design
- The end of the pixel perfect web.

CSS Selector:

- A combination of guidelines and components called a CSS selector instructs the browser which element to pick in order to apply a property.
- We may use a selector to pick and choose which HTML elements we want to work with
- Selectors are used to “find” HTML elements using IDs, classes, and other criteria

7.1.3 Using the style tag attribute

The style specification format relies on the level of the style sheet. The format of a style element is show below:

```
<style type =
        “text/css”>
        Rule list
</style>
```

The attribute type of the above mentioned tag tells the browser regarding the type of the style specifications, which is always text/css.This, is necessary because there are other type of style sheet that can appear in style elements. Example can be style sheet provided by JavaScript.

Defining Styles

The values of style attribute of a tag appear to be Inline style specifications which can be shown in a general form as:

Style = "property_1:value1; property_2: value 2; …; property_n: value n;"

Even though it is not mandatory to have a semicolon at end of property/ value pair, it is recommended to use it.

The scope of an inline style specification is restricted to the content of the element in which it appears.

You define the styles in a similar manner whether it is in the head of the HTML document or in a separate style sheet.

Give each selector a style definition using the following format:

H3 {font-family: Arial}

Here H3 is the selector, and font-family: Arial is its defined style. The definition is a combination of the property and the value associated with it. (Property is the characteristics of an object which can hold some value to it. Ex: font-size can have value like 24, font-color can have value white etc.)

Multiple properties can be included by separating out with semicolons:

H3 {font-family: Arial; font-style: italic; color: green}

You can also stack the properties to make it easier as shown.

```
H3 {font-family:
   Arial;font-style:
   italic; color:
   green}
```

For a single property, if you want to have more value, just add them separated by a comma as shown:

```
H3 {font-family: Arial, Helvetica, sans-
   serif;font-style: italic;
   color: green}
```

The font-family property offers several values to choose, so the browser goes down in search till typeface is identified. The first item Arial is the default choice of typeface and the second one Helvetica is the alternate choice if the user system doesn't have Arial. The sans-serif is offered as the last alternate, if both the font-family is not available. If none of the above family is available the browser user the default available one.

7.1.4 Creating Classes and IDs

Creating classes with your CSS can make customizing your pages ten times easier; because you can give different occurrences of the same element different styles. Same element can have different styles, when a simple selector has different classes.

For example, to display a code in different color depending on its language,

code.html {color: #191970}

code.css {color: #4b0082}

From the above code two classes, namely CSS and HTML has been created for the use with HTML's CODE element. To indicate the class of an element class attribute is used.

<P CLASS=warning>only one class is allowed per selector.

For example, code.html.proprietary is invalid. </p>

Classes may also be declared without an associated element:

note {font-size: small}

In this case, the **note** class may be used with any element.

The classes can be named according to their function than the appearance.

Class selector can also be connected together to target elements that have multiple class names.

Example:

<h1 class= "simple"> Be simple </h1>

<p class="help"> don't attempt to use the computer CPU, for anything other than pushing the button </p>

Creating IDs

IDs are similar to classes, except once a specific id has been declared it cannot be used again within the same HTML file.

Generally IDs are used to style the layout elements of a page that will only be needed once, whereas classes used to style text and they are used mulitple times.

Example:

#container (

Width: 80%;

Padding: 20px;

Background: #ffffff;

}

You will observe that the id selector begins with # sign, whereas class selector begins with period (.) symbol.

Creating CSS Rules

Selector and declaration makes up the rule for Cascading Style Sheets.

H2 {color: blue ;}
Selector {declaration ;}

The rule for declaration is that it should appear inside curly braces. The style effect is specified.

For example “color: blue”.

The elements will be affected by the declaration based on the selector specifications. We can consider selector as a link between the HTML mark-up document and the style of the web page. A type selector is nothing but a selector which refers to HTML element. (Other kinds of selectors will be discussed later). Any HTML element name can be used as a type selector. The empty tags like <BR> or <HR> cannot be used as a selector. In current CSS specifications these are not included. Two parts consist of a declaration; they are property and value separated by a semicolon.

Selector {property: value}

Inside the curly braces we can place more than one declaration and each declaration is separated by a comma.

Selector {property: value; property: value ;}

H2 {color: blue; font-family: Arial, sans-serif ;}

Instead of coding,

H1 {font-family: Arial, Helvetica, sans-serif;}
H2 {font-family: Arial, Helvetica, sans-serif;}
H3 {font-family: Arial, Helvetica, sans-serif;}

Selectors can be grouped together. So each selector is separated by a comma. One rule applies to several selectors when grouped.

H1, H2, H3 {font-family: Arial, Helvetica, sans-serif ;}

Using Style Sheets to support multiple browsers

It is difficult to design a single style sheet to work properly on all the browsers, so the solution is to design a different style sheet documents. So using this method we can specify CSS formatting customized for the betterment for different browsers.

The above said can be achieved in two ways. One is to use content negotiation and one way to do is to send a browser-specific style sheet to the browser. With HTTP, a request for any resource (including a style sheet) will look something like (omitting several other pieces of information):

```
GET /path/stylesheet.css HTTP/1.0
User_Agent: Mozilla/4.61 [en] (Win98; I)
```

User_Agent mentioned above is used to identify the type of browser. Using this webservers can be configure to return different style sheets. It always don’t work unfortunately due to the breaks caching on some proxy servers. Being an author of the code, you may not have control on the server side configurations.

Another way to check is using JavaScript for browser version, model and to "write" link elements referencing appropriate style sheets directly into the document. The browsers will process the script generated by the server and this work only when the JavaScript is enable.

Self Assessment Questions

1. CSS stands for____________.
2. CSS id selector begins with_______sign.

7.2 Types of Style sheets

CSS supports three types of styles, denoted as rules: inline, internal and external. You can use just one style type or a combination of two or more in each page.

- **Inline styles**

You can use inline style sheets when you want to apply a style to single occurrence of an element. Inline style sheets are declared within individual tags and affect those tags only. Inline styles are declared with the *style* attribute. You can use an inline style to format a single element. Such as, a heading you want to be different from the other heading on the page.

Below CSS example sets color and font size information for the text in specific paragraph.

```
<p style="font-size: 12pt; color: red ">.
```

- **Internal styles**

Unlike inline styles, you set up internal styles separate from your content, In other words, internal styles allow you to format multiple objects with same style, which in turn allows you to make global formatting changes by simply editing a single style. Internal styles are defined in the <head> section of an HTML page, by using the <style> tag.

```
<Head>
<style type=
 "text/css">Body {
 background color: red
;}P {
  Color: green ;}
</style>
</head>
```

- **External styles**

External styles are styles that are written in a separate document and then attached to various web documents. A style sheet is an independent file that you can attach to an HTML document using the <link> element or CSS @import statement. Style is attribute that can be embedded within any HTML element.

7.2.1 Generating External Style Sheets

If two or more documents are going to use a style sheet, you should always aim to use an external style sheet. To generate external style sheet, you have to follow below two steps.

1. Type the style code into a plain text file, and save it with .css extension (i.e. external style sheet)

```
Ex: HR {color: #000000; height: 2px}
```

2. Add .css external file between <head> tag of HTML document that you want to reference the external style sheet. There are two ways to include external style sheets in your pages : <link> and @import.

<link> : link tag is the first method for including an external style sheet on your web pages. It is intended to link together your web page with your style sheet. It is added to the <head> of your HTML documents following way:

<link href="style.css" type=text/css >

Link tag supports following attributes

- **Href:** Specifies location of the linked document
- **Rel:**specifies the relation between the current document and the linked document
- **Media:** Specifies on what device the linked document will be

  displayedType: specifies the MIME type of the linked document
- **@import:** import allows you to import one style sheet into another. You caninclude import in head of your HTML document following way

<style type="text/css"> @import URL ("style.css); </style>

There are several advantages to using external CSS style sheets rather than internal style sheets or inline style sheet, including the following

- The same style sheet can be reused by all of the web pages in your site.
- The style sheet can act as a style template to help different authors achieve the same style of document without learning of individual style setting.
- You can change the appearance of several pages by altering just the style sheet rather than each individual page, this particularly helpful if you want to change your text color, or the font used for certain type of element whenever that element appears across whole sits.
- A style sheet can import and use styles from other style sheets, making for modular development and goal reuse.

➢ **Style sheets by priority**

You can have multiple style sheet definitions on one page. For example, an internal style sheet and an external style sheet on one page or an inline style sheet and an internal style sheet on one page.

- **Inline style sheet:** an inline style sheet has the highest priority. It will override style declared in an internal style sheet, an external style sheet, and a web browsers default styles.
- **Internal style sheet:** an internal style sheet has the second highest priority. It will override styles declared in an external style sheet and

a web browsersdefault styles.

- **External style sheet:** An external style sheet has the third highest priority. Itwill override a web browsers default style.

- **Browser default styles:** A web browser default styles have the lowest priority. A web browsers default style will be used when there are no styles set for an element in an inline, internal, or external style sheet.

Example:

```
<Html>
<Head>
<link rel=“style sheet” type=“text/css” href=“style2.css” />
<style type= “text/css”>
< p {color : orange} />
</style>
</head>
<Body>
<p style= “color: yellow”>
  The text this paragraph will be yellow
</P>
</body>
</html>
style2.css
<P style=”color: gray “> this text will be gray </p>
```

In this example there are several style sheet definitions

External style definition taken from the file style2.css: specifies that the background color of the page should be gray.

Internal style sheet definition: specifies that text declared with the <P> tag should be orange.

Inline style sheet definition: specifies that text declared with the <P> tag should be yellow.

From above example, the external style sheet definition will override the web browser default background color and will set the background color of page to gray. The inline style sheet definition will override the internal style sheets definition that specifies the text declared with the <P> tag should be orange, and will set it to yellow.

Self Assessment Questions

3. External styles are styles that are written in a separate document and then attached to various web documents. (True/False)
4. ________allows you to import one style sheet into another.

7.3 Style Placement

When styling and positing your content with CSS. It helps to understand the logic behind how CSS handles elements on a web page.

7.3.1 Using <div> and <span> tags

When dealing with cascading style sheets, <span> and <div> tags are very useful. Developers use two tags in similar fashion serving different purposes.

<div>:

The web page can be divided logically using <div> tag. The working is similar to <p> tag, but divides page in to bigger sections. The style of the section can also be defined using <div> tag. A section of page can be defined for call out and that part can be given a different style from the surrounding text.

The <div> tag allows you to name sections of the documents so we can affect with style sheet or Dynamic HTML.

When we use <div> tag remember it breaks the paragraphs. It acts like more of quoting the start and end of paragraph.

The primary attributes of the <div> tag are:

- style
- class
- id

It is advisable to use <div> tag even if we don’t use style sheets or DHTML. When more XML parsers are available this will be more advantage. Webpages are well formed when we use id and name attributes to name the section (Always use the name attribute with the id attribute and give them the same contents).

It is better to use as shown below div tag to the depreciation of <center> tag in HTML 4.0.

<div style= “text-align: center ;"> to center the content inside your div.

<Span>:
The <span> tag works as <div> tag, but the difference is it changes the style of the text it encloses. The enclosed text will not change with <span> tag if style attributes are not specified. The primary difference between the span and div elements is that span doesn’t do any formatting of it’s own. The Div element includes a paragraph break. The <span> tag simply tells the browser to apply the style rules to whatever is within the <span>.

There are three useful attributes for <span> tag

- style
- class
- id

Use <span> when you want to change the style of elements without placing them in a new block-level element in the document. For example, if you had a Level 3 Heading (<h3>) that you wanted the second word to be red, you could surround that word with

<span style= “color: #f00 ;"> 2ndWord</span> and it would still be a part of the <h3> tag, just red.

7.3.2 Header style

The STYLE element allows authors to put style sheet rules in the head of the document. HTML permits any number of STYLE elements in the HEAD section of a document. User agents that don't support style sheets, or don't support the specific style sheet language used by a STYLE element, must hide the contents of the STYLE element. It is an error to render the content as part of the document's text. Some style sheet languages support syntax for hiding the content from non-conforming user agents. The syntax of style data depends on the style sheet language.

Some style sheet implementations may allow a wider variety of rules in the STYLE element than in the style attribute. For example, with CSS, rules may be declared within a STYLE element for:

- All instances of a specific HTML element (e.g., all P elements, all H1 elements, etc.)
- All instances of an HTML element belonging to a specific class (i.e., whose class attribute is set to some value).

- Single instances of an HTML element (i.e., whose id attribute is set to some value).

Rules for style rule precedence and inheritance depend on the style sheet language.

The following CSS STYLE declaration puts a border around every H1 element in the document and centers it on the page.

```
<HEAD>
 <STYLE type= “text/css">
   H1 {border-width: 1; border: solid; text-align: center}
 </STYLE>
</HEAD>
```

To specify that this style information should only apply to H1 elements of a specific class, we modify it as follows:

```
<HEAD>
 <STYLE type= “text/css">
   H1.myclass {border-width: 1; border: solid; text-align: center}
 </STYLE>
</HEAD>
<BODY>
 <H1 class= “myclass"> This H1 is affected by our style </H1>
 <H1> This one is not affected by our style </H1>
</BODY>
```

Finally, to limit the scope of the style information to a single instance of H1, set the id attribute:

```
<HEAD>
 <STYLE type="text/css">
   #myid {border-width: 1; border: solid; text-align: center}
 </STYLE>
</HEAD>
<BODY>
```

```
 <H1 class= “myclass"> This H1 is not affected </H1>
 <H1 id="myid"> This H1 is affected by style </H1>
 <H1> This H1 is not affected </H1>
</BODY>
```

7.3.3 Positioning

The CSS positioning properties allow you to position an element. It can also an element behind another, and specify what should happen when an element content is too big.

Elements can be positioned using the top, bottom, left, and right properties. However these properties will not work unless the position property is set first.

There are four different positioning methods

1. Static positioning

HTML elements are positioned static by default. Static positioned elements are not affected by the top, bottom, left, and right propertied.

2. Fixed positing

An element with fixed position is positioned relative to browser window. It will not move even if the window is scrolled.

Example:

```
 p.posfixed
{
Position: fixed
Top: 40px;
Right: 5px;
}
```

3. Relative positioning

A relative positioned is positioned relative to its normal position

```
 H2.posleft
{
Position: relative
Left: 30px;
}
```

4. Absolute positioning

An absolute position element is positioned relative to the first parent element that has a position other than static.

```
H2 {
Position: absolute
Left: 20 px;
Top: 15px;
}
```

Overlapping Elements

When elements are positioned outside the normal flow, they can overlap other elements.

7.3.4 Box Model

A CSS box model is a section that has several components, including content, border, padding, and margin. A web page's design and structure are developed using it. It can be used as a set of tools to customize how various components are laid out. Each element is provided by the web browser as a square prism in accordance with the CSS box model.

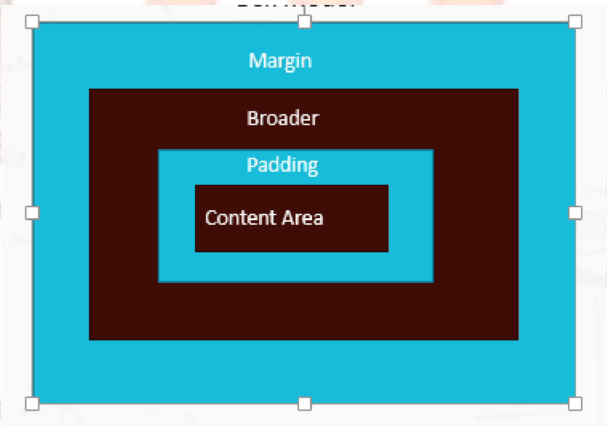

Figure 7.1: Box model

The various CSS properties are contained in the box model of CSS.

- **Border:** It is the area between the padding-box and the margin. Its dimensions depend on the boundary's breadth and height.

- **Margin:** The region between the boundary and the border's edge makes up this segment. The margin region's percentage is determined by the margin-width box's and height. It is preferable to keep the product apart from its surrounding nodes.
- **Padding:** This region basically consists of the space inside the border box and around the subject area. The padding box's proportions depend on its height and width.
- **Content:** This category includes content like text, pictures, or other digital assets.Its dimensions are set by the content enclosure's width and height, and it is restricted by the information edge**.**

Self Assessment Questions

5. HTML permits any number of STYLE elements in the HEAD section ofa document. (True/False)

6. An______________position element is positioned relative to the first parent element that has a position other than static

7.4 Text and Font Properties

CSS gives you lot more control over the appearance of text than HTML. CSS provides several different properties to control text.

- **Properties related to text are:**

Color

Direction

Text-decoration

Text-shadow

Text-align

Text-indent

Example: setting text color and decoration

```
P {
  Color: #00ff00;
  Text-decoration: none
}
```

CSS offers a bit more control over your text, enabling you to specify actual fonts and font sizes.

- **Properties related to font are:**

Font-family

Font-size

Font-variant

Font-weight

For example, suppose you are creating documentation for a programming language and wanted to format all reserved words a particular way,

Example: setting font text as slightly larger, red color and bold style.

<p><font size="+1" color="red" ><B> </font>

Later, you might decide that the red color is too much emphasis, and larger, bold text is enough. You can then change every <font> tag used around reserved words, as follows, removing the color attribute.

<p><font size="+1"><B> </font>

Typography

A type family (commonly referred to in a web design as a font family) is a category of typefaces (fonts) that have similar characteristics. Each individual character within a font is referred to as a glyph. The text that you type in your HTML document acts, for the most part, like the text in a word processor. The advantages of HTML text are that it is easy to edit if changes are required, and it can adjust to the width of screen on which it is being viewed.

However, HTML, text has some severe limitations for design purpose. By and large, most of the textual control is left up to the visitor’s browser. CSS gives designers greater control of many common typographic features.

There are four main font properties that you can style using CSS: font-family, style, size and weight. Between them you can fine-tune the way text displays in your web pages and when printed, and so on.

CSS provides five generic font families. The font family property is dynamic. It can accept more than one font value.

Font family values: Serif, sans-serif, monospace, cursive and fantasy.

P {font-family: verdana, Arial, Helvetica, San-serif ;}

With font-style you can choose to display a font normally, in italics, or obliquely (a similar effect to italic, usually used with sans-serif type face), and so on. The following example creates there classes (normal, italic, and oblique) that can be applied to elements to create these effects:

```
.normal {font-style: normal ;}
.italic {font-style: italic ;}
.oblique {font-style: oblique :}
```

Self Assessment Questions

7. The________ properties is used in CSS to align text.
8. The CSS property that was utilised to bold the text is _____ .

7.5 CSS properties

7.5.1 Backgrounds

The background property is a shorthand property that allows all the individual background properties to be set in a single declaration.

Values for background property:

Background-color sets the color of the background.

Background-image supplies the address of an image to be used on the background.

Background position specifies the initial starting position of background image.

Example: setting all background properties in one declaration

```
Body
{
Background: #ffffff  URL ("rose.gif") no-repeat fixed center;
}
```

Using this shorthand property, you can set the color of the background, and supply the URI of an image to be used on background at the same time.

7.5.2 Box properties

CSS box property let you control the margin, padding, and border characteristics of block level elements. There are several CSS properties you can use to affect the shape and location of your text elements.

Those are: Width, height, margin, padding.

Width: the width of an element is the distance from the left inner edge of the element to the right inner edge.

Height: the height of an element is the distance from the top inner edge of the element to the bottom inner edge.

Margin: margins add space around the outer edge of the element. Using the margin property, you can define all four margins to be the same. You can set all four separately with the same property.

Margin: top, right, bottom and left.

Padding: Padding adds space around the inner edge of the element. Using the padding property, you can define all four sides to have the same padding. You can set all four separately with the same property.

Padding: top, right, bottom and left.

Example:

```
<div style="border-top-width: thick; border-bottom-width: medium;
        Border-top-style: solid; border-bottom-style: solid;
        Margin: 0.5cm; padding: .857em ;">
Inside the first embedded div.
</div>
```

7.5.3 CSS Float

A positioning property in CSS is the float property. In order to allow other elements to wrap around an element, it is used to push the element to the left or right. It usually goes with layouts and images.

Example

```
<!DOCTYPE html>
<html>
<head>
<style>
```

```
img {
   float: right;
}
</style>
</head>
<body>
<p> An elegant picture appears
<b>float:right</b>. As a result, the picture in the paragraph will float to the
right..</p>
<img src="picture1.jpg" alt="image"/>
</body>
</html>
```

7.5.4 CSS Page Break

When printing the document, a page break is added before the element using a CSS property. During document printing, it adds a page break before the given element. This CSS property cannot be applied to elements that are absolutely positioned or to a <div> element that is empty and does not produce a box.

This CSS attribute indicates whether or not a page break is permitted before the box of the element. The CSS **properties page-break-before, page-break-after, and page-break-inside** all work together to specify how the document will behave when printed.

Syntax

```
page-break-before:  auto | always | left | right | avoid | initial | inherit;
```

Example:

```
  div{
    font-size: 20px;
    page-break-before: left;
```

```
}
```

7.5.5 CSS Flex Property

In CSS, the flex property stands in for the flex-grow, flex-shrink, and flex-basis properties. The flex attribute will have no effect on the related item if it is not a flex-item because it only applies to flex-items. The length of flexible objects can be set using this parameter. With this CSS feature, placing the main container and child items is simple. It controls how a flexible item will change size to fit the available area.

- **Flex-grow:** The flex-grow factor is an integer that is positive. The amount of growth relative to other flexible elements is specified. No negative values are permitted. It defaults to the value 1.

- **Flex-shrink:** it describes how much the item will shrink. No negative values are permitted. It defaults to the value 1 if it is left out.

- **Flex-basis:** The beginning length of the flex-item is defined by the length in relative or absolute units. It is used to specify the flex-length. item's Its values can be inherit, auto, or a number followed by the length units em, px, etc.

Self Assessment Questions

9. __ specifies the initial starting position of backgroundimage.

10. Are negative values permitted for the padding property? (Yes/No)

7.6 Summary

- CSS is used to style HTML elements such as layering and positioning the content.
- The id selector is used to specify a style for a single, unique element.
- The class selector is used to specify a style for a group of elements. Unlike the id selector, the class selector is most often used on several elements.
- CSS supports three types of styles, denoted as rules: inline, internal and external.
- The text-decoration property is used to set or remove decorations from text.
- CSS provides five generic font families. The font family property is dynamic. It can accept more than one font value.
- CSS box property let you control the margin, padding, and border characteristics of block level elements.

7.7 Terminal Questions

1. Discuss what is CSS?
2. Explain different types of CSS?
3. Write a short note on the following

   a) Text and font properties b) typographic
4. Write CSS code for following properties

   a) Box property b) Fixed positioning c) Relative positioning
5. Discuss the Box model.

7.8 Answers

Self Assessment Questions

1. Cascading Style sheet
2. #

3. True
4. Import
5. True
6. An absolute position
7. Text-align
8. font-weight:bold
9. Background position
10. No

Terminal Questions

1. CSS is used to style HTML elements such as layering and positioning the content. CSS is designed primarily to enable the separation of document content from document presentation. For more details refer section 7.1.1.
2. CSS supports three types of styles, denoted as rules: inline, internal and external. For more details refer section 7.2.
3. CSS offers a bit more control over your text, enabling you to specify actual fonts and font sizes. For more details refer section 7.4.
4. CSS box property let you control the margin, padding, and border characteristics of block level elements. For more details refer section 7.5.
5. The CSS box model is a term used in web development to describe how HTML components are represented in browser engines and how their dimensions are determined from CSS properties. For more details refer section 7.3.4

7.9 References

- Hart Davis (2009). *HTML, XHTML and CSS quick steps.* Third edition. MC Graw Hill.
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