

Front End Development

Cascading Style Sheets

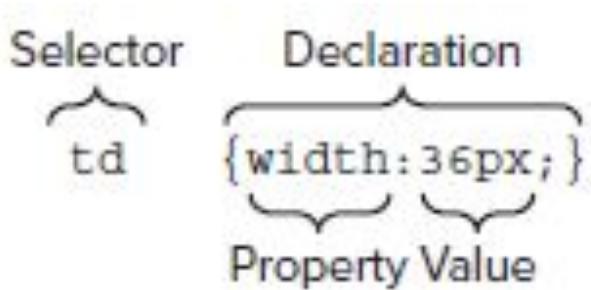
CSS – What you will learn?

- What makes up a CSS rule
- How properties and values control the presentation of different elements within your document
- How to control the presentation of text using CSS
- How CSS is based on a box model, and how you set different properties for these boxes (such as width and styles of borders)

CSS – Introduction

- CSS works by enabling you to associate *rules* with the elements that appear in a web page. These rules govern how the content of those elements should be rendered. Below figure shows an example of a CSS rule, which is made up of two parts:

- The selector indicates which element or elements the declaration applies to. (If it applies to more than one element, you can have a comma-separated list of several elements.)
- The declaration sets out how the elements referred to in the selector should be styled.



DECLARATION

- A property is the property of the selected element(s) that you want to affect, in this case the width property.
- A value is a specification for this property; in this case it is that table cells should be 36 pixels wide.

Lets see an example...

```
h1, h2, h3 {  
    font-weight : bold;  
    font-family : verdana;  
    color : red;  
    background-color : silver;  
}
```

Where you can Add CSS rules?...

1. Inline Style

- <td style="font-family:courier; padding:5px; border-style:solid;">

2. Inside a <style> element, which sits inside the <head> element of a document

- Our first example

3. External style sheets(The Best way)

- <link rel="stylesheet" href="cssExample2.css">

- The <link> tag defines a link between a document and an external resource(external style sheets). The href attribute specifies the URL for the document being linked to..

Example(Second) explained in detail

```
body {  
color:#000000;  
background-color : #ffffff;  
font-family : arial,  
verdana, sans-serif;  
}
```

<body> element - Specifies that the default color of any text and lines used on the page will be black and that the background of the page should be white. The colors here are represented using a hex code.

It also states that the typeface used throughout the document should be Arial. If Arial is not available, Verdana will be used instead; failing that, it will use its default font group that corresponds to that generic font group.

```
h1 {  
font-size : 18px;  
}  
p {  
font-size : 12px;  
}
```

These rules simply specify the size of the contents of the <h1> and <p> elements, respectively.

You will see about pixels(px) in next slides

Example(Second) explained in detail(Contd..)

```
table {  
background-color : #efefef;  
border-style : solid;  
border-width : 1px;  
border-color : #999999;  
}
```

Let's control the appearance of the table.

First, give it a light gray background. Then, draw a border around the edge.

Three properties are used to describe the border:

The first says it is a solid line (rather than a dashed or dotted line),
the second says it should be 1 pixel thick,
and the third specifies that it should be light gray

```
th {  
background-color :  
#cccccc;  
font-weight : bold;  
padding : 5px;  
}
```

Within the table, let's give a medium gray background color (slightly darker than the main body of the table) to the table headings.

The text should appear in a bold font and between the edge of the cell and the text, there should be 5 pixels of padding.

Example(Second) explained in detail(Contd..)

```
td {  
padding : 5px;  
}
```

The individual table data cells also have 5 pixels of padding (like the headings). Adding this space makes the text much easier to read, and without it the text in one column might run up right next to the text in the neighboring column

```
td.code {  
font-family : courier,  
courier-new, serif;  
font-weight : bold;  
}
```

Finally, you may have noticed in output that the cells of the table that contained the names of CSS properties were in a Courier font. If you look at the corresponding table cells in the HTML document, they carried a class attribute whose value was code. On its own, the class attribute does not change the display of the document, but the class attribute does enable you to associate CSS rules with elements whose class attribute has a specific value. Therefore, the following rule applies only to <td> elements that carry a class attribute whose value is code, not to all <td> elements

When you want to specify an element whose class attribute has a specific value, you put the value of that class attribute preceded by a period (or full stop) symbol.

TIME TO THINK...

Whether the default <td> CSS rule is applicable to <td> elements that carry a class attribute whose value is code ?

Inheritance

What is inheritance in Java?

- One of the powerful features of CSS is that when a property has been applied to one element, it will often be inherited by child elements (elements contained within the element that the rules were declared upon).
 - For example, after the font-family property had been declared for the <body> element in the second example, it applied to all the elements inside the <body> element. This saves you from repeating the same rules for every element that makes up a web page.
 - If another rule is more specific about which elements it applies to, then it overrides any properties associated with the <body> element or any other containing element. In the preceding example, most of the text was in an Arial typeface, as specified in the rule associated with the <body> element; although, there were a few table cells that used a Courier typeface. The table cells that were different had a class attribute whose value was code
 - This rule takes precedence over the one associated with the <body> element because the selector is more specific about which element it applies to..

CSS PROPERTIES

FONT		
font	unicode-bidi	border-bottom-color
font-family	white-space	border-bottom-style
font-size	word-spacing	border-bottom-width
font-style	BACKGROUND	border-left
font-variant	background	border-left-color
font-weight	background-attachment	border-left-style
TEXT	background-color	border-left-width
color	background-image	border-right
direction	background-position	border-right-color
letter-spacing	background-repeat	border-right-style
text-align	BORDER	border-right-width
text-decoration	border	border-top
text-indent	border-color	border-top-color
text-shadow	border-style	border-top-style
text-transform	border-width	border-top-width
	border-bottom	

CSS PROPERTIES

MARGIN	POSITIONING	LIST and MARKER
margin	bottom	list-style
margin-bottom	clip	list-style-image
margin-left	left	list-style-position
margin-right	overflow	list-style-type
margin-top	right	marker-offset
PADDING	top	GENERATED CONTENT
padding	vertical-align	content
padding-bottom	z-index	counter-increment
padding-left	OUTLINES	counter-reset
padding-right	outline	quotes
padding-top	outline-color	CLASSIFICATION
DIMENSIONS	outline-style	clear
height	outline-width	cursor
line-height	TABLE	display
max-height	border-collapse	float
max-width	border-spacing	position
min-height	caption-side	visibility
min-width	empty-cells	
width	table-layout	

CONTROLLING TEXT(Using Font)

Several properties enable you to control the appearance of text in your documents. These can be split into two groups:

- Those that directly affect the font and its appearance. (These include the typeface used, whether it is regular, bold, or italic, and the size of the text.)
- Those that would have the same effect on the text irrespective of the font used. (These include the color of the text and the spacing between words or letters.)

PROPERTY	PURPOSE
font	Enables you to combine several of the following properties into one.
font-family	Specifies the typeface or family of the font that should be used.
font-size	Specifies the size of the font.
font-weight	Specifies whether the font should be normal or bold.
font-style	Specifies whether the font should be normal, italic, or oblique.
font-variant	Specifies whether the font should be normal or small caps.

TIME TO EXPLORE...

What is the difference between em Vs pixel Vs point Vs percentage? Which one is the best one to use?

(Note: End users view the website in different devices)

TEXT FORMATTING

- In addition to the properties that affect the font, several properties affect the appearance or formatting of your text

Text Formatting Properties

PROPERTY	PURPOSE
color	Specifies the color of the text.
text-align	Specifies the horizontal alignment of the text within its containing element.
vertical-align	Specifies the vertical alignment of text within its containing element.
text-decoration	Specifies whether the text should be underlined, overlined, or strikethrough.
text-indent	Specifies an indent from the left border for the text.
text-transform	Specifies that the content of the element should all be uppercase, lowercase, or capitalized.
text-shadow	Specifies that the text should have a drop shadow.
letter-spacing	Controls the width between letters (known to print designers as <i>tracking</i>).
word-spacing	Controls the amount of space between each word.
white-space	Specifies whether the white space should be collapsed, preserved, or prevented from wrapping.
direction	Specifies the direction of text (similar to the <code>dir</code> attribute).

Background Properties

BACKGROUND

- You can control the background of a body element or a div element etc.

PROPERTY	PURPOSE
background-color	Specifies a background color.
background-image	Specifies an image to use as the background.
background-repeat	Indicates whether the background image should be repeated.
background-attachment	Indicates a background image should be fixed in one position on the page, and whether it should stay in that position when the user scrolls down the page.
background-position	Indicates where an image should be positioned.
background	A shorthand form that enables you to specify all of these properties.

Box Model Properties

BOX MODEL

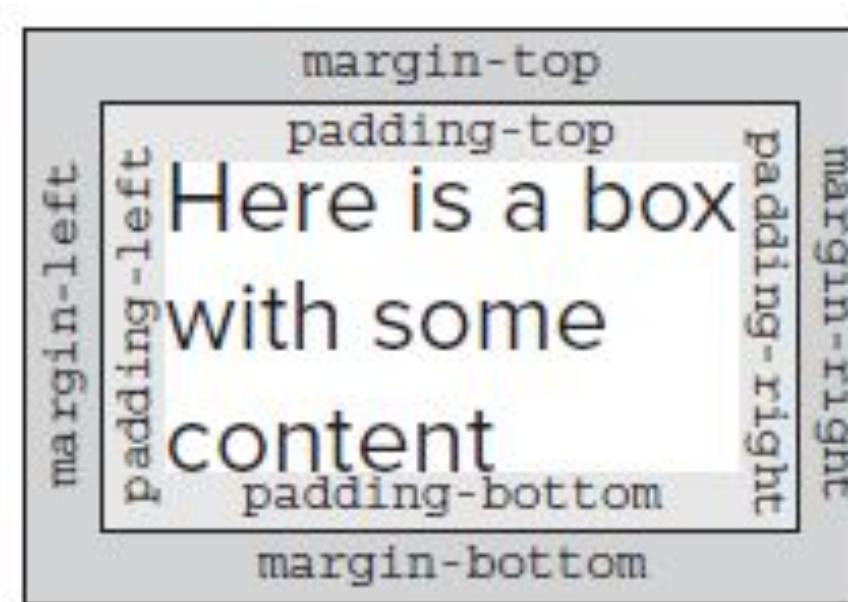
- The box model is an important concept in CSS because it determines how elements are positioned within the browser window. It gets its name because CSS treats every element as if it were in a box.
- As you can see in below table, every box has three properties you must be aware of.

PROPERTY	DESCRIPTION
border	Even if you cannot see it, every box has a border. This separates the edge of one box from other surrounding boxes.
margin	The margin is the distance between the border of a box and the box next to it.
padding	This padding is the space between the content of the box and its border.

BOX MODEL(Contd..)

- You can use CSS to individually control the border, margin, and padding on each side of a box. You can specify a different width, line-style, and color for each side of the box's border.
- The padding and margin properties are especially important in creating what designers refer to as white space. This is the space between the various parts of the page. For example, if you have a box with a black border and the box contains black text, you would not want the text to touch the border because it would make the text harder to read. Giving the box padding helps separate the text from the line around the edge.

Example



Summary

Introduction to CSS

Ways to insert CSS

Inheritance in CSS

CSS Properties

Text Formatting

Background

Box Model

Sample Exercises