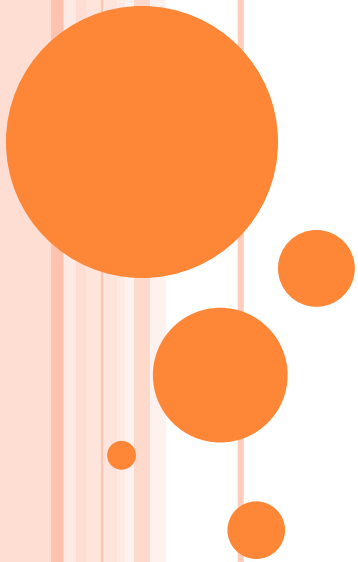


CSS (CASCADING STYLE SHEET)



INTRODUCTION TO CSS

- CSS stands for Cascading Style Sheets and is a simple styling language which allows attaching style to HTML elements.
- Style Sheets are templates, very similar to templates in desktop publishing applications, containing a collection of rules declared to various selectors (elements).
- Style defines how to display HTML contents.



BENEFITS OF CASCADING STYLE SHEETS

- Powerful and flexible way to specify the formatting of HTML elements.

Can define font,size,background color, background image , margins etc..

- Share style Sheets across multiple documents or entire web site.
- Can specify a class definition for a style effectively defining new HTML elements.



INTRODUCTION TO CSS

Selectors

Element Selectors – (refer to HTML tags)

H1 {color: purple;}

H1, H2, P {color: purple;}

Class Selectors

<H1 CLASS="warning">Danger!</H1>

<P CLASS="warning">Be careful...</P>

selector

declaration

H1 {color: blue;}

property

value



INTRODUCTION TO CSS

Selector

Declaration Block

```
body {  
    font-family: Tahoma, Arial, sans-serif;  
    color: black;  
    background: white;  
    margin: 8px;  
}
```

Value

Attribute Name



UNDERSTANDING STYLE RULES

- The style characteristics for an HTML element are expressed by Style Rules.
- A set of style rules is called a Style Sheet.
- Style rules are contained in the <STYLE> element in the document's <HEAD> section.
- A Style Rule is composed of two parts: a selector and a declaration.

```
<Head>  
<Style type="text/css">  
P  
{color:blue; font-size: 24pt;}  
</Style>  
</Head>
```



UNDERSTANDING STYLE RULES

- The Selector indicates the element to which the rule is applied.
- The Declaration determines the property values of a selector.
- The Property specifies a characteristic, such as color, font-family, position, and is followed by a colon (:).
- The Value expresses specification of a property, such as red for color, arial for font family, 12 pt for font-size, and is followed by a semicolon (;).
- The Style Sheet Property Names are case-sensitive.



UNDERSTANDING STYLE RULES

- The `<STYLE>` element always contains `<TYPE>` attribute. The value “text/css” defines the style language as Cascading Style Sheets.
- External Style Sheet has a .css extension.



TYPES OF CSS

- Three Ways to Specifying CSS:

1. Inline styles
2. internal styles
3. external style



TYPES OF CSS


○ Inline styles

Inline styles are the least flexible type of style to implement

You can apply inline styles to any tag, for example:

```
<p style="color: red">Paragraph text goes in here</p>
```

It suffers the same major drawback - that if you wanted to change the style properties, you would have to edit each and every instance of the style on every single page of your website.



TYPES OF CSS

- **Internal stylesheets**

With internal stylesheets, a web page's styles are all specified at the top of the page code, within the `<head>` tag for the page.

```
<head>
```

```
<style type="text/css">
```

```
h1 {color: blue; font-weight: bold}
```

```
p {color: gray}
```

```
</style>
```

```
</head>
```



TYPES OF CSS

◦ External stylesheets

It allow you to put all of your styling information into a completely separate CSS file.

We can then simply reference this file from within each web page, and the page's content will then be styled accordingly.

The obvious huge advantage of this method is that you need only change a style in your stylesheet file(.css file), and the changes will cascade through the rest of your website.

Exa:

```
<head>
```

```
<link rel="stylesheet" type="text/css" href="stylesheet.css" />
```

```
</head>
```



LINKING TO AN EXTERNAL STYLE SHEET

To link a Web page to an external style sheet a <LINK> element should be added within <HEAD> element of a document with the URL to a style sheet. It tells the browser to find a specified style sheet.

HREF attribute states the relative URL to the style sheet

The REL attribute describes the relationship between the current document and the document identified by the *href* attribute

```
<Head>
<Title>Demo_1</Title>
<Style type="text/css">
<Link href="style1.css" Rel="stylesheet">
</Style>
</Head>
```

WAYS TO PUT CSS AND HTML TOGETHER

.HTML File

```
<head>
```

```
<link rel="stylesheet" type="text/css" href="Test1.css"/>
```

```
</head>
```

.CSS File

```
hr {color:pink;}
```

```
p {margin-left:20px;}
```

```
body {background-image:url("images/back40.gif");}
```



USING THE ID SELECTOR

- The id selector is used to specify a style for a single, unique element.
- The id selector uses the id attribute of the HTML element, and is defined with a "#".
- The style rule below will be applied to the element with id="para1":

```
#para1  
{  
text-align:center;  
color:red;  
}
```



USING THE ID SELECTOR

Example

```
<html> <head>  
  
<style type="text/css">  
#para1  
{  
text-align:center;  
  
color:blue;  
  
}  
  
</style></head>
```

```
<body>  
  
<p id="para1">Hello  
World!</p>  
  
<p>This paragraph is not  
affected by the style.</p>  
  
</body> </html>
```



USING THE CLASS ATTRIBUTE SELECTOR

- The class selector is used to specify a style for a group of elements.
- CLASS is an HTML attribute that assigns a class name to any HTML element on a Web page.
- A class name is created by declaring a style rule and adding (.) flag character indicating that the selector is a class selector.
- Add it to HTML code of a Web page by using the CLASS attribute.



USING THE CLASS ATTRIBUTE SELECTOR

All HTML elements with class="center" will be center-aligned:

```
.center {text-align:center;}
```

You can also specify that only specific HTML elements should be affected by a class.

All p elements with class="center" will be center-aligned:

```
p.center {text-align:center;}
```

Element

Class Selector

```
A.nav:link {color:#FF3300; text-decoration: none;}
```

```
<a href="http://www.eric.org" class="nav">ERIC</a>
```

USING THE CLASS SELECTOR

Example

```
<html> <head>  
  
<style type="text/css">  
  
.center  
{  
  
text-align:center;  
  
}  
  
</style> </head> <body>  
  
<h1 class="center">Center-aligned heading</h1>  
  
<p class="center">Center-aligned paragraph.</p>  
  
</body> </html>
```



USING THE CLASS SELECTOR

```
<html> <head>
```

```
<style type="text/css">
```

```
    p.center
```

```
{
```

```
    text-align:center;
```

```
}
```

```
</style> </head> <body>
```

```
<h1 class="center">This heading will not be  
    affected</h1>
```

```
<p class="center">This paragraph will be center-  
    aligned.</p>
```

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



USING THE PSEUDO-CLASS SELECTOR

- Classes are used to add special effects to some selectors.
- The syntax of pseudo-classes:

`selector:pseudo-class {property:value;}`

- CSS classes can also be used with pseudo-classes:

`selector.class:pseudo-class {property:value;}`

Example

- `a:link {color:#FF0000;} /* unvisited link */`
`a:visited {color:#00FF00;} /* visited link */`
`a:hover {color:#FF00FF;} /* mouse over link */`
`a:active {color:#0000FF;} /* selected link */`



USING THE PSEUDO-CLASS SELECTOR

```
<html>    <head>
```

```
<style type="text/css">
```

```
a:link {color:#FF0000;}  /* unvisited link */
```

```
a:visited {color:#00FF00;} /* visited link */
```

```
a:hover {color:#FF00FF;} /* mouse over link */
```


```
a:active {color:#0000FF;} /* selected link */
```

```
</style> </head> <body>
```

```
<p><b><a href="1.html" target="_blank">This is a link</a></b></p>
```

<p>Note: a:hover MUST come after a:link and a:visited in the CSS definition in order to be effective.</p>

<p>Note: a:active MUST come after a:hover in the CSS definition in order to be effective.</p> </body> </html>



CSS - THE :FIRST-CHILD PSEUDO-CLASS

- The **:first-child pseudo-class** matches a specified element that is the first child of another element.

```
<html>
  <head>
    <style type="text/css">
      p:first-child
      {
        color:blue;
      }
    </style>
  </head>

  <body>
    <p>I am a Italic Style.</p>
    <p>I am a Italic Style.</p>
  </body>
</html>
```



MATCH THE FIRST <I> ELEMENT IN ALL <P> ELEMENTS

- The :first-child pseudo-class matches a specified element that is the first child of another element.


```
<html>
  <head>
    <style type="text/css">
      p i:first-child
      {
        color:blue;
      }
    </style>
  </head>
  <body>
    <p>I am a <i>Italic</i> Style. I am a <i>Italic</i>
    Style.</p>
    <p>I am a <i>Italic</i> man. I am a <i>Italic</i>
    Style.</p>
  </body>
</html>
```



MATCH ALL <i> ELEMENTS IN ALL FIRST CHILD <p> ELEMENTS

The Selector matches all <i> elements in <p> elements that are the first child of another element.

```
<html>
  <head>
    <style type="text/css">
      p:first-child
      {
        color:blue;
      }
    </style>
  </head>
  <body>
    <p>I am a <i>Italic</i> Style. I am a <i>Italic</i>
    style.</p>
    <p>I am a <i>Italic</i> style. I am a <i>Italic</i>
    style.</p>
  </body>
</html>
```



PROPERTIES FOR CSS

1. CSS Background

- CSS background properties are used to define the background effects of an element.
- CSS properties used for background effects:

- **background-color**

`background-color: pink;`

or

`background-color: #b0c4de;`

- **background-image**

- The background-image property specifies an image to use as the background of an element.
- By default, the image is repeated so it covers the entire element.



PROPERTIES FOR CSS

- By default, the background-image property repeats an image both horizontally and vertically.

```
<style type="text/css">
```

```
    body {background-image:url('bgdesert.jpg');}
```

```
    background-repeat:repeat-x;
```

```
    background-repeat:repeat-y;
```

```
    background-repeat:no-repeat;
```

```
    background-position:right top;
```

```
</style>
```

Background - Shorthand property

- To shorten the code, it is also possible to specify all the properties in one single property. This is called a shorthand property.



PROPERTIES FOR CSS

- The shorthand property for background is simply "background":

```
body {background:#ffffff url('img_tree.png') no-repeat right top;}
```

background-attachment

The background-attachment property sets whether a background image is fixed or scrolls with the rest of the page.

```
background-repeat:no-repeat;
```

```
background-attachment:fixed;
```

scroll : The background image scrolls with the rest of the page.

fixed : The background image is fixed



MANIPULATING TEXT

Text Color

With CSS, a color is most often specified by:

- a HEX value - like "#ff0000"
- an RGB value - like "rgb(255,0,0)"
- a color name - like "red"

The default color for a page is defined in the body selector.

Text Alignment

- The text-align property is used to set the horizontal alignment of a text.
- Text can be centered, or aligned to the left or right, or justified.

```
h1 {text-align:center;}  
p.date {text-align:right;}  
p.main {text-align:justify;}
```



MANIPULATING TEXT

Text Decoration

- The text-decoration property is used to set or remove decorations from text.
- The text-decoration property is mostly used to remove underlines from links for design purposes:

```
h1 {text-decoration:overline;}
```

```
h2 {text-decoration:line-through;}
```

```
h3 {text-decoration:underline;}
```

```
h4 {text-decoration:blink;}
```

```
h5 {text-decoration:none;}
```



MANIPULATING TEXT

Text Transformation

The `text-transform` property is used to turn everything into uppercase or lowercase letters, or capitalize the first letter of each word.

```
p.uppercase {text-transform:uppercase;}
```

```
p.lowercase {text-transform:lowercase;}
```

```
p.capitalize {text-transform:capitalize;}
```

Text Indentation

The `text-indentation` property is used to specify the indentation of the first line of a text.

```
p {text-indent:100px;}
```



LIST PROPERTIES IN CSS

CSS Lists

The CSS list properties allow you to:

Set different list item markers for unordered lists

```
ul.a {list-style-type: circle;}  
ul.b {list-style-type: square;}
```

Set different list item markers for ordered lists

```
ol.c {list-style-type: upper-roman;}  
ol.d {list-style-type: lower-alpha;}
```

Set an image as the list item marker

```
ul  
{  
list-style-image: url('sqpurple.gif');  
}
```



LIST PROPERTIES IN CSS

CSS List Shorthand Property

- It is also possible to specify all the list properties in one, single property. This is called a shorthand property.
- When using the shorthand property, the order of the values are:
 - list-style-type
 - list-style-position (Inside or Outside)
 - list-style-image

```
ul  
{  
list-style: square url("sqpurple.gif");  
}
```



TABLE PROPERTIES IN CSS

Table Borders

```
table, th, td
{
border: 1px solid black;
border-collapse: collapse;
}
```

The border-collapse property sets whether the table borders are collapsed into a single border or separated

Table Width & Text Alignment

```
Table {
width: 100%; }

Th { height: 75px; }

td {
text-align: right;
vertical-align: bottom; }
```



TABLE PROPERTIES IN CSS

Table Color

```
<style type="text/css">
table, td, th
{
border:1px solid green;
}
th
{
background-color:green;
color:white;
}
</style>
```

Table Padding

To control the space between the border and content in a table, use the padding property on td and th elements:

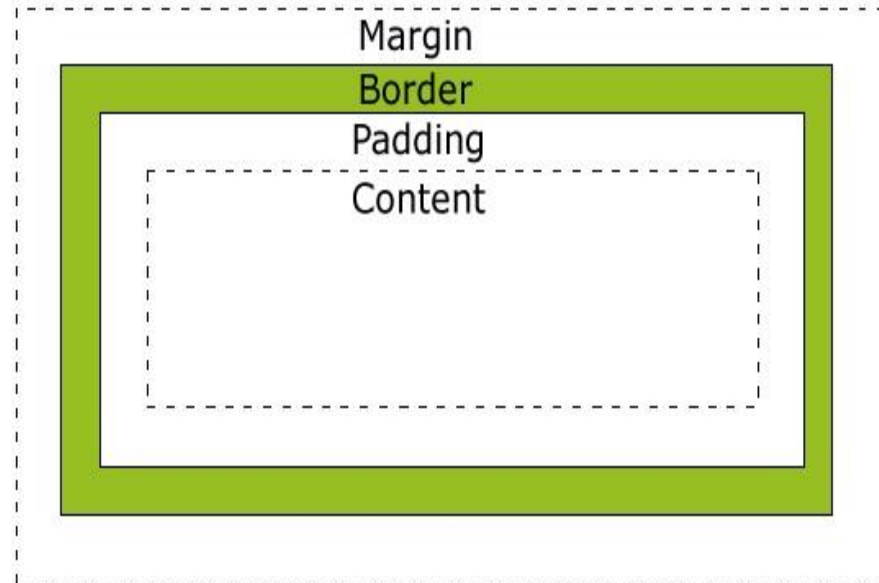
○ `td { padding:15px; }` or `padding-left:50px;`



THE CSS BOX MODEL

- The CSS box model is essentially a box that wraps around HTML elements, and it consists of: margins, borders, padding, and the actual content.
- The box model allows us to place a border around elements and space elements in relation to other elements.

```
width:250px;  
padding:10px;  
border:5px solid gray;  
margin:10px;
```



THE CSS BOX MODEL

- **Margin** - Clears an area around the border. The margin does not have a background color, it is completely transparent
- **Border** - A border that goes around the padding and content. The border is affected by the background color of the box
- **Padding** - Clears an area around the content. The padding is affected by the background color of the box
- **Content** - The content of the box, where text and images appear



THE CSS BORDER

The border-style property specifies what kind of border to display.

- **border-style values:**

None ,dotted , dashed , solid , double , groove , ridge
inset ,outset

- border-style:solid;
- border-top-style:dotted;
- border-style:dotted solid double dashed;
- border-style:dotted solid double;
- border-style:dotted solid;

margin:100px 50px;

margin-left:50px;



CSS POSITIONING

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

Static Positioning

HTML elements are positioned static by default. A static positioned element is always positioned according to the normal flow of the page.

Fixed Positioning

- An element with fixed position is positioned relative to the browser window.
- It will not move even if the window is scrolled:
- Fixed positioned elements can overlap other elements.



CSS POSITIONING

```
p.pos_fixed {  
position:fixed;  
top:30px;  
right:5px;    }
```

Relative Positioning

- A relative positioned element is positioned relative to its normal position.
- The content of relatively positioned elements can be moved and overlap other elements
- h2.pos_left {
position:relative;
left:-20px; }




CSS POSITIONING

Absolute Positioning

- An absolute position element is positioned relative to the first parent element that has a position other than static. If no such element is found, the containing block is <html>:

```
h2 { position:absolute;  
left:100px;  
top:150px; }
```

Overlapping Elements

- When elements are positioned outside the normal flow, they can overlap other elements.
 - The z-index property specifies the stack order of an element which element should be placed in front of, or behind, the others.
- 

CSS POSITIONING

```
img
{
position:absolute;
left:0px;
top:0px;

}
```

CSS Float

- With CSS float, an element can be pushed to the left or right, allowing other elements to wrap around it.
- Elements are floated horizontally, this means that an element can only be floated left or right, not up or down.
- The elements after the floating element will flow around it.
- If an image is floated to the right, a following text flows around it, to the left:

CSS POSITIONING

```
img  
{ float:right; }
```

Floating Elements Next to Each Other

- If you place several floating elements after each other, they will float next to each other if there is room.

```
.thumbnail  
{  
    float:left;  
    width:110px;  
    height:90px;  
    margin:5px;  
}
```



CSS POSITIONING

No Floating

- The clear property specifies which sides of an element other floating elements are not allowed.
- Add a text line into the image gallery, using the clear property:

```
.text_line  
{  
clear:both;  
}
```



CSS LAYOUT AND STRUCTURE

- The idea behind CSS was to separate the formatting and styling rules from the content.
- Structure of document can be maintain by breaking the page into logical sections with div elements.

CSS Navigation Bars

- With CSS you can transform boring HTML menus into good-looking navigation bars.

Navigation Bar = List of Links

- A navigation bar needs standard HTML as a base.
- A navigation bar is basically a list of links, so using the `` and `` elements makes perfect sense



CSS LAYOUT AND STRUCTURE

Vertical Navigation Bar

- To build a vertical navigation bar we only need to style the `<a>` elements in addition to the list code.

```
a
{
display:block;
width:60px;
}
```

- `display:block` - Displaying the links as block elements makes the whole link area clickable (not just the text), and it allows us to specify the width

Horizontal Navigation Bar

- There are two ways to create a horizontal navigation bar. Using **inline** or **floating** list items.



CSS LAYOUT AND STRUCTURE

- if you want the links to be the same size, you have to use the floating method.

Inline List Items

- To build a horizontal navigation bar is to specify the `` elements as inline

```
li
{
display:inline;
}
```

- `display:inline;` - By default, `` elements are block elements. Here, we remove the line breaks before and after each list item, to display them on one line

Floating List Items

- For all the links to have an equal width, float the `` elements and specify a width for the `<a>` elements

CSS LAYOUT AND STRUCTURE

- `li`
`{ float:left; }`
`a`
`{ display:block;`
`width:60px; }`
- `float:left` - use float to get block elements to slide next to each other
- `display:block` - Displaying the links as block elements makes the whole link area clickable (not just the text), and it allows us to specify the width

