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Cascading Style Sheet (CSS) - Introduction

COURSE

19CAT601 -
Web Programming
Essentials

UNIT II

CSS

I Semester /
I MCA

CSS - Introduction

❑ **Cascading Style Sheets** (CSS) determines how HTML elements in our HTML documents are displayed and formatted

❑ CSS comprises of style rules

❑ CSS3 adds several new styling features and improvements to enhance the web presentation capabilities

Why CSS?

- ❑ Separates the web contents from the presentation formats
- ❑ Uniform look and consistent to all the pages
- ❑ Superior styles
- ❑ Saves time: write once and reuse
- ❑ Multiple device compatibility
- ❑ Easy maintenance
- ❑ Global web standards
- ❑ Transform elements like scale, rotate, skew in 2D/3D
- ❑ Create animation and transition effects

Advantages - CSS

Save Time

LOAD FASTER

Easy to maintain

Device Compatibility

❑ **We can add CSS code in the following ways**

1. *Inline Style* – Place CSS code directly into an HTML element within the <body> section of a web page

2. *Internal Style Sheet* - CSS code is placed into a separate, dedicated area within the <head> section of a web page

3. *External Style Sheet* - CSS code is placed into a separate file and then linked to a web page

Internal Style Sheets

1. Appropriate for very small sites, ie for single page

2. Make sense when each page need different look

Vs

External Style Sheets

1. They are better for multi-page websites that need uniform look and feel

2. Make for faster-loading sites

3. Allows developers to make site-wide changes quickly and easily

Inline Styles

❑ Used to apply the unique style rules to an element by putting the CSS rules directly into the start tag

Example
This is a heading style 1   This is some dive content.

⚠ Using the inline styles are generally considered as a bad practice

Internal stylesheets

- Embedded / Internal style sheets only affect the document they are embedded in

- Style sheets are defined in the <u>\<head\></u> section using the <u>\<style\></u> element

Type attribute of the \<style\> and \<link\> tag (i.e. type="text/css") defines the language of the style sheet

Example

```
<html>
<head>
    <title>My HTML Document</title>
    <style>
        body { background-color: YellowGreen;}
        p { color: #fff; }
    </style>
 </head>
<body>
    <h1>About Us</h1>
    <p>We are pioneering in the field of …</p>
</body>
</html>
```

External stylesheets

❑ Ideal when the uniform style is applied to many pages of the website

❑ All the style rules in a separate document (.css) and linked with HTML doc

❑ It is flexible, because changes in one file affects the entire site

❑ Attach external style sheets in two ways

- Linking

- Embedding

External style sheet is the best method for defining and applying styles among three methods

External stylesheets

Linking

Example

``
<style>
@import url("css/style.css");
p
  { color: blue; font-size: 16px;
   }
</style>
``

you can use the @import rule to import a style sheet within another style sheet

External stylesheets

Importing

Example

```<head>```
   ```<link rel="stylesheet"   href="css/style.css">```
```</head>```
```<body>```
   ``` This is a heading ```
   ``` This is a paragraph of text. ```
```</body>```
```</html>```

style.css

```
body
 { background: lightyellow;
      font: 18px Arial, sans-serif; }
 h1 { color: orange; }
```
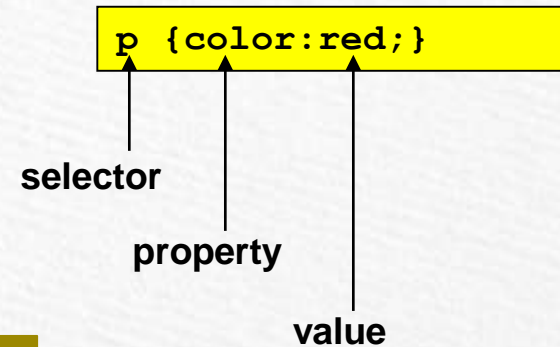
you can use the @import rule to import a style sheet within another style sheet

CSS Syntax

The correct syntax of a CSS rule/declaration has two parts namely selector and attributes

selector {property:value;}

`p {color:red;}`

selector

property

value

A semicolon must be placed after each CSS declaration
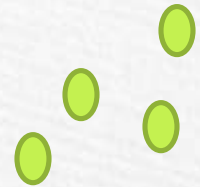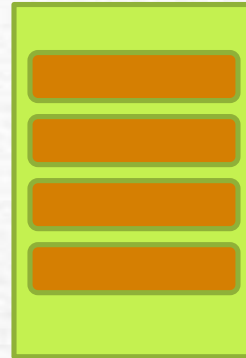
Internal style sheets must use the opening and closing <style> tags to surround the CSS code, while external style sheets do not use the <style> element

Selector

❑ Selector indicates what elements the style should be applied to

❑ By default this is applicable to all elements of the group indicated

❑ **Three** kinds of subgroup selectors:

- *Universal selectors*
- *Element selectors*
- *Class selectors*
- *ID selectors*
- *Descendant selectors*
- *Child selectors*

Selector – Example

```
<style>

P {font-size: 14pt; margin-left: 2px; margin- right: 2px}
….
</style>

<p> My Test Page </p>
```

Selector Types

Universal Selector

Denoted by an asterisk (*), matches every single element on the page

```
* {
    margin: 0;
    padding: 0;
    }
```

Element type Selector

Matches all instance of the element in the document

```
p {
    color: blue;
    }
```

It is recommended *not to use* the universal selector (*) too often

Selector Types

Id Selector

- Used to define style rules for a single or unique element
- Define with #

```
#err {
    color: red;
}
```

Class Selector

- Selectors can be used to elect any HTML element that has a class attribute
- Defined with (.) symbol

```
.blue {
    color: blue; }
```

```
p.blue { color: blue; }
```

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Selector Types

Descendant Selector

When you need to select an element that is the descendant of another element

```
ul.menu li a {
    text-decoration:
none; }
```

Child Selector

- Used to select only those elements that are the direct children of some element
- It made up 2 or more selectors separated by (>)

```
ul > li { list-style: square; }
ul > li ol { list-style: none; }
```

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Literature review

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References

- Thomas A. Powell, "HTML & CSS: The Complete Reference", Fifth Edition, 2010
- https://www.tutorialrepublic.com/css-tutorial/css-selectors.php
- https://www.w3schools.com/css