2022

WEB SYSTEM LAB

LECTURE#04

CSS-Part 1

Collage of Computers & Information Technology

Hadhramout University

Mohammed L. Bazanbour

Lab Instructor

Lab instructions

- Students should come prepared for the lab practice.
- Quizzes are expected anytime so students should review everything they have taken after class.
- In case a student misses a class, it is his/her responsibility to complete and understand the missed lab exercises.
- They should implement the given exercises individually OR in groups depend on exercise.
- Use meaningful names.
- Once the exercise(s) get executed, they should show the program and results to the instructors.
- Questions for lab tests and exam need **not** necessarily be **limited** to the questions in the manual, but could involve some **variations and / or combinations** of the questions

Objective of this lab:

- CSS Types
- CSS Comments
- CSS Selectors Type

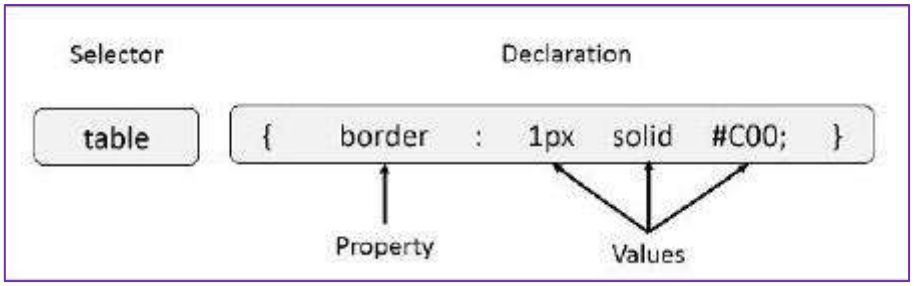
Cascading Style Sheets (CSS) Types:

Used to specify the presentation of elements separately from the structure of the document.

Syntax:

```
selector { property: value }
```

- Selector − A selector is an HTML tag at which a style will be applied. This could be any tag like <h1> or <table>, Class, or id etc.
- Property − A property is a type of attribute of HTML tag. Put simply, all the HTML attributes are converted into CSS properties. They could be color, border etc.
- Value − Values are assigned to properties. For example, color property can have value either red or #F1F1F1 etc.



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Different ways to define styles

- ***Inline Style***

. Declares a style for an individual element by using the style attribute in the element's start tag

Syntax:

```
<HTML_element style = "property1:value1; property2:value2;……">
```

Examble:

```
<h1 style = "color:#36C;font-size:20pt">This is inline CSS</h1>
```

Output:

This is inline CSS

- ***Embedded Style Sheets***

The purpose of this styles is to reuse the same style to different elements. They defined in the head section of HTML's document.

Example:

```
<head>
<style type = "text/css">
body {background-color: linen;}
h1 {color: maroon;margin-left: 40px;}
</style>
</head>
```

Output:

This is inline CSS

- **External Style Sheets**

The purpose of this styles is to reuse the same style to different elements. They defined in a separate document that contain only CSS rules with .css extension

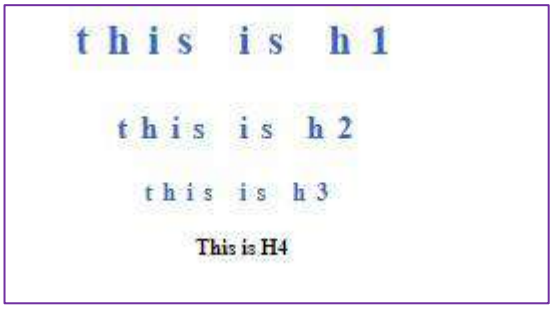
Example:

```
<head>
<link type = "text/css"  href = "mystyle.css" />
</head>
<body >
   <h1 >This is H1</h1>
   <h2 >This is H2</h2>
   <h3 >This is H3</h3>
   <h4 >This is H4</h4>
   </body>
```

a simple style sheet file with a name mystyle.css having the following rules

```
h1, h2, h3 {color: #36C;
letter-spacing: .4em;
margin-bottom: 1em;
text-transform: lowercase;}
```

Output:



Attributes

Attributes associated with <style> elements are :

Attribute	Value	Description
type	text css	Specifies the style sheet language as a content-type (MIME type). This attribute is required.
href	URL	Specifies the style sheet file having Style rules. This attribute is a required.

Relative length measurements:

- px (pixels – size varies depending on screen resolution)
- em (usually the height of a font's uppercase M)
- ex (usually the height of a font's lowercase x)
- Percentages (of the font's default size)

Absolute-length measurements (units that do not vary in size):

- in (inches)
- cm (centimeters)
- mm (millimeters)
- pt (points; 1 pt = 1/72 in)
- pc (picas; 1 pc = 12 pt)

CSS comments use

/* .... */ to comment single line or multi-line blocks

CSS Selectors Type

- Universal selector: Style will be applied to every element within the page

```
*{color : red;}
```

This rule renders the text content of **every element** in our document in **red**.

- Html Element Selector: style applied to the selected html elements

```
H1{ color: aquamarine;}
```

- Html Descendant Selector: style will be applied to the second element only when it lies within the first element

```
P span{ font-size:20pt;}
```

As given in the following example, style rule will apply to element only when it lies inside <p> tag.

- Html Class Selector: style will be applied to all elements who have the same class name

```
.myclass{ color: black;}
```

All the elements having that class will be formatted according to the defined rule. This rule renders the content in black for every element with class attribute set to black in our document.

```
p.myclass{ color: black;}
```

We can mix any two types of selectors to be very specific on Appling styles such as in the example above ☝ the style will be applied to the <p> tags who have the class 'myclass'.

- Html ID Selector: style will be applied to single elements who has the selected id

```
#myid{ color: black;}
```

```
h1#black {color: #000000;}
```

This rule renders the content in black for only <h1> elements with id attribute set to black.

```
#black h1{color: #000000;}
```

In this example all <h1> will be displayed in black color when those headings will lie with in tags having id attribute set to black.

- Html Attribute Selector:

```
input[type = "text"] {color: #000000;}
```

- Html Child Selector: It is very similar to descendants but have different functionality. Consider the following example:

```
input[type = "text"] {color: #000000;}
```

This rule will render all the paragraphs in black if they are direct child of <body> element. Other paragraphs put inside other elements like or <td> would not have any effect of this rule.

- Grouping Selectors: You can apply a style to many selectors if you like. Just separate the selectors with a comma, as given in the following example

```
h1, h2, h3 {color: #36C;
font-weight: normal;
letter-spacing: .4em;}
```

For more information about css refer to: https://www.w3schools.com