

Quadrant II – Transcript and Related Materials

Programme: Bachelor of Science (First Year)

Subject: Computer Science

Course Code: CSG110

Course Title: Generic Elective: Client Side Web Development

Unit: 03

Module Name: Selectors- simple selectors, attribute selectors, combinators, multiple selectors, pseudo-classes, pseudo-elements.

Notes:

Selectors:

- ✓ In CSS, selectors are used to target the HTML elements on our web pages that we want to style.
- ✓ A CSS selector is the first part of a CSS Rule.
- ✓ It is a pattern of elements and other terms that tell the browser which HTML elements should be selected to have the CSS property values inside the rule applied to them.
- ✓ CSS selectors can be divided into different categories:
- ✓ Simple selectors (select elements based on name, id, class)
- ✓ Combinator selectors (select elements based on a specific relationship between them)
- ✓ Pseudo-class selectors (select elements based on a certain state)
- ✓ Pseudo-elements selectors (select and style a part of an element)
- ✓ Attribute selectors (select elements based on an attribute or attribute value)

Simple Selectors:

The CSS ID Selector

- ✓ The id selector uses the id attribute of an HTML element to select a specific element.
- ✓ The id of an element is unique within a page, so the id selector is used to select one unique element!

- ✓ To select an element with a specific id, write a hash (#) character, followed by the id of the element.
- ✓ Example:
- ✓ The CSS rule below will be applied to the HTML element with id="para1":

```
#para1 {  
  text-align: center;  
  color: red;  
}
```
- ✓ **Note:** An id name cannot start with a number!

The CSS class Selector:

- The class selector selects HTML elements with a specific class attribute.
- To select elements with a specific class, write a period (.) character, followed by the class name.
- ✓ Example:
- In this example all HTML elements with class="center" will be red and center-aligned:

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

Combinators:

- ✓ A combinator is something that explains the relationship between the selectors.
- ✓ A CSS selector can contain more than one simple selector. Between the simple selectors, we can include a combinator.
- ✓ There are different combinators in CSS:
- ✓ descendant selector (space)
- ✓ child selector (>)
- ✓ adjacent sibling selector (+)

1. Descendant Selector

2. The descendant selector matches all elements that are descendants of a specified element.
3. The following example selects all <p> elements inside <div> elements:
4. Example

```
div p {
  background-color: yellow;
}
```

2. Child Selector (>):

- ✓ The child selector selects all elements that are the children of a specified element.
- ✓ The following example selects all <p> elements that are children of a <div> element:
- ✓ Example

```
div > p {
  background-color: yellow;
}
```

3. Adjacent Sibling Selector (+):

- ✓ The adjacent sibling selector is used to select an element that is directly after another specific element.
- ✓ Sibling elements must have the same parent element, and "adjacent" means "immediately following".
- ✓ The following example selects the first <p> element that are placed immediately after <div> elements:
- ✓ Example:

```
div + p {
  background-color: red; }
```

Multiple Selectors:

- ✓ Multiple Selectors can be grouped together that helps to minimize the size of code of stylesheet.
- ✓ The grouping selector selects all the HTML elements with the same style definitions.
- ✓ To group selectors, separate each selector with a comma.

- ✓ Example:
h1, h2, p {
text-align: center;
color: red; }

CSS Attribute Selectors:

- ✓ The CSS Attribute Selector is used to select an element with some specific attribute or attribute value.
- ✓ It is an excellent way to style the HTML elements by grouping them based on some specific attributes
- ✓ The attribute selector will select those elements with similar attributes.
- ✓ Following are the attribute selectors:
 - CSS [attribute] Selector
 - CSS [attribute="value"] Selector

1. CSS [attribute] Selector:

- ✓ The [attribute] selector is used to select elements with a specified attribute.
- ✓ The following example selects all <a> elements with a target attribute:
- ✓ Example

```
a[target] {  
background-color: yellow;  
}
```

2. CSS [attribute="value"] Selector:

The [attribute="value"] selector is used to select elements with a specified attribute and value.

The following example selects all <a> elements with a target="_blank" attribute:

Example

```
a[target="_blank"] {  
background-color: yellow;  
}
```

Pseudo-classes:

- ✓ A pseudo-class is used to define a special state of an element.
- ✓ For example, it can be used to:
- ✓ Style an element when a user mouses over it.
- ✓ Style visited and unvisited links differently.
- ✓ Style an element when it gets focus.
- ✓ Syntax :
- ✓ The syntax of pseudo-classes:

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

Example:

- ✓ When you hover over the link in the example, it will change color:
- ✓ Example:

```
a.highlight: hover {  
    color: #ff0000;  
}
```

First-child Pseudo-class:

- ✓ The :first-child pseudo-class matches a specified element that is the first child of another element.
- ✓ Match the first <p> element
- ✓ In the following example, the selector matches any <p> element that is the first child of any element:
- ✓ Example

```
p:first-child {  
    color: blue;  
}
```

CSS Pseudo-elements:

A CSS pseudo-element is used to style specified parts of an element.

For example, it can be used to:

Style the first letter, or line, of an element

Insert content before, or after, the content of an element

Syntax:

The syntax of pseudo-elements:

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

- ✓ Following are the types of pseudo- elements
- ✓ The ::first-line Pseudo-element
- ✓ The ::first-letter Pseudo-element
- ✓ The ::marker Pseudo-element

1. The ::first-letter Pseudo-element:

- ✓ The :: first-letter pseudo-element is used to add a special style to the first letter of a text.
- ✓ The following example formats the first letter of the text in all <p> elements:
- ✓ Example

```
p::first-letter {  
  color: #ff0000;  
  font-size: xx-large;  
}
```

2. The ::marker Pseudo-element:

- ✓ The ::marker pseudo-element selects the markers of list items.
- ✓ The following example styles the markers of list items:
- ✓ Example

```
::marker {  
  color: red;  
  font-size: 23px;  
}
```

3. The ::first-line Pseudo-element:

- ✓ The ::first-line pseudo-element is used to add a special style to the first line of a text.
- ✓ The following example formats the first line of the text in all <p> elements:
- ✓ Example:

```
p::first-line {  
  color: #ff0000;
```

```
font-variant: small-caps;  
}
```

CSS Pseudo-elements:

- ✓ The ::first-line pseudo-element is used to add a special style to the first line of a text.
- ✓ The following example formats the first line of the text in all <p> elements:
- ✓ Example:

```
p::first-line {  
  color: #ff0000;  
  font-variant: small-caps;  
}
```