Internet Engineering
HTML 2-CSS
مهندسی اینترنت

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Content

- HTML Links

- HTML Lists

- HTML Block and Inline Elements

- The class Attribute

- The id Attribute

HTML Links

HTML Links - Hyperlinks

- Hyperlinks are defined with the HTML <a> tag

  link text

- The href attribute specifies the destination address of the link.

  Visit HTML tutorial

  HTML Images

HTML Link Colors

- By default, a link will appear like this (in all browsers):

  - An <u>unvisited link</u> is underlined and blue

  - A <u>visited link</u> is underlined and purple

  - An <u>active link</u> is underlined and red

```
<style>
a:link {
  color: green;
  background-
color: transparent;
  text-decoration: none;
}

a:visited {
  color: pink;
  background-
color: transparent;
  text-decoration: none;
}

a:hover {
  color: red;
  background-
color: transparent;
  text-decoration: underline;
}

a:active {
  color: yellow;
  background-
color: transparent;
  text-decoration: underline;
}
</style>
```

Link Colors

You can change the default colors of links

HTML Images

Link Colors

You can change the default colors of links

HTML Images

```html
<!DOCTYPE html>
<html>
<head>
<style>
a:link {
  color: green;
  background-color: transparent;
  text-decoration: none;
}
a:visited {
  color: pink;
  background-color: transparent;
  text-decoration: none;
}
a:hover {
  color: red;
  background-color: transparent;
  text-decoration: underline;
}
a:active {
  color: yellow;
  background-color: transparent;
  text-decoration: underline;
}
</style>
</head>
<body>

<h2>Link Colors</h2>

<p>You can change the default colors of links</p>

<a href="html_images.asp" target="_blank">HTML Images</a>

</body>
</html>
```

Links as Buttons

```
<style>
a:link, a:visited {
  background-color: #f44336;
  color: white;
  padding: 15px 25px;
  text-align: center;
  text-decoration: none;
  display: inline-block;
}

a:hover, a:active {
  background-color: red;
}
</style>
```

This is a link

```
<!DOCTYPE html>
<html>
<head>
<style>
a:link, a:visited {
  background-color: green;
  color: white;
  padding: 15px 25px;
  text-align: center;
  text-decoration: none;
  display: inline-block;
}
```

```
a:hover, a:active {
  background-color: red;
}
</style>
</head>
<body>

<h2>Link Button</h2>
<p>A link styled as a button:</p>
<a href="default.asp"
target="_blank">This is a link</a>

</body>
</html>
```

Link Button

A link styled as a button:

This is a link

Link Button

A link styled as a button:

This is a link

The target Attribute

- The target attribute specifies <u>where to open the linked document</u>.

- _blank
  - Opens the linked document in a new window or tab

- _self
  - Opens the linked document in the same window/tab as it was clicked (this is default)

- _parent
  - Opens the linked document in the parent frame

- _top
  - Opens the linked document in the full body of the window

- framename
  - Opens the linked document in a named frame

Target Attribute Example

```
<a href="https://www.MyHTML.com/" target="_blank">Visit HTML Codes!</a>

<a href="https://www.MyHTML.com/html/" target="_top">HTML5 tutorial!</a>
```

Link titles

- The **title attribute** specifies **extra information** about an element.
- The information is most often shown as a tooltip text when the mouse moves over the element

`<a href="https://www.MyHTML.com/html/" title="Go to MyHTML section">Visit our HTML Tutorial</a>`

Link Titles

The title attribute specifies extra information about an element. The information is most often shown as a tooltip text when the mouse moves over the element.

Visit our HTML Tutorial

Go to MyHTML section

HTML Lists

HTML List Tags

Tag	Description
	Defines an unordered list
	Defines an ordered list
	Defines a list item
<dl>	Defines a description list
<dt>	Defines a term in a description list
<dd>	Describes the term in a description list

HTML List

- An <u>Unordered</u> List:
  - Item
  - Item
  - Item
  - Item

An unordered list starts with the <ul> tag.

Each list item starts with the <li> tag.

- An <u>Ordered</u> List:
  1. First item
  2. Second item
  3. Third item
  4. Fourth item

An ordered list starts with the <ol> tag.

Each list item starts with the <li> tag.

Example

An unordered HTML list

- Coffee
- Tea
- Milk

An ordered HTML list

1. Coffee
2. Tea
3. Milk

Example Code

```html
<!DOCTYPE html>
<html>
<body>

<h2>An unordered HTML list</h2>

<ul>
  <li>Coffee</li>
  <li>Tea</li>
  <li>Milk</li>
</ul>


</body>
</html>
```

```html
<!DOCTYPE html>
<html>
<body>

<h2>An ordered HTML list</h2>

<ol>
  <li>Coffee</li>
  <li>Tea</li>
  <li>Milk</li>
</ol>


</body>
</html>
```

Unordered HTML List – Choose List Item Marker

- The CSS list-style-type property is used to define the style of the list item marker.

Value	Description
disc	Sets the list item marker to a bullet (default)
circle	Sets the list item marker to a circle
square	Sets the list item marker to a square
none	The list items will not be marked

Example

Unordered List with Square Bullets
- Coffee
- Tea
- Milk

```html
<!DOCTYPE html>
<html>
<body>

<h2>Unordered List with Square Bullets</h2>

<ul style="list-style-type: square;">
  <li>Coffee</li>
  <li>Tea</li>
  <li>Milk</li>
</ul>

</body>
</html>
```

Ordered HTML List – The Type Attribute

- The type attribute of the <ol> tag, defines the type of the list item marker.

Type	Description
type="1"	The list items will be numbered with numbers (default)
type="A"	The list items will be numbered with uppercase letters
type="a"	The list items will be numbered with lowercase letters
type="I"	The list items will be numbered with uppercase roman numbers
type="i"	The list items will be numbered with lowercase roman numbers

Example

Ordered List with Roman Numbers

   i.   Coffee

   ii.   Tea

   iii. Milk

```
<!DOCTYPE html>
<html>
<body>

<h2>Ordered List with Roman Numbers</h2>

<ol type="i">
  <li>Coffee</li>
  <li>Tea</li>
  <li>Milk</li>
</ol>

</body>
</html>
```

HTML Description Lists

- The **<dl>** tag defines the description list, the **<dt>** tag defines the term (name), and the **<dd>** tag describes each term.

```
<dl>
 <dt>Coffee</dt>
 <dd>- black hot drink</dd>
 <dt>Milk</dt>
 <dd>- white cold drink</dd>
</dl>
```

Nested HTML Lists

List items can contain new list, and other HTML elements, like images and links, etc.

```
<ul>
 <li>Coffee</li>
 <li>Tea
  <ul>
   <li>Black tea</li>
   <li>Green tea</li>
  </ul>
 </li>
 <li>Milk</li>
</ul>
```

A Nested List

List can be nested (lists inside lists):

- Coffee

- Tea
  - Black tea
  - Green tea

- Milk

Control List Counting

```
<ol start="50">
  <li>Coffee</li>
  <li>Tea</li>
  <li>Milk</li>
</ol>
```

- By default, an ordered list will start counting from 1.
- If you want to start counting from a specified number, you can use the start attribute

Horizontal List with CSS

- Create a navigation menu.

Navigation Menu

In this example, we use CSS to style the list horizontally, to create a navigation menu:

Home	News	Contact	About

```html
<!DOCTYPE html>
<html>
<head>
<style>
ul {
  list-style-type: none;
  margin: 0;
  padding: 0;
  overflow: hidden;
  background-color: #333333;
}

li {
  float: left;
}

li a {
  display: block;
  color: white;
  text-align: center;
  padding: 16px;
  text-decoration: none;
}

li a:hover {
  background-color: #111111;
}
</style>
</head>
<body>

<ul>
  <li><a href="#home">Home</a></li>
  <li><a href="#news">News</a></li>
  <li><a href="#contact">Contact</a></li>
  <li><a href="#about">About</a></li>
</ul>

</body>
</html>
```

HTML Block and Inline Elements

HTML Grouping Tags

Tag	Description
<div>	Defines a section in a document (block-level)
<span>	Defines a section in a document (inline)

Block-level Elements

- A block-level element always <u>starts on a new line</u>

- and takes up the <u>full width</u> available (stretches out to the left and right as far as it can).

The <div> element is a block-level element.

- The <div> element is very often used together with CSS, to <u>layout a web page</u>.

Example

<!DOCTYPE html>
<html>
<body>

Hello World

The DIV element is a block element, and will always start on a new line and take up the full width available (stretches out to the left and right as far as it can).

<div style="border: 1px solid black"> Hello World </div>

<p>The DIV element is a block element, and will always start on a new line and take up the full width available (stretches out to the left and right as far as it can).</p>
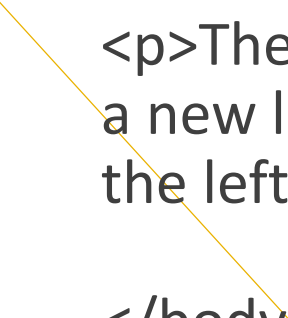
</body>
</html>

Example

Hello World

The DIV element is a block element, and will always start on a new line and take up the full width available (stretches out to the left and right as far as it can).

```
<!DOCTYPE html>
<html>
<body>

<div style="border:3px dashed red; text-align:center; max-width:300px"> <b>Hello World</b> </div>

<p>The DIV element is a block element, and will always start on a new line and take up the full width available (stretches out to the left and right as far as it can).</p>

</body>
</html>
```

Block level elements in HTML

<address>   <figcaption>   <noscript>

<article>   <figure>

<aside>   <footer>   <p>

<blockquote>   <form>   <pre>

<canvas>   <h1>-<h6>   <section>

<dd>   <header>   <table>

<div>   <hr>   <tfoot>

<dl>

<dt>   <main>   <video>

<fieldset>   <nav>

<div> Element

```
<div style="background-
color:black; color:white;
padding:20px;">
  <h2>London</h2>
  <p>London is the capital city
of England. It is the most
populous city in the United
Kingdom, with a metropolitan
area of over 13 million
inhabitants.</p>
</div>
```

Inline Elements

- An inline element <u>does not start on a new line</u> and only takes up as much width as necessary.

  This is an inline element inside

Example

<!DOCTYPE html>

<html>

<body>

> This is an inline span Hello World element inside a paragraph.
>
> The SPAN element is an inline element, and will not start on a new line and only takes up as much width as necessary.

<p>This is an inline span Hello World element inside a paragraph.</p>

<p>The SPAN element is an inline element, and will not start on a new line and only takes up as much width as necessary.</p>

</body>

</html>

Inline Elements in HTML

<a>   <i>   <small>
<abbr>   <img>   <span>
<acronym>   <input>   <strong>
<b>   <kbd>   <sub>
<bdo>   <label>   <sup>
<big>   <map>   <textarea>

         <object>   <time>
<button>   <output>   <tt>
<cite>   <q>   <var>
<code>   <samp>
<dfn>   <script>
<em>   <select>

\<span\> Element

\<h1\> My \<span style="color:red"\> Important\</span\> Heading\</h1\>

My Important Heading

The class Attribute

Class Attribute

- The HTML class attribute is used to define <u>equal styles for elements</u> with the <u>same class name</u>.
- All HTML elements with the same class attribute will get the same style.

Using The class Attribute on

Block Elements

.cities { …}

class="cities"

Using The class Attribute on

Inline Elements

span.note { …}

<span class="note">

Example (class on Block Elements)

London

London is the capital of England.

Paris

Paris is the capital of France.

Tokyo

Tokyo is the capital of Japan.

```
<!DOCTYPE html>
<html>
<head>
<style>
.cities {
  background-color: black;
  color: white;
  margin: 20px;
  padding: 20px;
}
</style>
</head>
<body>

<div class="cities">
  <h2>London</h2>
  <p>London is the capital of England.</p>
</div>

<div class="cities">
  <h2>Paris</h2>
  <p>Paris is the capital of France.</p>
</div>

<div class="cities">
  <h2>Tokyo</h2>
  <p>Tokyo is the capital of Japan.</p>
</div>

</body>
</html>
```

Example (class on Inline Element)

My Important Heading

This is some important text.

```html
<!DOCTYPE html>
<html>
<head>
<style>
span.note {
  font-size: 120%;
  color: red;
}
</style>
</head>

<body>

<h1>My <span class="note">Im
portant</span> Heading</h1>

<p>This is
some <span class="note">impo
rtant</span> text.</p>

</body>
</html>
```

Multiple Classes

- Style elements with the class name "city", also style elements with the class name "main ".

```
<h2 class="city main">London</h2>
<h2 class="city">Paris</h2>
<h2 class="city">Tokyo</h2>
```

Example

Multiple Classes

All three headers have the class name "city". In addition, London also have the class name "main", which center-aligns the text.

London

Paris

Tokyo

```html
<!DOCTYPE html>
<html>
<style>
.city {
  background-color: tomato;
  color: white;
  padding: 10px;
}

.main {
  text-align: center;
}
</style>
<body>

<h2>Multiple Classes</h2>
<p>All three headers have the class name "city". In addition, London also have the class name "main", which center-aligns the text.</p>

<h2 class="city main">London</h2>
<h2 class="city">Paris</h2>
<h2 class="city">Tokyo</h2>

</body>
</html>
```

The class Attribute in JavaScript

```html
<!DOCTYPE html>
<html>
<body>

<h2>Using The class Attribute in JavaScript</h2>
<p>Click the button, to hide all elements with the class name "city",
with JavaScript:</p>

<button onclick="myFunction()">Hide elements</button>

<h2 class="city">London</h2>
<p>London is the capital of England.</p>

<h2 class="city">Paris</h2>
<p>Paris is the capital of France.</p>

<h2 class="city">Tokyo</h2>
<p>Tokyo is the capital of Japan.</p>

<script>
function myFunction() {
  var x = document.getElementsByClassName("city");
  for (var i = 0; i < x.length; i++) {
    x[i].style.display = "none";
  }
}
</script>
```

Using The class Attribute in JavaScript

Click the button, to hide all elements with the class name "city", with JavaScript:

Hide elements

London

London is the capital of England.

Paris

Paris is the capital of France.

Tokyo

Tokyo is the capital of Japan.

The id Attribute

id Attribute

- The id attribute specifies a unique id for an HTML element.
- The value must be unique within the HTML document.
- The id value can be used by CSS and JavaScript.

A hash (#) character, followed by the id of the element
#myId {...}

```html
<!DOCTYPE html>
<html>
<head>
<style>
#myHeader {
  background-color: pink;
  color: black;
  padding: 40px;
  text-align: center;
}
</style>
</head>
<body>

<h2>The id Attribute</h2>
<p>Use CSS to style an element with the id "myHeader":</p>

<h1 id="myHeader">My Header</h1>

</body>
</html>
```

The id Attribute

Use CSS to style an element with the id "myHeader":

My Header

Tips

- The id attribute can be used on **any** HTML element.

- The id value is <u>case-sensitive</u>.

- The id value must contain <u>at least **one** character</u>, and must **not** <u>contain whitespace </u>(spaces, tabs, etc.).

Bookmarks with ID and Links

- HTML bookmarks are used to allow readers <u>to jump to specific parts</u> of a Web page.

- Bookmarks can be useful if your webpage is very long.

- To make a bookmark, you must <u>first create the bookmark</u>, and then <u>add a link</u> to it.

Create a bookmark

- Create a bookmark with the id attribute

```html
<h2 id="C4">Chapter 4</h2>
```

Create Link to the Bookmark

- Add a link to the bookmark ("Jump to Chapter 4"), from within the same page.

  `<a href="#C4">Jump to Chapter 4</a>`

- From another page

  `<a href="html_demo.html#C4">Jump to Chapter 4</a>`

Example

Chapter 1

This chapter explains ba bla bla

Chapter 2

This chapter explains ba bla bla

Chapter 3

This chapter explains ba bla bla

Chapter 4

This chapter explains ba bla bla

Chapter 5

This chapter explains ba bla bla

Chapter 6

Chapter 4

This chapter explains ba bla bla

Chapter 5

This chapter explains ba bla bla

Chapter 6

This chapter explains ba bla bla

Chapter 7

This chapter explains ba bla bla

Chapter 8

This chapter explains ba bla bla

Chapter 9

This chapter explains ba bla bla

Chapter 10

```html
<!DOCTYPE html>
<html>
<body>

<p><a href="#C4"> Jump to Chapter 4</a></p>
<p><a href="#C10">Jump to Chapter 10</a></p>

<h2>Chapter 1</h2>
<p>This chapter explains ba bla bla</p>

<h2>Chapter 2</h2>
<p>This chapter explains ba bla bla</p>

<h2>Chapter 3</h2>
<p>This chapter explains ba bla bla</p>

<h2 id="C4">Chapter 4</h2>
<p>This chapter explains ba bla bla</p>

<h2>Chapter 5</h2>
<p>This chapter explains ba bla bla</p>

<h2>Chapter 6</h2>
<p>This chapter explains ba bla bla</p>

<h2>Chapter 7</h2>
<p>This chapter explains ba bla bla</p>

<h2>Chapter 8</h2>
<p>This chapter explains ba bla bla</p>

<h2>Chapter 9</h2>
<p>This chapter explains ba bla bla</p>

<h2 id="C10">Chapter 10</h2>
<p>This chapter explains ba bla bla</p>

<h2>Chapter 11</h2>
<p>This chapter explains ba bla bla</p>

</body>
</html>
```

Example

```
<style>

a: link {
  color: green;
  background-color: transparent;
  text-decoration: none;
}

a: hover {
  color: red;
  text-size: 25px;
  background-color: gold;
  text-decoration: underline;
 }
</style>
```

Jump to Chapter 4

Jump to Chapter 10

Chapter 1

This chapter explains ba bla bla

Chapter 2

This chapter explains ba bla bla

Chapter 3

This chapter explains ba bla bla

Chapter 4

This chapter explains ba bla bla

Chapter 5

Difference between class and id

1. **ID and Class syntax**
   - ID name starts with "#" symbol followed by ID name.
   - Class name starts with "." followed by class name.

2. **ID to be unique**
   - ID attribute name to be unique in an HTML page.
   - *In CSS:* CSS apply styles to all duplicate ID elements.
   - *In JavaScript:* JavaScript doesn't work properly for elements with duplicate IDs.
     - When sets style to duplicate ID elements through JavaScript, style is applicable only to first element.
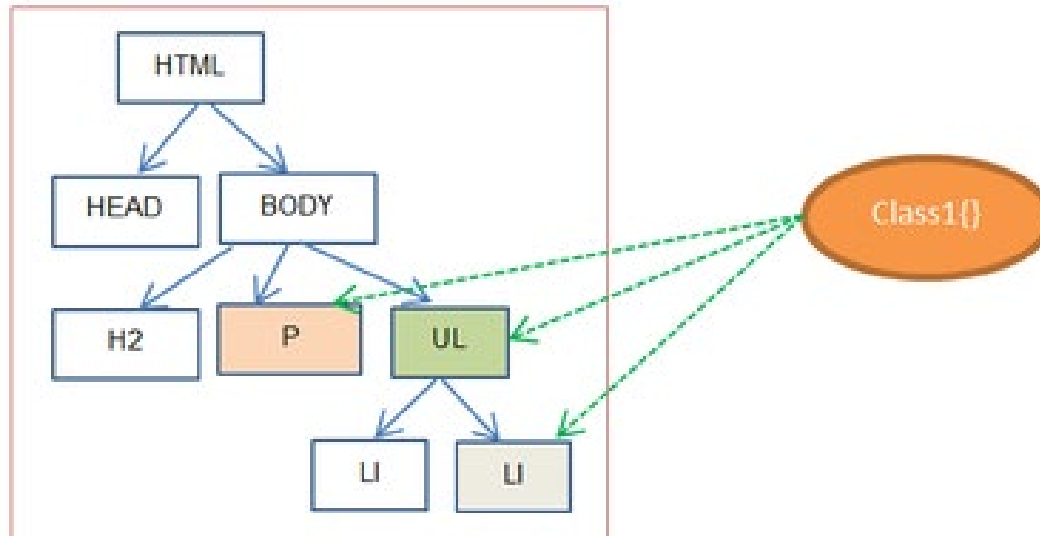
Difference between class and id ...

3. **Duplicate ID with different element selector (combination)**
- *In CSS:* In this case, duplicate IDs are combined with some other selectors. Combination may/may not give unique situation to select. But in both cases, style applies to elements.
- *In JavaScript:* When duplicate ID combined with some other selector and that combination focus only single element then JavaScript code works correctly.

4. **Same CSS Class can be used in multiple elements**
- Same CSS Class can be used in multiple elements to style.
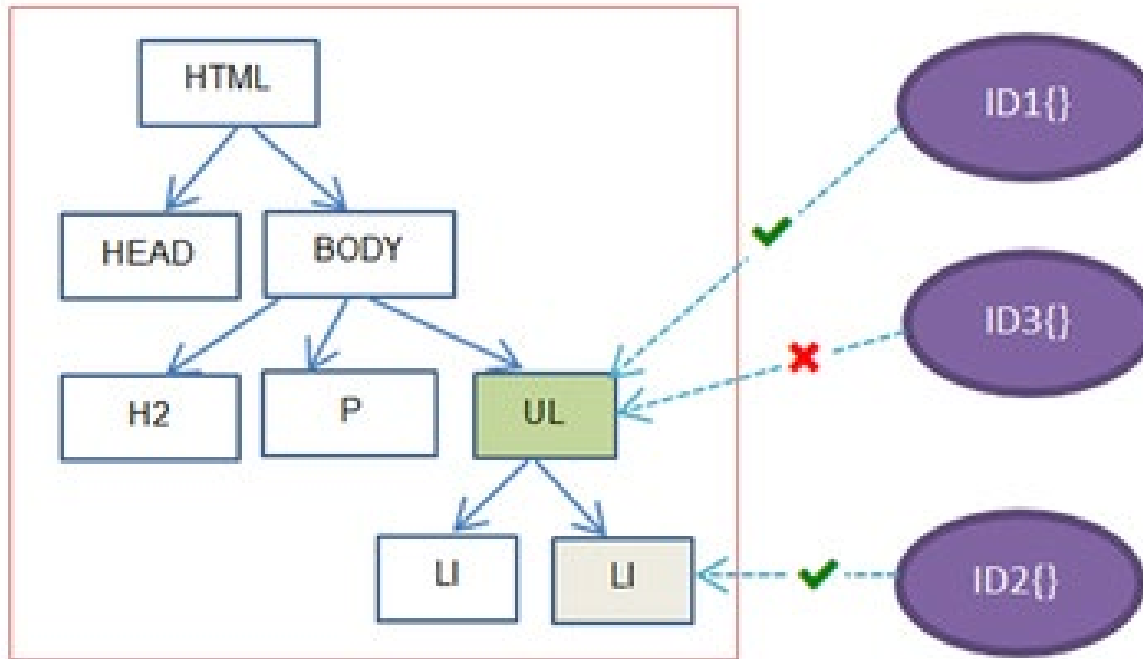- CSS and JavaScript will give the same output.

Difference between class and id …

5. Only one ID selector can be attached to an element

- Only one ID selector can be attached to an element.
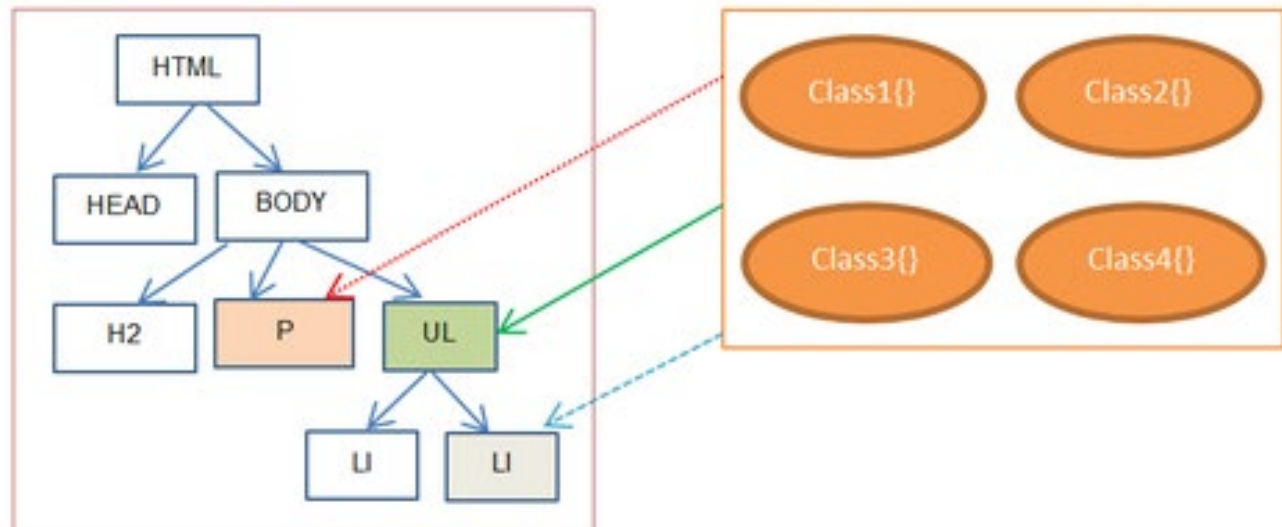- But multiple class selectors can be attached to an element.

Difference between class and id …

6. Multiple CSS Classes can be attached to an element

- Multiple Class selectors can to attached to an element using Class attribute (class="class1, class2").
- Comma separated multiple classes can be attached to an element. But only one ID selector can be attached to an element.

Difference between class and id …

7. **ID and Class selectors can be applied in the same element**

- ID and Class selectors can be applied in the same element.

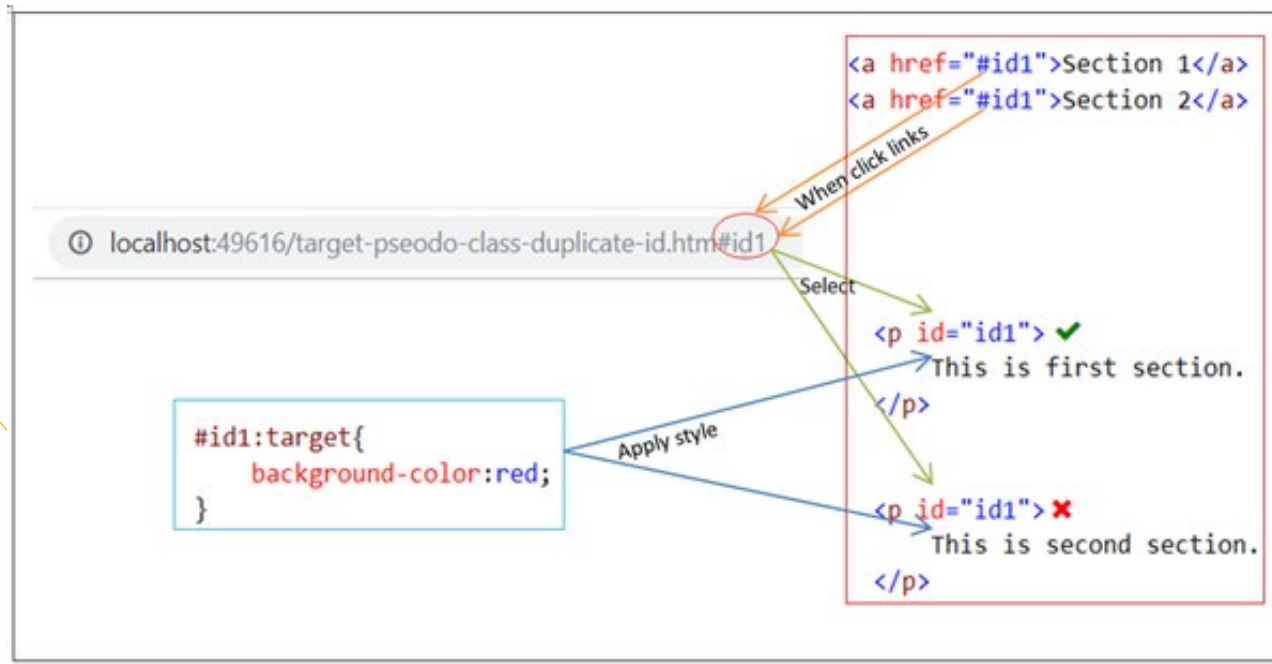**8.** **ID has high preference than Class**

- When more than one styles(one is through Class and one is through ID) apply to an element, ID will get higher preference since it has higher specificity.

Difference between class and id
...

9. Target pseudo-class handling with duplicate IDs

- When duplicate IDs are there then :target pseudo-class sets style only to first element. It doesn't set style to remaining duplicate ID elements.

از توجه شما به این بخش سپاسگزارم.