



前端網絡開發人員證書

(一) 前端網絡開發

8. CSS: Advanced III

Presented by Krystal Educational Platform



Copyright © Krystal Institute Ltd 2022
Do not copy or distribute



Learning outcomes



- In this lesson, you are going to learn:
 - ✓ Counters
 - ✓ Layouts
 - ✓ Attribute selector
 - ✓ Image design



8.1 Counters

8.1 Counters



- A webpage may contain lot of information which we may need to separate into difference points
- In HTML, we can use a lists to do this :

```
<ol>
  <li>Using CSS Counters:</li>
  <li>HTML Tutorial</li>
  <li>CSS Tutorial</li>
  <li>JavaScript Tutorial</li>
</ol>
```

1. Using CSS Counters:
2. HTML Tutorial
3. CSS Tutorial
4. JavaScript Tutorial

8.1 Counters



- However, we can use the function counters.
- It is similar to the “print” function in JavaScript
- We can define the words to be display

Using CSS Counters:

[Section 1: HTML Tutorial](#)

[Section 2: CSS Tutorial](#)

[Section 3: JavaScript Tutorial](#)

8.1 Counters examples



For counters, we can use simpler coding to have similar result of lists.

```
<style>
body {
    background:lightgreen;
    counter-reset: section;
}

h2::before {
    counter-increment: section;
    content: "Section " counter(section) ":";
}

</style>
```

Using CSS Counters:

Section 1: HTML Tutorial

Section 2: CSS Tutorial

Section 3: JavaScript Tutorial

```
<h1>Using CSS Counters:</h1>
<h2>HTML Tutorial</h2>
<h2>CSS Tutorial</h2>
<h2>JavaScript Tutorial</h2>
```



8.1 Counters examples



```
body {  
    background:lightgreen;  
    counter-reset: section;  
}
```

“counter-reset” is necessary
in order to assign the
counters in different parts

Using CSS Counters:

Section 1: HTML Tutorial

Section 2: CSS Tutorial

Section 3: JavaScript Tutorial

“:Before”, is to define the way of the counters display. We can specify elements by “**h2::before**”

```
h2::before {
    counter-increment: section;
    content: "Section " counter(section) ": ";
}
</style>
```

8.1 Counters examples



“Counter-increment” is to define the variable that to be count.

```
h2::before {  
    counter-increment: section;  
    content: "Section " counter(section) ":";  
}  
</style>
```

8.1 Counters(summary)



Order list

- Clumsy code(CSS/HTML)
- It may be time consuming to define difference style of every different item
- HTML:


```
<LI> Value</LI>
<LI> Value</LI>
</OL>
```

counters

- Simple code(CSS)
- Suitable for content
- Only need to create the content
- CSS: “ :before{
 1. **counter-increment: value;**
 2. “display message” **counter(value); }** ”

8.1 Counters Addition(HTML)



Counters can cooperate with order list

```
<ol>
  <li>section A </li>
  <li>section B

  <ol>
    <li>section B1</li>
    <li>section B2</li>
    <li>section B3
  <ol>
```

```
<li>section B1a</li>
<li>section B1b</li>
<li>section B1c</li>
</ol>

</li>
<li>section B4</li>
</ol>
</li>
<li>section C</li>
<li>section D</li>
</ol>
```

1 section A
 2 section B
 2.1 section B1
 2.2 section B2
 2.3 section B3
 2.3.1 section B1a
 2.3.2 section B1b
 2.3.3 section B1c
 2.4 section B4
 3 section C
 4 section D

8.1 Counters Addition(CSS)



```
<style>
    body{
        background: lightseagreen;
        font-size: 20px;
    }
    ol {
        counter-reset: section;
        list-style-type: none;
    }
    li::before {
        counter-increment: section;
        content: counters(section, ".") " ";
    }
</style>
```

- 1 section A
- 2 section B
 - 2.1 section B1
 - 2.2 section B2
 - 2.3 section B3
 - 2.3.1 section B1a
 - 2.3.2 section B1b
 - 2.3.3 section B1c
 - 2.4 section B4
- 3 section C
- 4 section D

8.1 Counters activity 5



Create a content list with 2 head section and 3 sub section as shown below:

1. The first section
2. The second section
 - 2.1 section 2.1
 - 2.2 section 2.2

8.1 Counters

activity 5_suggested answer



For reference only:

```
<style>

    body{
        background: lightseagreen;
        font-size: 20px;
    }

    ol {
        counter-reset: section;
        list-style-type: none;
    }

    li::before {
        counter-increment: section;
        content: counters(section,".") " ";
    }

</style>
```

- 1 The first section
- 2 The second section
 - 2.1 section 2.1
 - 2.2 section 2.2

```
<body>
    <ol>
        <li>The first section </li>
        <li>The second section</li>

        <ol>
            <li>section 2.1</li>
            <li>section 2.2</li>
        </ol>
    </ol>
</body>
```



8.2 Layout



Copyright © Krystal Institute Ltd 2022
Do not copy or distribute

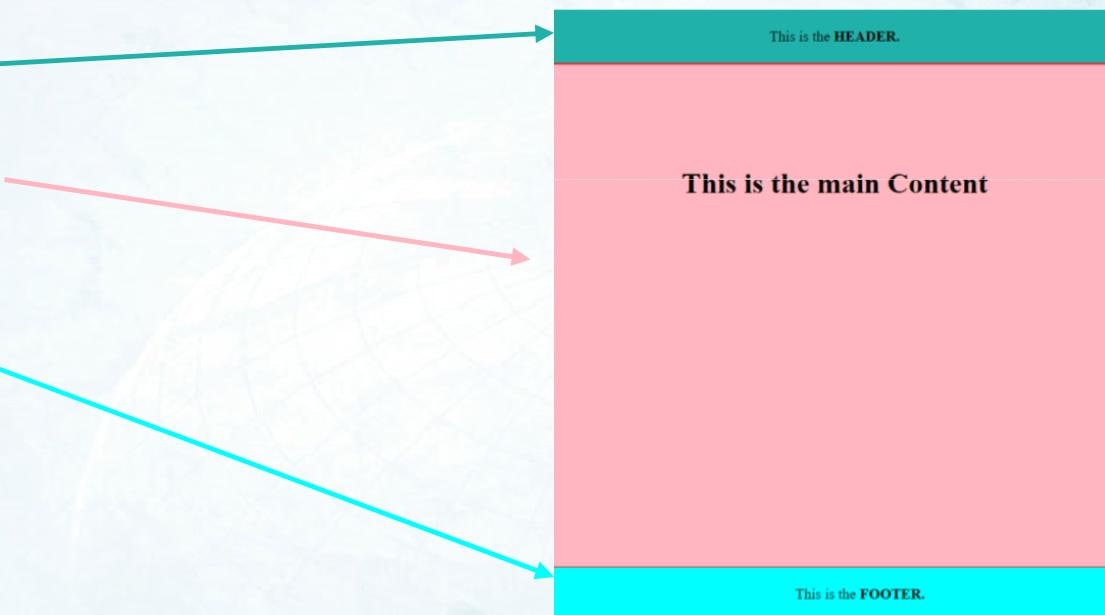


8.2 Layout



A website can be divided into different sections

- Header
- Main content
- footer



8.2 Layout(header) example



We can specific different styles of Header

```
}
```

```
.header {
```

```
    background-color: lightseagreen;
```

```
    padding: 20px;
```

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

```
}
```

```
<body>
```

```
    <div class="header">
```

```
        This is the <strong>HEADER.</strong>
```

```
    </div>
```

```
</body>
```

This is the **HEADER**.

8.2 Layout(footer) example



We can specify different style of footer

```
.footer {  
    width: 100%;  
    background-color: cyan;  
    position: fixed;  
    bottom: 0;  
    margin: 0px;  
    padding: 20px;  
    text-align: center;  
}
```



8.2 Layout

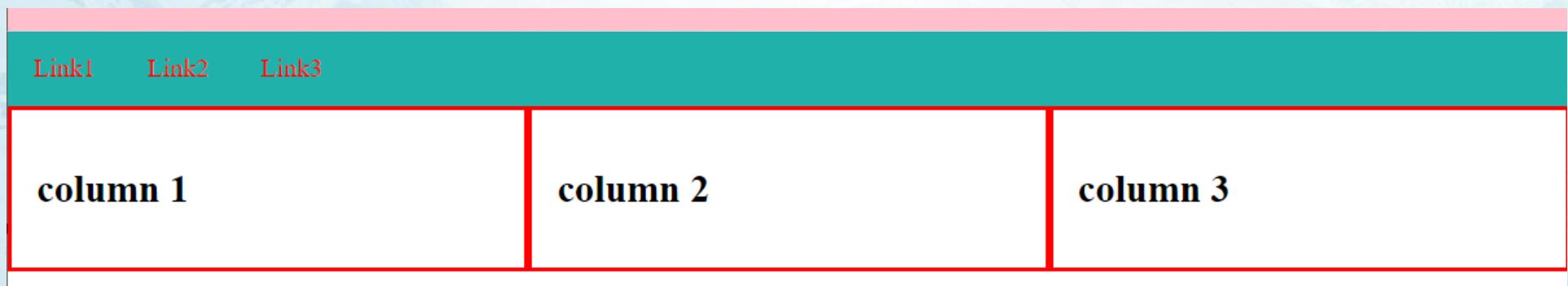


- For Header and footer, it is similar to a DIV.
- We can use the same properties to design a suitable interface.
- Layout is important to a webpage design as the clumsy design of a webpage may affect its readability.

8.2 Layout Addition(columns)

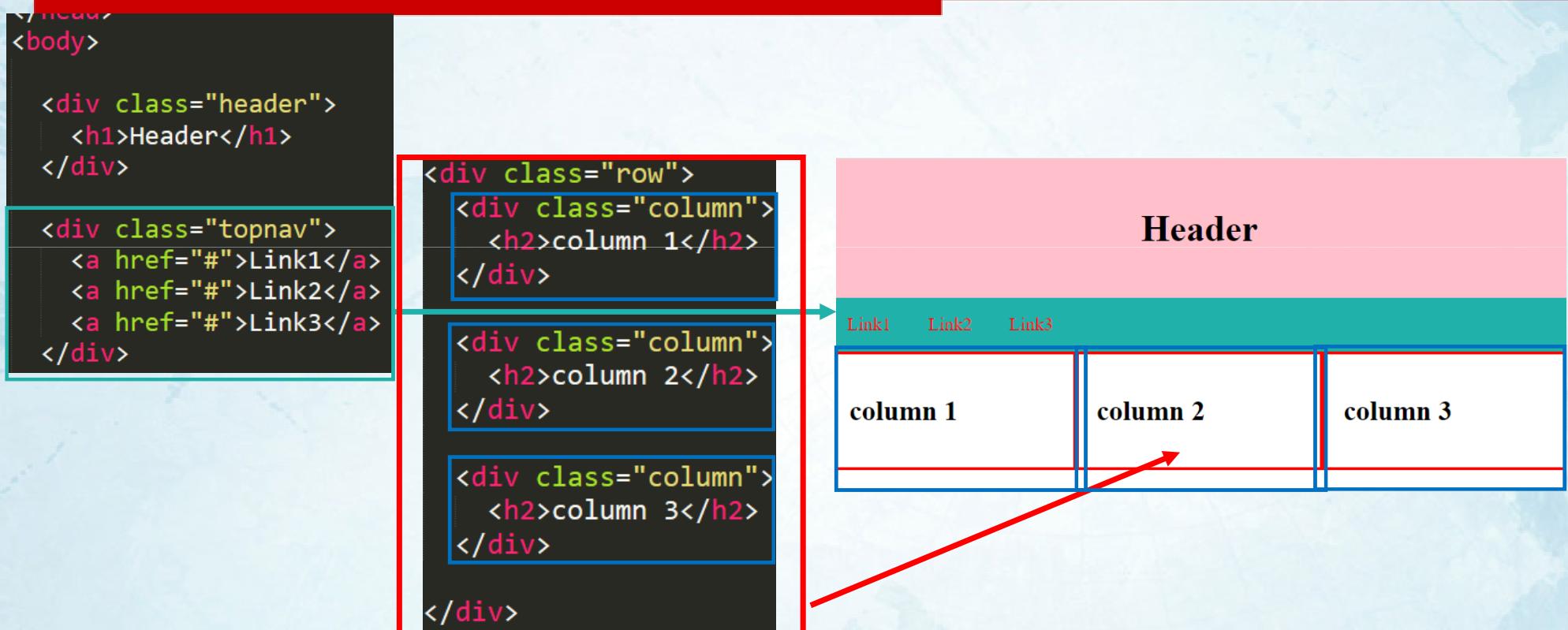


In order to present information in a good way, we can divide the content into different columns



For reference: https://www.w3schools.com/css/css_website_layout.asp

8.2 Layout addition _example(columns)



8.2 Layout addition _example(columns)



Be aware “box sizing” is necessary ,otherwise, it will not show the result

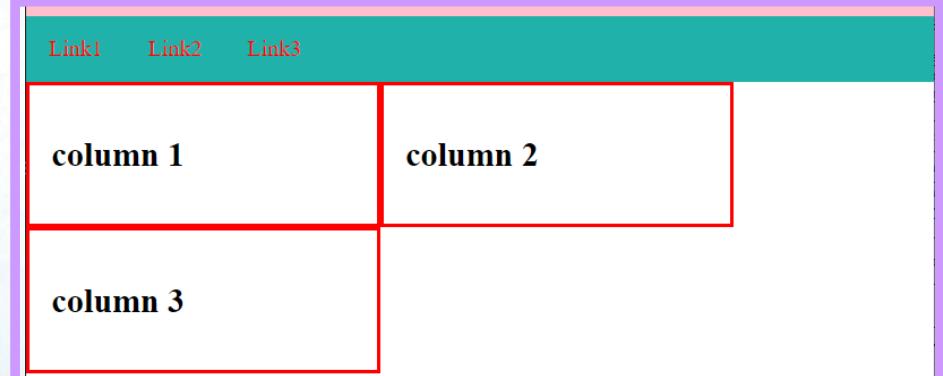
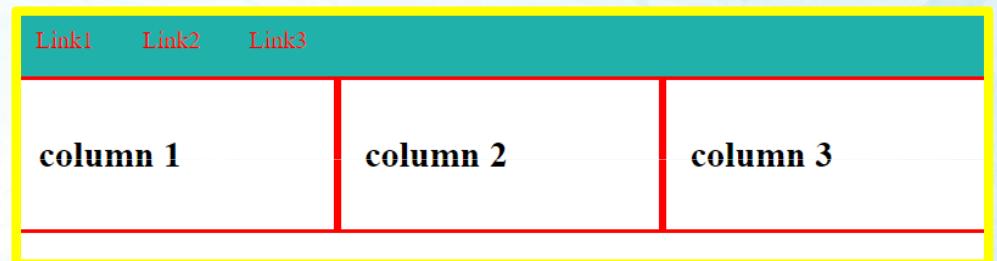
```
<style>
* {
  box-sizing: border-box;
}
body {
  margin: 0;
}

.header {
  background-color: pink;
  padding: 20px;
  text-align: center;
}
```

```
.topnav {
  overflow: hidden;
  background-color: lightseagreen;
}

.topnav a {
  float: left;
  color: red;
  text-align: center;
  padding: 14px 16px;
  text-decoration: none;
}

.topnav a:hover {
  background-color: orange;
  color: black;
}
```



8.2 Layout addition _example(columns)

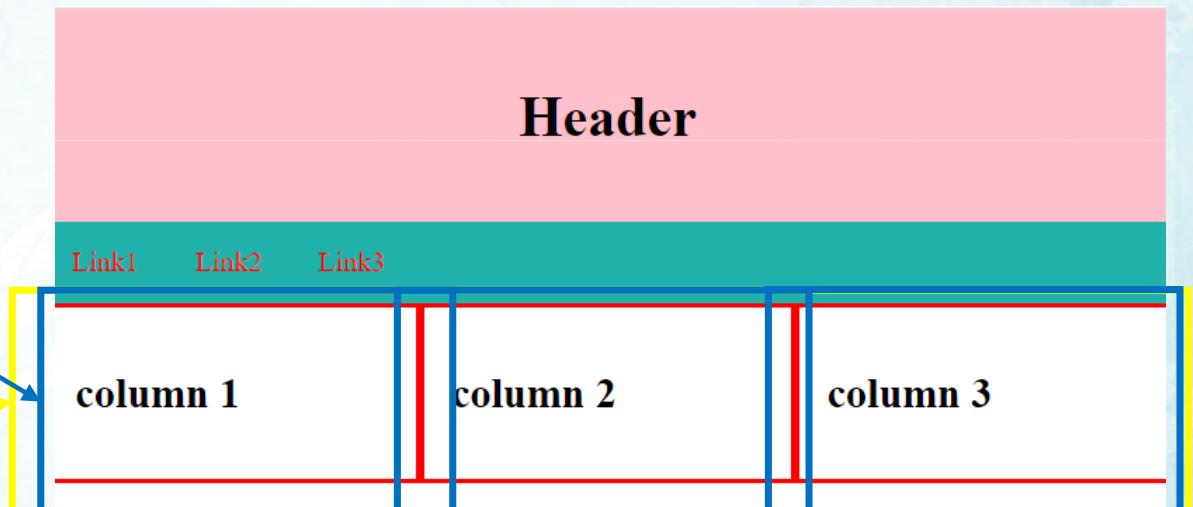
To create column as shown below, “.column” and “.row” is important

```
.topnav a:hover {
    background-color: orange;
    color: black;
}

.column {
    border: red solid 3px;
    float: left;
    width: 33.33%;
    padding: 15px;
}

/* Clear floats after the columns */
.row:after {
    content: "";
    display: table;
    clear: both;
}

</style>
```



8.3 Attribute selector



Copyright © Krystal Institute Ltd 2022
Do not copy or distribute

8.3 Attribute selector



- We can use **class/id** to specify a specific style for elements
- In this chapter , it will have a more detailed explanations on it.

8.3 Attribute selector example(original)



```
<style>
  body{
    background-color: lightcyan;
  }

  strong{
    color: red;
    font-size: 15px;
  }

  .section1{
    background-color: orange;
  }

</style>
```

This is a section without any class

This is section 1 =

```
</head>
<body>

  <h1> This is a section <strong> without any class
  </strong></h1>
  <h1 class="section1"> This is section 1 <strong
  style="font-size:20px;"> = </strong></h1>

</body>
```

8.3 Attribute selector example (attribute="value")



```
<style>
  body{
    background-color: lightcyan;
  }

  strong{
    color: red;
    font-size: 15px;
  }

  h1[ class="section 1" ]{
    background-color: orange;
  }

</style>
```

This is a section **without any class**

This is section 1

This is section 2

This is section 3

```
<body>
  <h1> This is a section <strong> without any class </strong></h1>

  <h1 class="section 1"> This is section 1 </h1>

  <h1 class="section 2"> This is section 2 </h1>

  <h1 class="section 3"> This is section 3 </h1>

</body>
</html>
```

8.3 Attribute selector example(attribute ~="value")



```
h1[ class~="section" ]{
    background-color: orange;
}
```

This is section 1

This is section 2

This is section 3

```
<body>

    <h1> This is a section <strong> without any class
    </strong></h1>

    <h1 class="section 1"> This is section 1 </h1>

    <h1 class="section 2"> This is section 2 </h1>

    <h1 class="section 3"> This is section 3 </h1>

</body>
</html>
```

Note: it is important to define a clear **value** for attribute selector: “section” **NOT** “section”

8.3 Attribute selector example(attribute |=“value”)



```
h1[ class |= "section" ]{
    background-color: orange;
}
```

This is section 1

This is section 2

This is section 3

This is section 4

It work when the class name contain exact the “value”

```
<body>

<h1> This is a section <strong> without any class
</strong></h1>

<h1 class="section-1"> This is section 1 </h1>

<h1 class="section"> This is section 2 </h1>

<h1 class="section "> This is section 3 </h1>

<h1 class="section 4"> This is section 4 </h1>

</body>
```

8.3 Attribute selector example(attribute ^="value")



```
h1[ class^="section" ]{
    background-color: orange;
}
```

This is a section without any class

This is section 1

This is section 2

This is section 3

This is section 4

It works when the class name start with the “value”

```
<body>

    <h1> This is a section <strong> without any class
    </strong></h1>

    <h1 class="1 section"> This is section 1 </h1>
    <h1 class="2 section 2"> This is section 2 </h1>
    <h1 class="section 3"> This is section 3 </h1>
    <h1 class="section 4"> This is section 4 </h1>

</body>
</html>
```



KRYSYAL INSTITUTE
DIGITAL ECONOMY CORE TECHNOLOGY

8.3 Attribute selector example(attribute \$="value")



```
h1[class $="section"]{  
    background-color: orange;  
}
```

Be aware if it end with a space, it will not work

This is a section without any class

This is section 1

This is section 2

This is section 3

This is section 4

```
<h1> This is a section <strong> without any class  
</strong></h1>  
  
<h1 class="1 section"> This is section 1 </h1>  
  
<h1 class="2 section "> This is section 2 </h1>  
  
<h1 class="section 3"> This is section 3 </h1>  
  
<h1 class="section 4"> This is section 4 </h1>  
  
</body>  
</html>
```

8.3 Attribute selector example(attribute *=“value”)



```
h1[class *= "sec"]{  
    background-color: orange;  
}
```

as long as the name of the class/id contain the value , it will show the effect

This is a section without any class

This is section 1

This is section 2

This is section 3

This is section 4

```
<body>  
  
    <h1> This is a section <strong> without any class  
    </strong></h1>  
  
    <h1 class="section"> This is section 1 </h1>  
  
    <h1 class="section "> This is section 2 </h1>  
  
    <h1 class="section 3"> This is section 3 </h1>  
  
    <h1 class="section 4"> This is section 4 </h1>  
  
</body>
```

8.3 Attribute selector example(attribute *=“value”)

```
h1[class *= "sec"]{
    background-color: orange;
}
```

This is a section without any class

This is section 1

This is section 2

This is section 3

This is section 4

```
<body>

<h1> This is a section <strong> without any class
</strong></h1>

<h1 class="section-1"> This is section 1 </h1>

<h1 class="123sec "> This is section 2 </h1>

<h1 class="se123ction"> This is section 3 </h1>

<h1 class="section 4"> This is section 4 </h1>

</body>
```

8.3 Attribute selector (summary)



code	meaning
Attribute = "value"	The class/id name must be exactly the same(value)
Attribute ^= "value"	Class/id name contain the value (without hyphen -) (abc value)
Attribute = "value"	Class/is name contain the value (value-a)
Attribute ^= "value"	The class/id name start with the value(value abc/ valueabc / value-abc)
Attribute \$= "value"	The class/id name end with the value(abc value /abc value /abc- value)
Attribute *= "value"	As long as the class/id name contain the value (123value234)



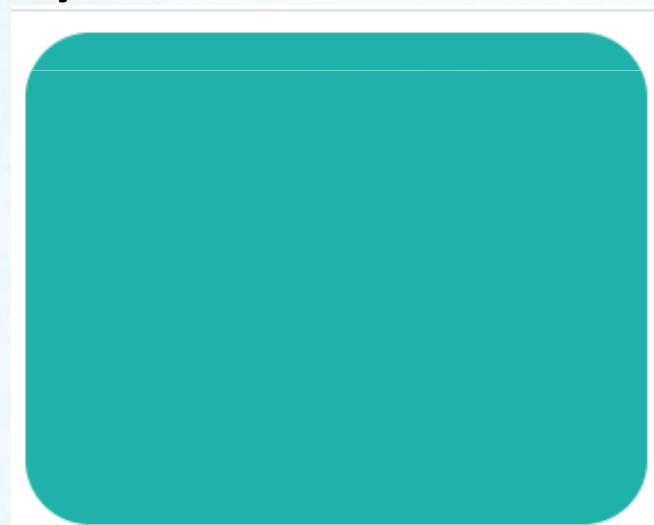
8.4 Image design



8.4 Images design



We can specify a DIV/ image with a rounded corner which can make your website look better.



8.4 Image design example



```
.rcorners1 {  
    border-radius: 25px;  
    background: lightseagreen;  
    padding: 20px;  
    width: 200px;  
    height: 150px;  
    margin-right: 20px  
}
```

This is section 1

```
.rcorners2 {  
    border-radius: 50px;  
    background: blue;  
    padding: 20px;  
    width: 200px;  
    height: 150px;  
}
```

This is section 2

8.4 Image design Example



You may also specific different value for “border-radius” to see different effect

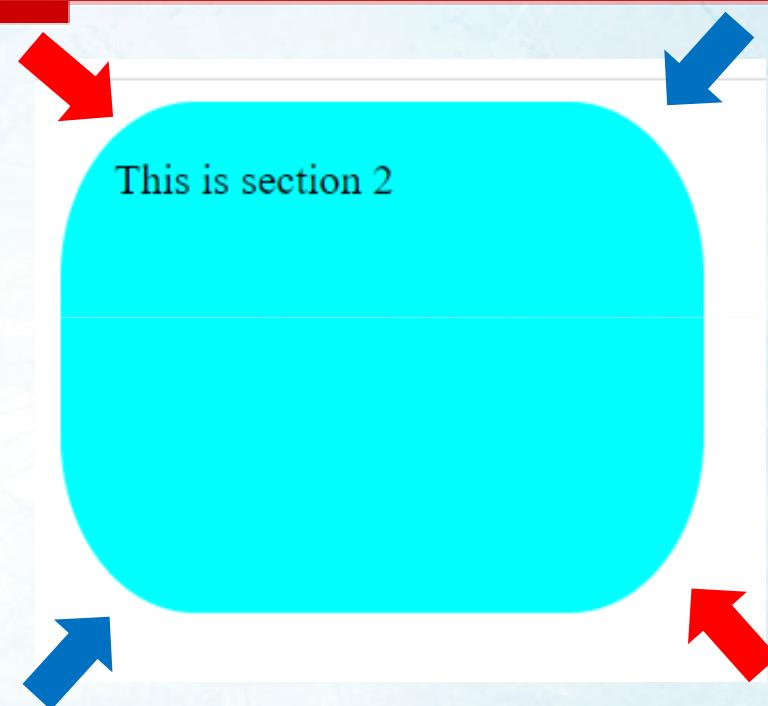
```
.rcorners1 {  
    border-radius: 25px 15px 30px 0px;  
    background: lightseagreen;  
    padding: 20px;  
    width: 200px;  
    height: 150px;  
    margin-right: 20px;  
}
```

This is section 1

8.4 Image design example(border-radius)



```
.rcorners2 {  
    border-radius: 50px / 65px;  
    background: cyan;  
    padding: 20px;  
    width: 200px;  
    height: 150px;  
}
```





Any questions?



Copyright © Krystal Institute Ltd 2022
Do not copy or distribute





Quiz time



Copyright © Krystal Institute Ltd 2022
Do not copy or distribute



Quiz time

Question 1



1. :before{ Counter-increment: 123;
Counter: “a” counter(123); }

Please fill in the blanks to show the following result.

Answer:

a=Subject

Subject 1: Chinese

Subject 2: English

Subject 3: Math

Quiz time

Question 2



2. Which of the followings divide the content into 4 columns?

- ```
.column{ a. width:15%
 b. width:25%
 c. width:30%
 d. width:40% }
```

## Quiz time

### Question 3



3. How many kinds of attribute selectors are there?

- a. 4
- b. 5
- c. 6
- d. 7

# Quiz time

## Question 4



4. Which of the followings class name will work ?

- a. A [ class ~ = “abc”] ① Abc-123
- b. A [ class | = “abc”] ② 123abc
- c. A [ class \* = “abc”] ③ Abc 123
- d. A [ class \$ = “abc”] ④ 12abc3

## Quiz time

### Question 5

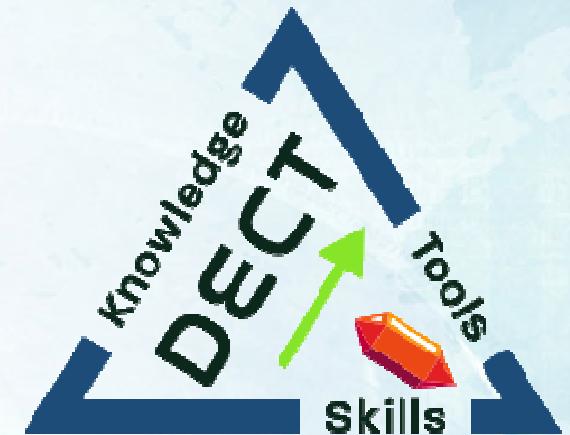


5. Which of the following is the correct code to make a rounded corner of image?

- a. Border radis:15px;
- b. Border radius:15px;
- c. Border-radius:15px;
- d. Border-corner:15px;



# Reference



Copyright © Krystal Institute Ltd 2022  
Do not copy or distribute



# Reference



There are some useful websites for reference:

1. [https://www.w3schools.com/css/css counters.asp](https://www.w3schools.com/css/css_counters.asp)
2. [https://www.w3schools.com/css/css attribute selectors.asp](https://www.w3schools.com/css/css_attribute_selectors.asp)
3. [https://www.w3schools.com/css/css website layout.asp](https://www.w3schools.com/css/css_website_layout.asp)
4. [https://www.w3schools.com/css/css3 borders.asp](https://www.w3schools.com/css/css3_borders.asp)