

Pemrograman Web

Sirojul Munir | rojulman@nurulfikri.ac.id

CSS

Sirojul Munir | rojulman@nurulfikri.ac.id

What is CSS ?

- ✚ CSS stands for **Cascading Style Sheets**
 - ✚ Styles define **how to display** HTML elements
 - ✚ Styles are normally stored in **Style Sheets**
 - ✚ Styles were added to HTML 4.0 to **solve a problem**
 - ✚ **External style sheets** can save a lot of work
 - ✚ External style sheets are stored in **CSS files**
 - ✚ Multiple style definitions will **cascade** into one

CSS3

✚ Cascading Style Sheets 3 (CSS3)

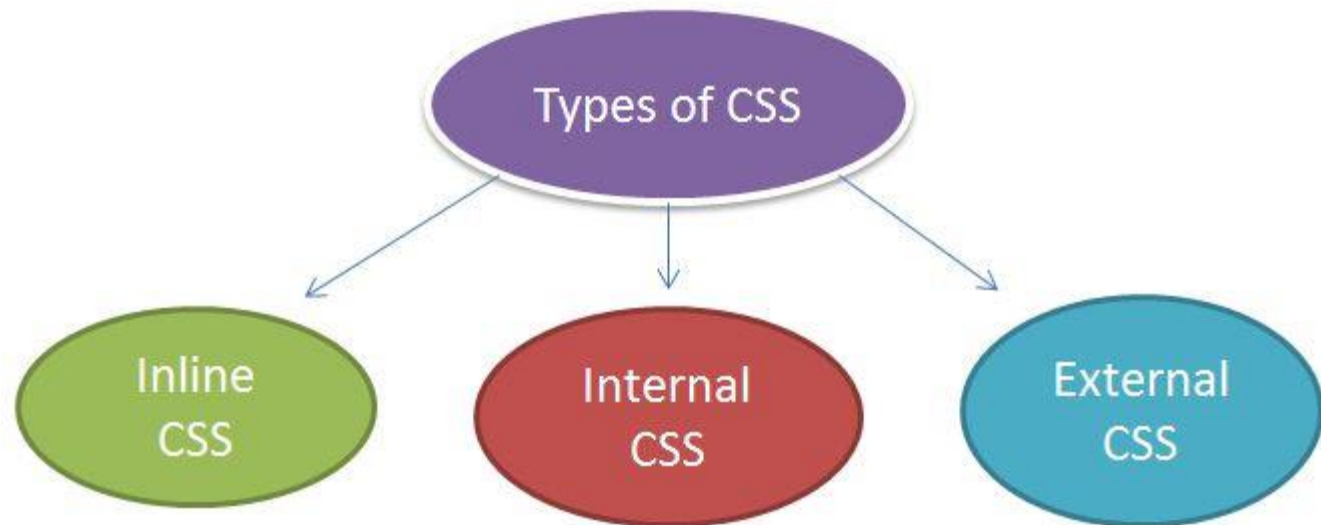
- ✚ Used to specify the presentation of elements separately from the structure of the document.

✚ CSS validator

- ✚ jigsaw.w3.org/css-validator/
- ✚ This tool can help you make sure that your code is correct and will work on CSS3-compliant browsers.

Penulisan CSS

- ✚ Inline Style
- ✚ Internal Style (Embedded Style)
- ✚ External Style



Inline Style

Declare an individual element's format using the HTML5 attribute **style**

```
<start_tag style="...">
```

```
...
```

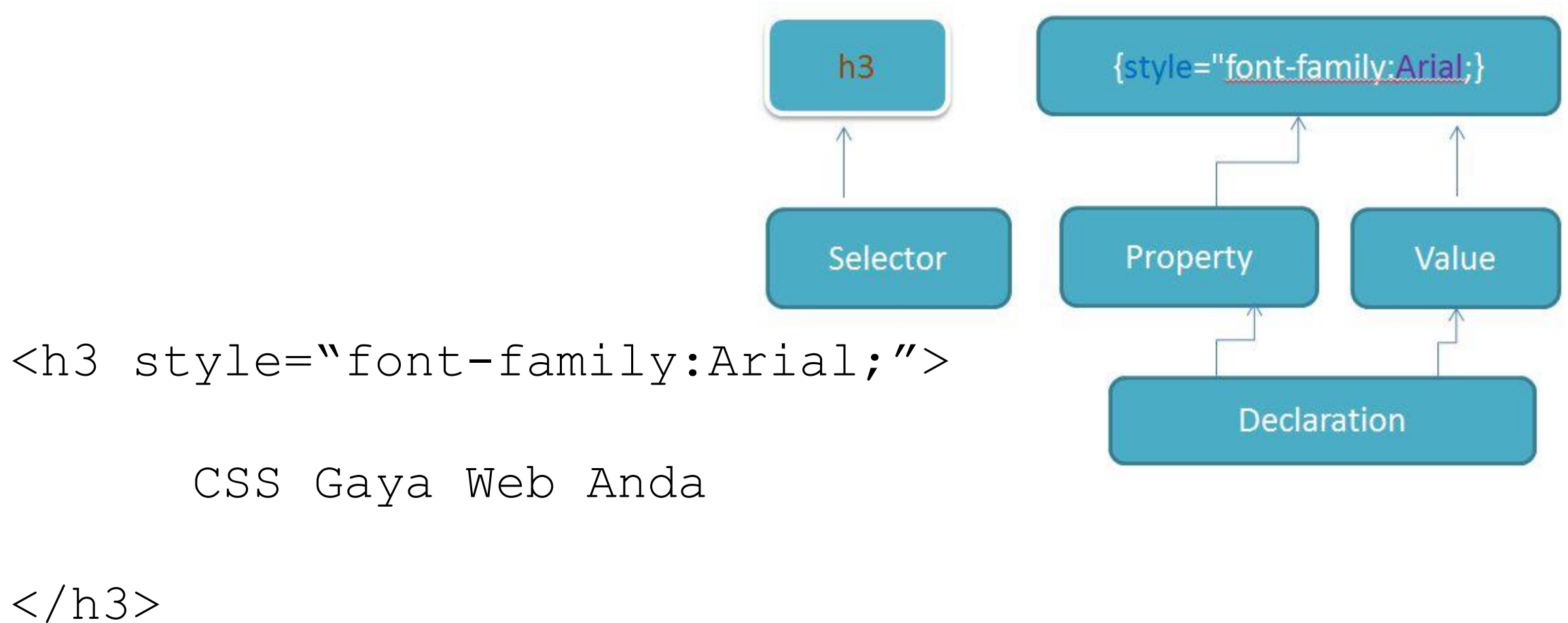
```
</end_tag>
```

```
<div style="color:red">
```

```
    red will be red
```

```
</div>
```

Inline Style : Selector – Property – Value



CSS Gaya Web Anda

</h3>

Inline Style Example

```
1  <!DOCTYPE html>
2
3  <!-- Fig. 4.1: inline.html -->
4  <!-- Using inline styles -->
5  <html>
6    <head>
7      <meta charset = "utf-8">
8      <title>Inline Styles</title>
9    </head>
10   <body>
11     <p>This text does not have any style applied to it.</p>
12
13     <!-- The style attribute allows you to declare -->
14     <!-- inline styles. Separate multiple -->
15     <!-- style properties with a semicolon. -->
16     <p style = "font-size: 20pt;">This text has the
17       <em>font-size</em> style applied to it, making it 20pt.
18     </p>
19
20     <p style = "font-size: 20pt; color: deepskyblue;">
21       This text has the <em>font-size</em> and
22       <em>color</em> styles applied to it, making it
23       20pt and deep sky blue.</p>
24   </body>
25 </html>
```

Fig. 4.1 | Using inline styles. (Part 1 of 2.)

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Internal Style (Embedded Style)

A second technique for using style sheets is embedded style sheets, which enable you to embed a CSS3 document in an HTML5 document's **head section**

```
<head>  
    <style type="text/css">  
  
        ...  
  
    </style>  
</head>
```

Internal Style Example (1)

```
1  <!DOCTYPE html>
2
3  <!-- Fig. 4.3: embedded.html -->
4  <!-- Embedded style sheet. -->
5  <html>
6    <head>
7      <meta charset = "utf-8">
8      <title>Embedded Style Sheet</title>
9
10     <!-- this begins the style sheet section -->
11     <style type = "text/css">
12         em      { font-weight: bold;
13                  color: black; }
14         h1      { font-family: tahoma, helvetica, sans-serif; }
15         p       { font-size: 12pt;
16                  font-family: arial, sans-serif; }
17         .special { color: purple; }
18     </style>
19 </head>
```



CSS Rules

Fig. 4.3 | Embedded style sheet. (Part I of 3.)

Internal Style Example (2)

```
20    <body>
21        <!-- this attribute applies the .special style class -->
22        <h1 class = "special">Deitel & Associates, Inc.</h1>
23
24        <p>Deitel & Associates, Inc. is an authoring and
25            corporate training organization specializing in
26            programming languages, Internet and web technology,
27            iPhone and Android app development, and object
28            technology education.</p>
29
30        <h1>Clients</h1>
31        <p class = "special"> The company's clients include many
32            <em>Fortune 1000 companies</em>, government agencies,
33            branches of the military and business organizations.</p>
34    </body>
35 </html>
```

Fig. 4.3 | Embedded style sheet. (Part 2 of 3.)

Eksternal Style

- ❖ Mendefinisikan style sheets dalam dokumen lain (file lain) yang berisi hanya aturan penulisan style CSS
- ❖ **Keuntungan external style:**
 - ❖ Beberapa halaman web dapat menggunakan file style CSS yang sama
 - ❖ Perubahan satu baris kode style sheet akan mengubah style tampilan seluruh halaman web yang menggunakannya
- ❖ Link file css yang digunakan halaman web di deklarasikan di heading document

```
<head>
```

```
  <link rel="stylesheet" type="text/css"  
        href="your_style.css"/>
```

```
</head>
```

Eksternal Style

```
<head>  
  <link rel="stylesheet" type="text/css"  
        href="your_style.css"/>  
</head>
```

- ❖ **rel:** attribute declares the linked document to be a stylesheet for document
- ❖ **type:** attribute specifies the MIME type of the related document
- ❖ **href:** attribute provides the URL for the document containing the style sheet

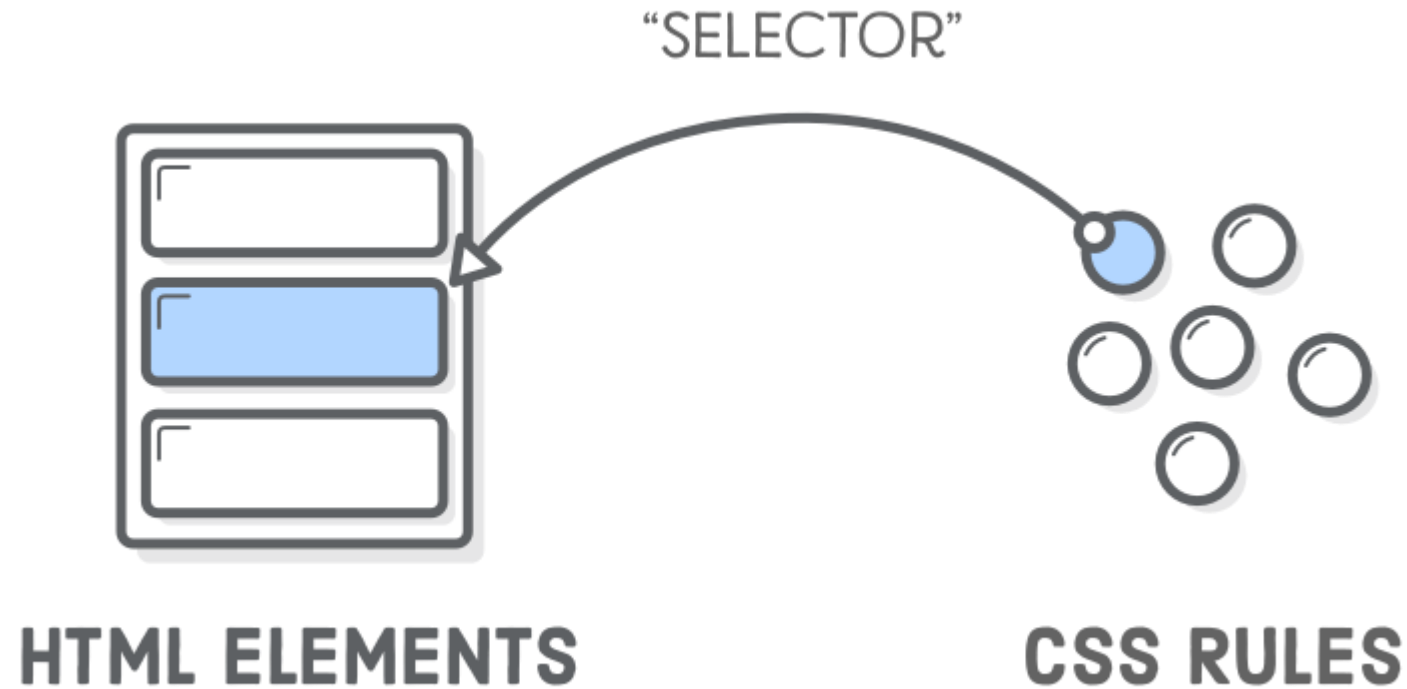
Eksternal Style

- File style sheet berektensi .css
- Letakan file dalam direktori css/

```
/praktikum02/  
  | --- index.html  
  | --- css/  
    | --- style.css  
    | --- bootstrap.css  
  | --- assets/  
    |--- img/  
      | --- bg.gif
```

```
<head>  
  <link rel="stylesheet" type="text/css" href="css/style.css"/>  
  <link rel="stylesheet" type="text/css" href="css/bootstrap.css"/>  
</head>
```

Type of Selector



1. Element Selector
2. ID Selector
3. Class Selector


Type of Selector

1. Element Selector

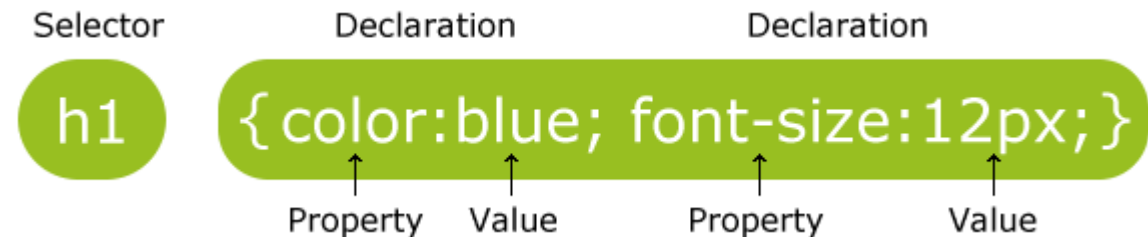
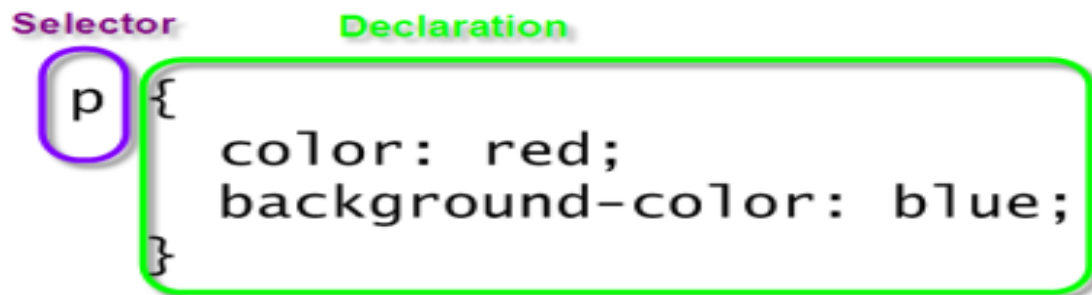
2. ID Selector

3. Class Selector

```
<style type="text/css">
  p {
    margin-left: 1.5em;
  }
  #nf {
    color:blue;
    text-align:center;
  }
  .ganjil{
    color:yellow;
    background-color: black;
  }
</style>
```



Selector Style Rule



Element Selector

- Style dasar (default) dari sebuah Selector
- Misal :
 - Default dari semua paragraph (<p>) dalam dokumen html akan diset dengan style css : warna merah dan font : arial
`p { color : red ; font-family : arial ; }`
 - Default dari tag html table dengan border : 1px solid #C00;



Element Selector : Selector String

- Single element type:

```
p { font-size:smaller; letter-spacing:1em }
```

- Multiple element types:

```
h1,h2,h3,h4,h5,h6 { background-color:purple }
```

- All element types:

```
* { font-weight:bold }
```

- Specific elements by id:

```
#p1, #p3 { background-color:aqua }
```

ID Selector

- The id **selector is written** using a “#” followed by the id value.



- Note: Class values are **case-sensitive**.
Browsers will interpret “a” and “A” differently.
- Note : do not start the name of ID with number, it will not work with Mozilla/firefox

ID Selector

Selector ID pada style sheet dipetakan dengan menggunakan tanda pagar # untuk value dari property ID tag html

```
#alt
{
  color:blue;
  text-align:left;
  font-size:100%;
}

<p id=alt>This is some blue blue text
from Reference Designer</p>
```

Id selector

Id tells which style to use

CSS ID Selector

ID Selector : Example

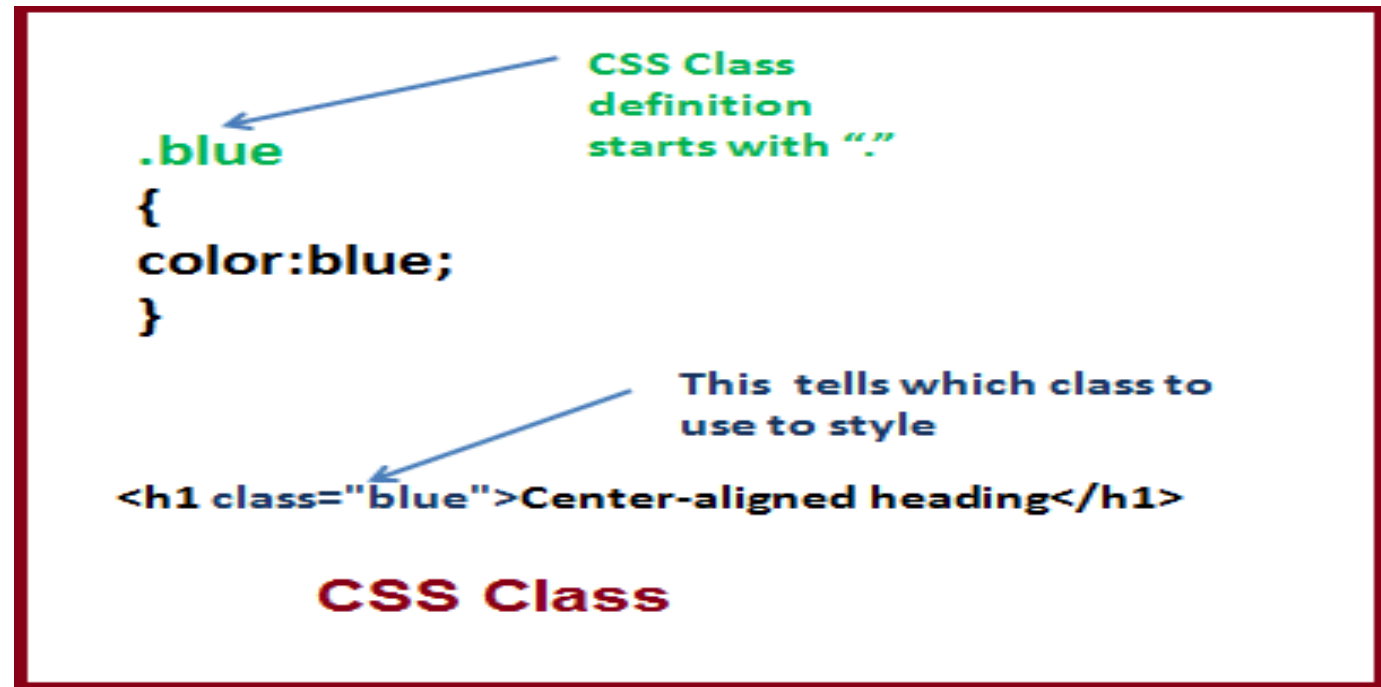
```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <title> Internal Style </title>

  <style>
    #jdlnf{
      text-align:center;
      color:blue;
      font-family: sans-serif;
    }

    #txttnf{
      text-align:justify;
      color:blue;
      font-family: sans-serif;
    }
  </style>
</head>
<body>
  <h1 id="jdlnf">STT Terpadu Nurul Fikri</h1>
  <p id="txttnf">
    Kampus IT Berlokasi di kota Depok ...
  </p>
</body>
</html>
```

Class Selector

Selector class digunakan untuk style element-element yang telah ditentukan dengan menggunakan atribut class. pada style sheet class didefinisikan menggunakan tanda titik . sebelum nama selector class

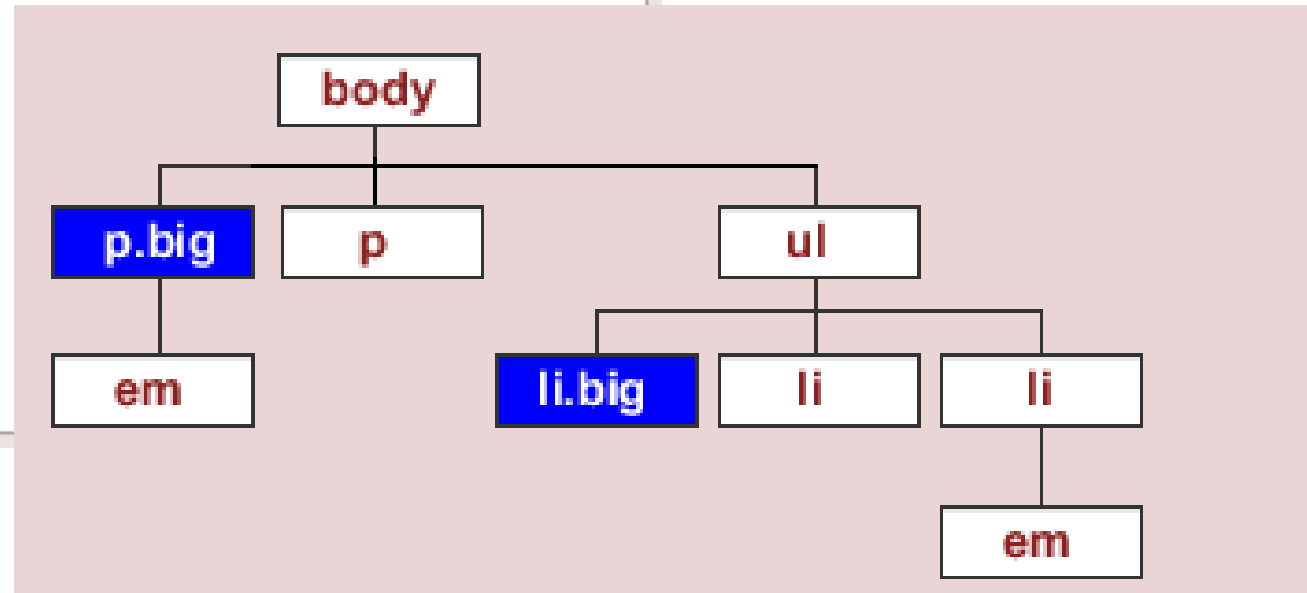


Class Selector

- Class selector dapat digunakan pada lebih dari satu target element HTML yang memiliki atribut class yang sama

```
.big { font-size: 110%; font-weight: bold; }
```

```
<body>
<p class="big">This is some <em>text</em></p>
<p>This is some text</p>
<ul>
<li class="big">List item</li>
<li>List item</li>
<li>List <em>item</em></li>
</ul>
</body>
```



Kombinasi Element Selector & Class Selector

- Kombinasi antara element selector dan class selector dapat diterapkan, dengan menambahkan notasi titik (.) antara element selector dan nama class selector

```
div.big { color: blue; }  
td.big { color: yellow; }  
label.big { color: green; }  
form.big { color: red; }
```

- Contoh:

```
.big { font-size: 110%; } /* affects p and li */  
p.big { font-weight: bold; } /* affects p only */
```

Kombinasi Multiple Class Selector

- Salah satu kekuatan dari class selector adalah kita bisa menerapkan multiple class pada dokumen HTML
- Misal kita ingin ada dua rule style untuk sebuah element HTML

```
<p class="big indent">
```

```
.big { font-weight: bold; }
```

```
.indent { padding-left: 2em; }
```

Class Selector Tidak menggantikan element HTML (1)

- Tidak disarankan menggunakan class selector untuk style yang sama untuk beberapa element HTML
- Misal konten elemen HTML <div> dan <p> akan digunakan style seperti sebuah heading

```
<div class="heading">Heading here</div>

.heading
{
font-weight: bold;
font-size: 140%;
color: #600;
}
```

- Problem untuk beberapa browser tidak mengenali style sheet <div> atau <p> diatas untuk style heading.
- Anda harus menggunakan element HTML yang benar pada contoh diatas gunakan element HTML heading (h1, h2, ..)

Class Selector Tidak menggantikan element HTML (2)

- Penerapan class selector / element HTML yang benar, contoh kasus

```
<h2>Heading here</h2>
```

```
h2
{
  font-weight: bold; /* should not really be required */
  font-size: 140%;
  color: #600;
}
```

Or, if you need a specific heading style for one area of your page:

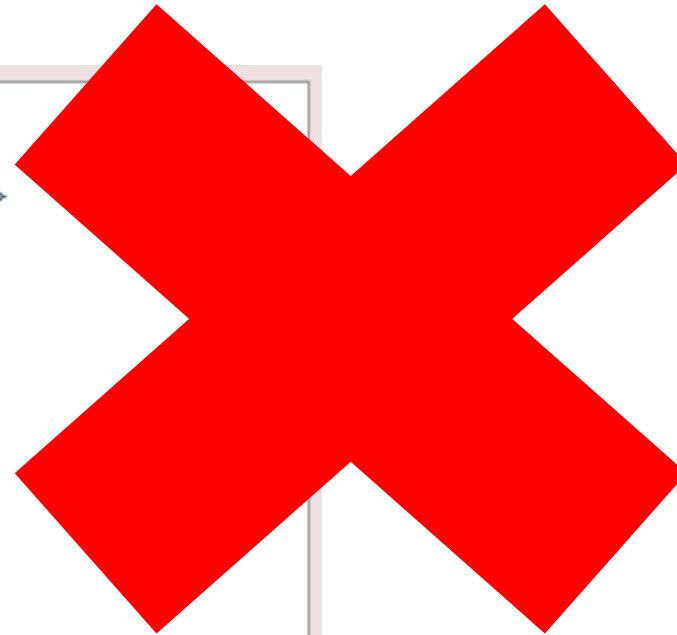
```
<h2 class="sidenav">Heading here</h2>
```

```
h2.sidenav
{
  font-weight: bold;
  font-size: 140%;
  color: #600;
}
```

Less Class (1)

- Class selector dapat digunakan berulang2 atau sering digunakan (overused) dalam beberapa selector
- Misalnya dalam range element HTML <div> menggunakan beberapa class selector

```
<div class="sidenav">  
<h2 class="sideheading">Site navigation</h2>  
<ul class="sidelist">  
<li class="sideitem">List item</li>  
<li class="sideitem"><a href="#"><span  
class="sidelink">List item</span></a></li>  
<li class="sideitem">List item</li>  
</ul>  
</div>
```



Less Class (2)

- Penggunaan tepat class selector yang berulang2

```
<div class="sidenav">
<h2>Site navigation</h2>
<ul>
<li>List item</li>
<li><a href="#">List item</a></li>
<li>List item</li>
</ul>
</div>
```

```
div.sidenav { blah } /* styles overall div */
div.sidenav h2 { blah } /* styles h2 within the div */
div.sidenav ul { blah } /* styles ul within the div */
div.sidenav li { blah } /* styles li within the div */
div.sidenav li a { blah } /* styles a within li within
the div */
```

http://css.maxdesign.com.au/selectutorial/selectors_class.htm

Question ?

- Apa perbedaan penggunaan ID Selector dan Class Selector pada style sheet ?

Pseudo Class

https://www.w3schools.com/css/css_pseudo_classes.asp

- CSS Pseudo-class adalah selector dalam CSS yang berfungsi memberikan efek pada bagian HTML yang tidak bisa diakses dengan selector biasa.
- Berikut adalah pseudo-class yang biasa digunakan:
 - **:link** : untuk menambahkan style pada link yang belum pernah di kunjungi atau pernah di klik
 - **:hover** : untuk menambahkan style pada elemen pada saat mouse berada di atasnya
 - **:active** : untuk menambahkan style pada elemen yang sedang aktif
 - **:visited** : untuk menambahkan style pada link yang sudah pernah di kunjungi
- Rumus:

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

```
a:link { color:black }  
a:visited { color:yellow }  
a:hover { color:green }  
a:active { color:red }
```


CSS Font Properties

- A **font family** is a collection of related fonts (typically differ in size, weight, etc.)

```
<p style="font-family:'Jenkins v2.0'">
```

- font-family property can accept a list of families, including **generic** font families

```
font-family:"Edwardian Script ITC","French Script MT",cursive
```

- Note that most generic font can be easily set on Firefox and Chrome, but such option doesn't seem to be available on IE 7 and 8. IE will still default to something although maybe not what you had hoped for!

CSS Font Properties

- Many properties, such as `font-size`, have a value that is a **CSS length**

```
<div id="d1" style="font-size:12pt">  
  <div id="d2" style="font-size:2em">
```

- All CSS length values except 0 need units

TABLE 3.4: CSS length unit identifiers.

| Identifier | Meaning |
|------------|--|
| in | inches |
| cm | centimeters |
| mm | millimeters |
| pt | points: 1/72-inch |
| pc | picas: 12 points |
| px | pixel: typically 1/96-inch (see text). |
| em | 1em is roughly the height of a capital letter in the reference font (see text). |
| ex | 1ex is roughly the height of the lowercase 'x' character in the reference font (see text). |

CSS Font Properties

TABLE 3.5: Additional font style properties.

| Property | Possible values |
|--------------|---|
| font-style | normal (initial value), <i>italic</i> (more cursive than normal), or <i>oblique</i> (more slanted than normal). |
| font-weight | bold or normal (initial value) are standard values, although other values can be used with font families having multiple gradations of boldness (see CSS2 [W3C-CSS-2.0] for details). |
| font-variant | small-caps , which displays lowercase characters using uppercase glyphs (small uppercase glyphs if possible), or normal (initial value) |

CSS Font Properties

- Shortcut font

```
{ font: italic bold 12pt "Helvetica",sans-serif }
```



```
{ font-style: italic;  
  font-variant: normal;  
  font-weight: bold;  
  font-size: 12pt;  
  line-height: normal;  
  font-family: "Helvetica",sans-serif }
```

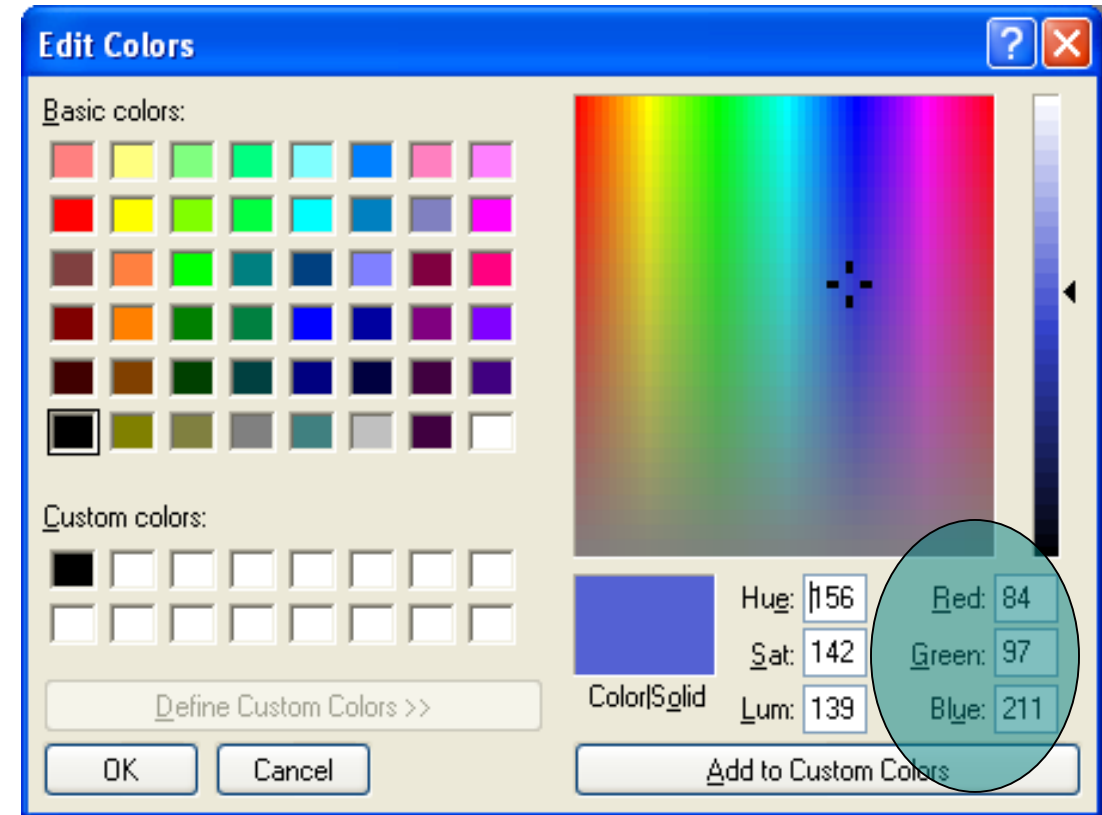
CSS Text Decoration

TABLE 3.6: Primary CSS text properties.

| Property | Values |
|------------------------------|---|
| <code>text-decoration</code> | <code>none</code> (initial value), <code>underline</code> , <code>overline</code> , <code>line-through</code> , or space-separated list of values other than <code>none</code> . |
| <code>letter-spacing</code> | <code>normal</code> (initial value) or a length representing additional space to be included between adjacent letters in words. Negative value indicates space to be removed. |
| <code>word-spacing</code> | <code>normal</code> (initial value) or a length representing additional space to be included between adjacent words. Negative value indicates space to be removed. |
| <code>text-transform</code> | <code>none</code> (initial value), <code>capitalize</code> (capitalizes first letter of each word), <code>uppercase</code> (converts all text to uppercase), <code>lowercase</code> (converts all text to lowercase). |
| <code>text-indent</code> | length (initial value 0) or percentage of box width, possibly negative. Specify for block elements and table cells to indent text within first line box. |
| <code>text-align</code> | <code>left</code> (initial value for left-to-right contexts), <code>right</code> , <code>center</code> , or <code>justified</code> . Specify for block elements and table cells. |
| <code>white-space</code> | <code>normal</code> (initial value), <code>pre</code> . Use to indicate whether or not white space should be retained. |

CSS Text Color

- Property color
- Two primary ways of specifying colors:
 - Color name: black, gray, silver, white, red, lime, blue, yellow, aqua, fuchsia, maroon, green, navy, olive, teal, purple, full list at <http://www.w3.org/TR/SVG11/types.html#ColorKeywords>
 - red/green/blue (RGB) values

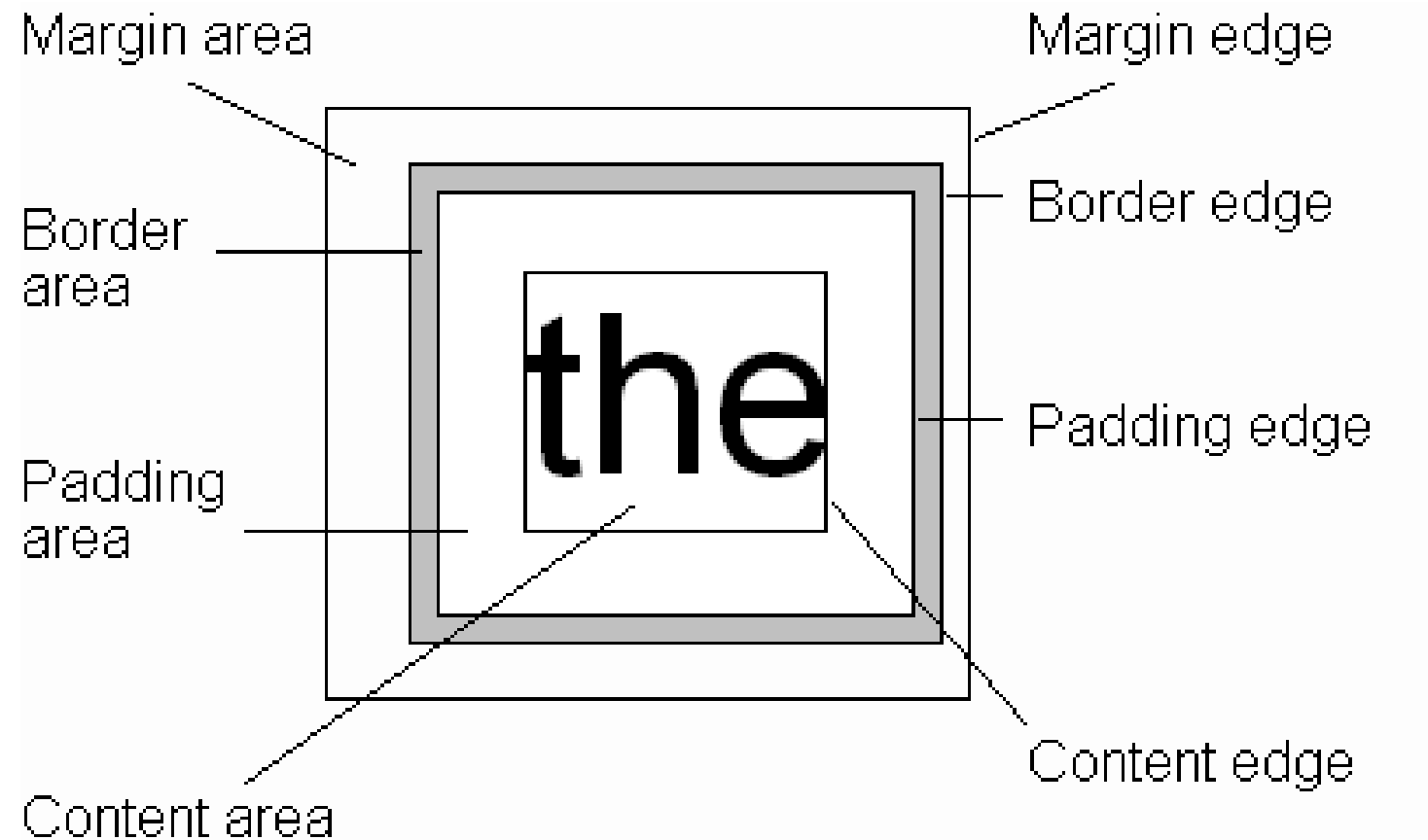


CSS Text Color

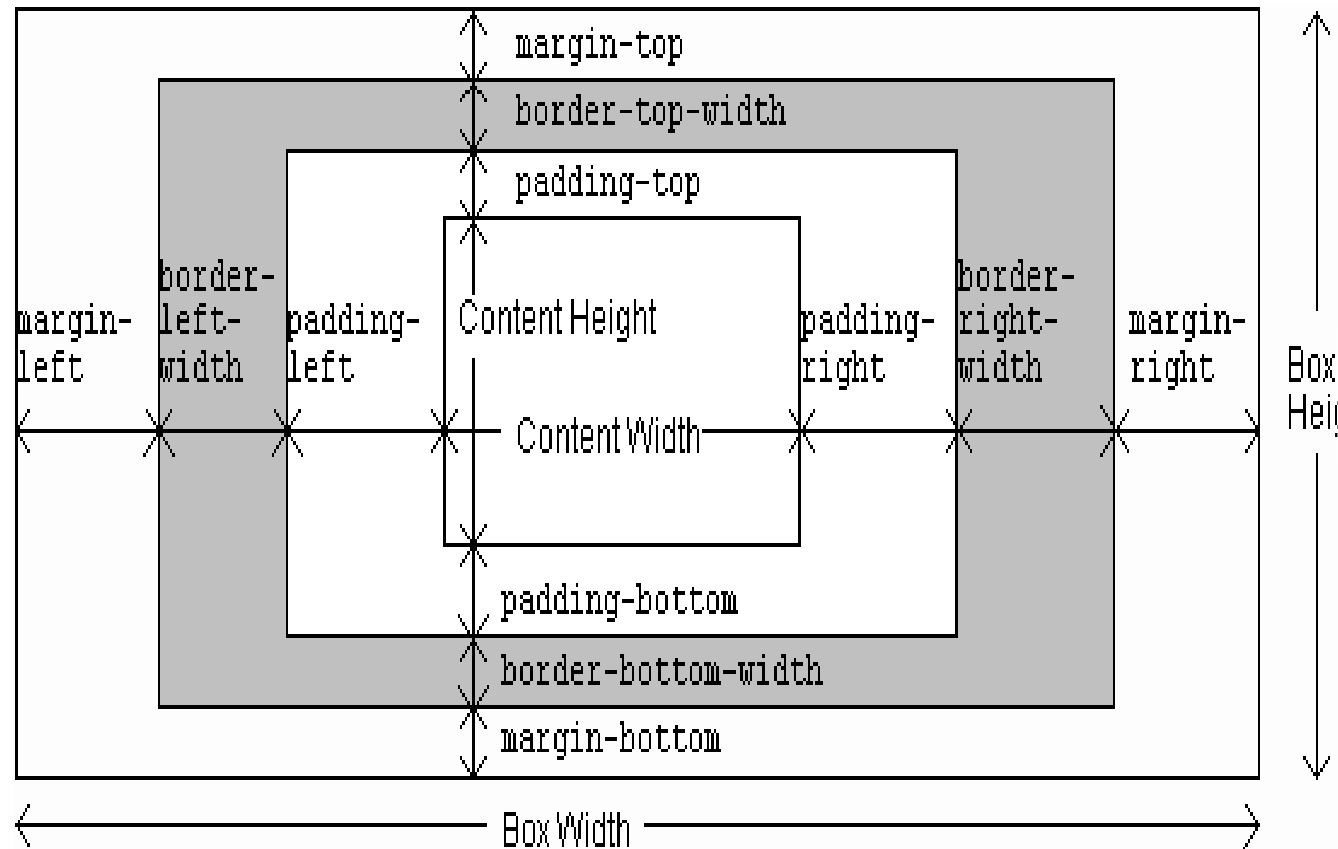
TABLE 3.7: Alternative formats for specifying numeric color values.

| Format | Example | Meaning |
|----------------------------------|---------------------------------|---|
| Functional, integer arguments | <code>rgb(255,170,0)</code> | Use arguments as RGB values. |
| Functional, percentage arguments | <code>rgb(100%,66.7%,0%)</code> | Multiply arguments by 255 and round to obtain RGB values (at most one decimal place allowed in arguments). |
| Hexadecimal | <code>#ffaa00</code> | The first pair of hexadecimal digits represents the red intensity, second and third represent green and blue, respectively. |
| Abbreviated hexadecimal | <code>#fa0</code> | Duplicate the first hexadecimal digit to obtain red intensity, duplicate second and third to obtain green and blue, respectively. |

CSS Box Model



CSS Box Model



```
span { margin-left: 1cm;
border-left-width: 10px;
border-left-color: silver;
border-left-style: solid;
padding-left: 0.5cm;
border-right-width: 5px;
border-right-color: silver;
border-right-style: solid }
```

CSS Box Model

TABLE 3.9: Basic CSS style properties associated with the box model.

| Property | Values |
|--|---------------------------------------|
| <code>padding-{top,right,bottom,left}</code> | CSS length (Sec. 3.6.2). |
| <code>padding</code> | One to four length values (see text). |

TABLE 3.10: Meaning of values for certain shorthand properties that take one to four values.

| Number of values | Meaning |
|------------------|---|
| One | Assign this value to all four associated properties (top , right , bottom , and left). |
| Two | Assign first value to associated top and bottom properties, second value to associated right and left properties. |
| Three | Assign first value to associated top property, second value to right and left , and third value to bottom . |
| Four | Assign first value to associated top property, second to right , third to bottom , and fourth to left . |

CSS Box Model

| | |
|---|---|
| <code>border-{top,right,bottom,left}-width</code> | <code>thin</code> , <code>medium</code> (initial value), <code>thick</code> , or a length. |
| <code>border-width</code> | One to four <code>border-*-width</code> values. |
| <code>border-{top,right,bottom,left}-color</code> | Color value. Initial value is value of element's color property. |
| <code>border-color</code> | <code>transparent</code> or one to four <code>border-*-color</code> values. |
| <code>border-{top,right,bottom,left}-style</code> | <code>none</code> (initial value), <code>hidden</code> , <code>dotted</code> , <code>dashed</code> , <code>solid</code> , <code>double</code> , <code>groove</code> , <code>ridge</code> , <code>inset</code> , <code>outset</code> . |
| <code>border-style</code> | One to four <code>border-*-style</code> values. |

CSS Box Model

| | |
|---|--|
| <code>border-{top,right,bottom,left}</code> | One to three values (in any order) for <code>border-*-width</code> , <code>border-*-color</code> , and <code>border-*-style</code> . Initial values are used for any unspecified values. |
| <code>border</code> | One to three values; equivalent to specifying given values for each of <code>border-top</code> , <code>border-right</code> , <code>border-bottom</code> , and <code>border-left</code> . |
| <code>margin-{top,right,bottom,left}</code> | <code>auto</code> (see text) or length. |
| <code>margin</code> | One to four <code>margin-*</code> values. |

```
{ border: 15px solid;  
  border-left: 30px inset red;  
  color: blue }
```

Left border is 30px wide,
inset style, and red

Background

- **background-color**

- Specifies background color for content, padding, and border areas
- Margin area is always transparent
- Not inherited; initial value transparent

```
<body style="background-color:cyan">
```

- **background-image**

- Specifies (using `url()` function) image that will be **tilled** over an element

```
<body style="background-image:url('CucumberFlowerPot.png')">
```

Referensi

- CSS : <https://www.w3schools.com/css/default.asp>
- CSS3 : https://www.w3schools.com/css/css3_intro.asp
- CSS Template : https://www.w3schools.com/css/css_templates.asp
- CSS Reference Sintax: <https://www.w3schools.com/cssref/default.asp>