

Hypertekst & hypermedia

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Tworzenie stron

HTML

content

CSS

presentation

JavaScript

action

CSS Cascading Style Sheet

Mechanism, language for defining the style of presentation of documents on the Internet, defining their graphic layout

The preferred way to describe the presentation of HTML documents, ...

It allows for consistent formatting of a set of documents

Easier modification of the pages' appearance

It does not exist independently - closely related to the language of the document's structure description

Why CSS?

separation of the design part from the content part.

control over the method of the final presentation of the document

shorter time for the "care" of the page by the author

different formatting for different devices

Adding styles to documents

External style sheets

Internal CSS

Inline styles

Adding styles to documents

metodo
raccomandato

External
style sheets

```
<html>
  <head>
    <title>My hobby</title>
    <link rel="Stylesheet" type="text/css" href="Style.css">
  </head>

  <body>

    body
    {
      margin-top : 5px;
      padding : 0;
      text-align : left;
      background : #333333;
      border-radius: 20px ;
    }
    h1 {
      text-align:left;
      vertical-align:middle;
      font-family: 'Palatino Linotype', "Times New Roman", Verdana;
      color: #555555;
      font-style: italic;
      font-weight: bold;
    }
    ul {
      margin: 0;
      padding: 0;
      list-style: none;
      width: 200px;
      border-bottom: 1px solid #565656;
    }
    ul li {
      position: relative;
    }
  }
```

Da non usare

Adding styles to documents

Internal CSS

```
<!DOCTYPE html>
<html>
<head>
<title>My hobby</title>
<style>
body
{
    margin-top : 5px;
    padding : 0;
    text-align : left;
    background : #333333;
    border-radius: 20px ;
}
h1 {
    text-align:left;
    vertical-align:middle;
    font-family: 'Palatino Linotype', "Times New Roman", Verdana;
    color: #555555;
    font-style: italic;
    font-weight: bold;
}
ul {
    margin: 0;
    padding: 0;
    list-style: none;
    width: 200px;
    border-bottom: 1px solid #565656;
}
```

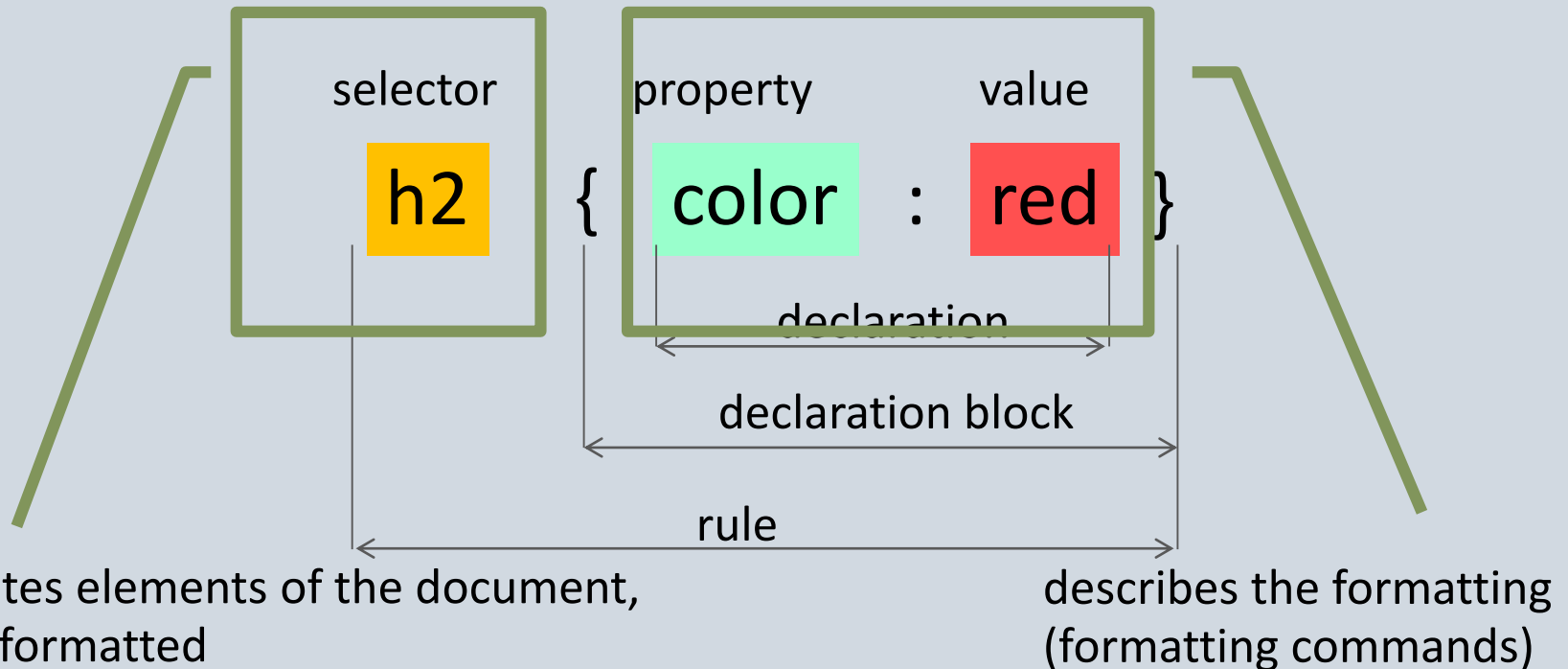
Dan non usare MAI (ma quello con la priorità più alta)

Adding styles to documents

Inline styles

```
<body>  
  <div style="text-align:center; border: 1px solid black;">  
    An example of inline style  
  </div>
```


Rules syntax



Selector:

name of the elements (`h1`, `p`, `div`, `a`, ...)

class (`.left`)

identifier (`#left`)

Rules syntax

grouping of selectors

```
p, h1 { color : red }
```

grouping of declarations

```
p { color : red ; font-style : italic ; }
```

Types of selectors

simple selector

```
<html>
  <head>
    <title>My hobby</title>
    <style>
      p { color:red;    font-size:14pt; }
    </style>
  </head>
</body>

  HTML file wits CSS rules
  <p>
    An example of a formatted paragraph.
  </p>
</body>
</html>
```

HTML file wits CSS rules

An example of a formatted paragraph.

Types of selectors

universal selector

```
* { color:red; font-size:14pt; }
```

The universal selector, written "*", matches the name of any element type

- Use “**Universal selector**” if you want all the tags in your web documents have some common style (for example, all tags don't have any margin)

Leggi il testo! è autoesplicativo: span funziona solo all'interno di p! (come se fosse un figlio)

Types of selectors

Descendants

```
p span { color:red; font-size:14pt; }
```

```
<p> paragraph <span> with descendants selector </span> </p>  
<div> here the rule for span <span> doesn't work </span> </div>
```

paragraph with descendants selector

here the rule for span doesn't work

Types of selectors

Child

```
p > span { color:red; font-size:14pt; }
```

```
<p> paragraph <span> with descendants selector </span> </p>  
<div> here the rule for span <span> doesn't work </span> </div>
```

paragraph with descendants selector

here the rule for span doesn't work

Types of selectors

sibling

```
h2 + p { color:red; font-size:14pt }
```

```
<h2>Story</h2>  
<p>First paragraph</p>  
<p>Second paragraph</p>  
<p>Third paragraph</p>
```

Story

First paragraph

Second paragraph

Third paragraph

Se devi usarlo più di una volta

Types of selectors

Class

```
.red { color:red; font-size:14pt }  
  
h1.blue { color:blue }
```

- Use “**class selector**” if you want to apply the style for many (but not all) occurrences of a certain tag; *OR* if you want to apply the style for more than one type of tags

```
<h1 class="blue">Header</h1>  
<h2 class="red">Story</h2>  
<p>First paragraph</p>  
<p class="red">Second paragraph</p>  
<p>Third paragraph</p>
```

Header

Story

First paragraph

Second paragraph

Third paragraph

Types of selectors

ID

```
#red { color:red; font-size:14pt }  
  
h1#blue { color:blue }
```

- Use “**ID selector**” if you want to apply the style for only one occurrence of a certain tag

```
<h1 id="blue">Header</h1>  
<h2 >Story</h2>  
<p>First paragraph</p>  
<p id="red">Second paragraph</p>  
<p>Third paragraph</p>
```

Header

Story

First paragraph

Second paragraph

Third paragraph

Types of selectors

pseudo-classes

```
a {  
  font-size:12pt;  
  text-decoration:none;  
}  
  
a:link  
{  
  color:green;  
}  
  
a:visited  
{  
  color:yellow;  
}  
  
a:hover  
{  
  color:pink;  
  text-decoration:underline;  
}
```

```
<a href="https://www.eti.pg.gda.pl">Wydział ETI PG</a>
```

Wydział ETI PG

Wydział ETI PG

Types of selectors

pseudo-element

```
p::first-letter { color:red; font-size:24pt }
```

```
<h2 >Story</h2>  
<p>First paragraph</p>  
<p>Second paragraph</p>  
<p>Third paragraph</p>
```

Story

First paragraph

Second paragraph

Third paragraph

Types of selectors

selektory atrybutu

```
<style>  
  input[type="submit"] {color:red;}  
</style>
```

Dane osobowe: _____

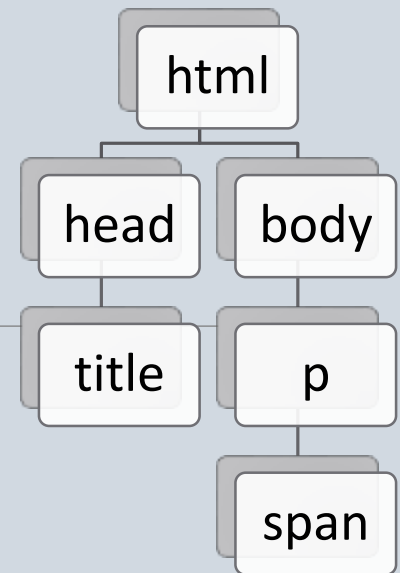
Nazwisko i imię:

email:

Send

Potwierd

Inheritance



```
p {color:green}
```

Story

paragraph with span

```
<p> paragraph <span> with span </span> </p>
```

Text properties

- text-indent, text-align, text-decoration, text-shadow, letter-spacing, text-transform
- word-spacing
- letter-spacing
- text-decoration (none, underline, overline, line-through, blink)
- vertical-align
- text-transform (capitalize, uppercase, lowercase)
- text-align
- text-indent
- line-height

Font properties

font (serif, ...)

font-style (normal, italic, ...)

font-variant (normal, small-caps, ...)

font-weight (normal, bold, 100, ...)

font-size (small, medium, large, ...)

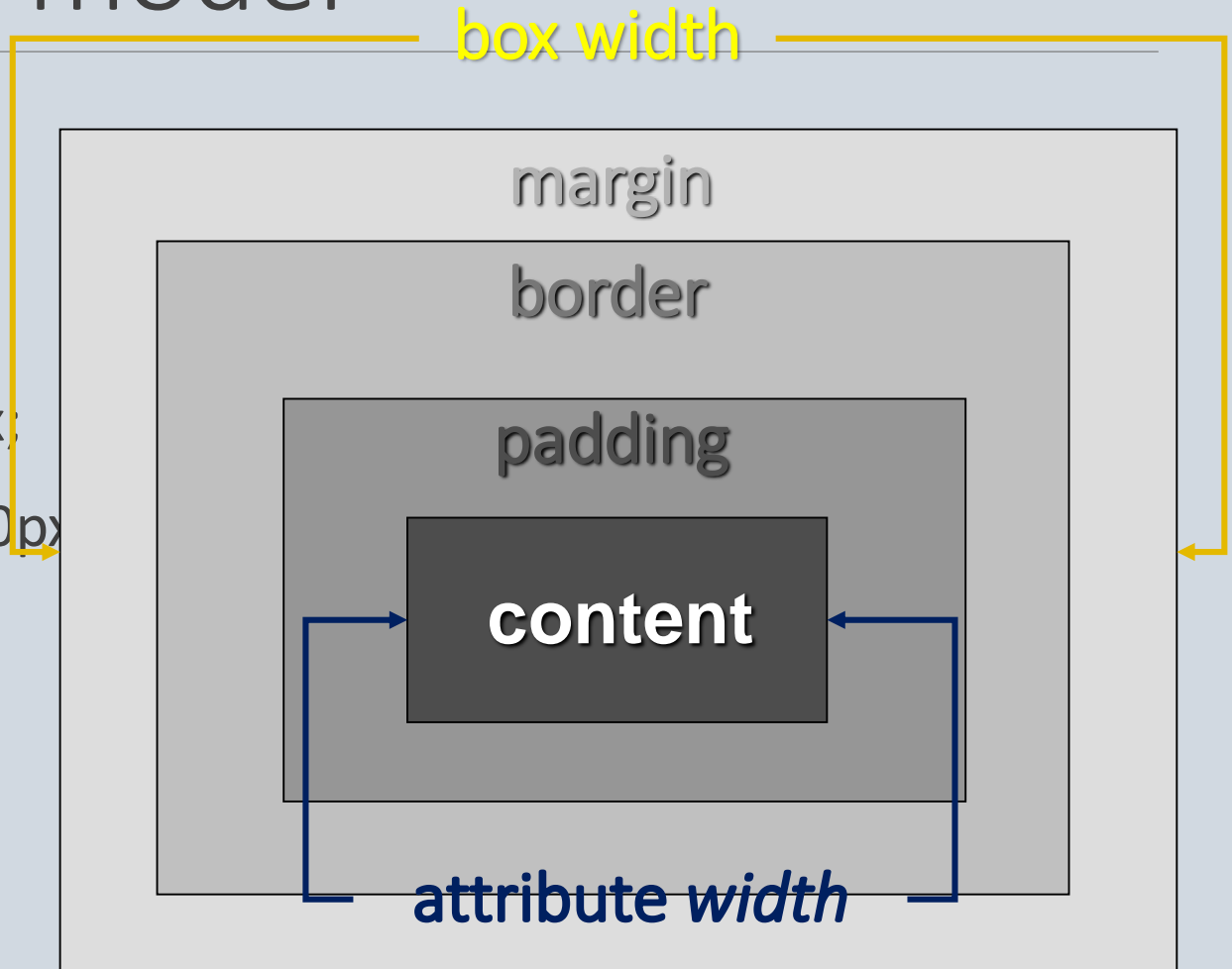
font-family

Color properties

- color
- background
- background-color
- background-image
- background-repeat
- background-attachment
- background-position

The box model

padding : 15px;
margin : 30px;
border-left : 1px;
margin-top : 100px



Positioning

static

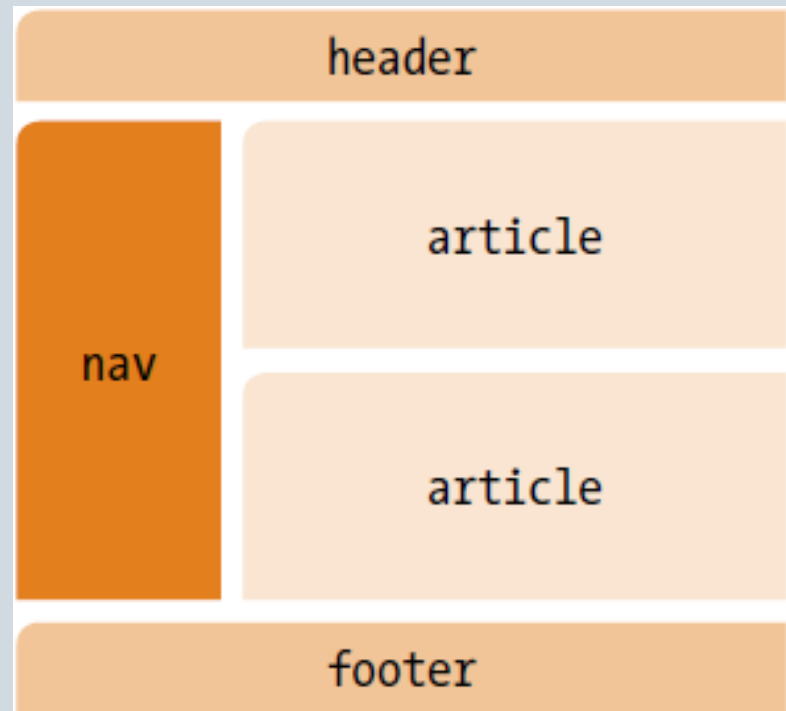
absolute

relative

fixed

z-index

float



Positioning

static

- normal positioning

```
selector { position: static; other parameters }
```



```
img  
{  
    position: static;  
    left:70px;top:50px  
}
```

E' invisibile agli altri elementi

Positioning

absolute

- position of the element is determined by specifying the distance from the edges of the container (*left, right, top, bottom*).

```
selector { position: absolute; other parameters }
```



```
img  
{  
  position: absolute;  
  left:70px;top:50px  
}
```

Gli altri elementi sanno dell'elemento

Positioning

relative

- the position of the element is moved by the values specified in left, right, top and bottom relative to the initial position.

```
selector { position: relative; other parameters }
```



```
img  
{  
  position: relative;  
  left:70px;top:50px  
}
```

Positioning

fixed



- an element locked in a specific place on the screen, constantly visible and does not scroll with the rest of the page.

```
selector { position: fixed; other parameters }
```

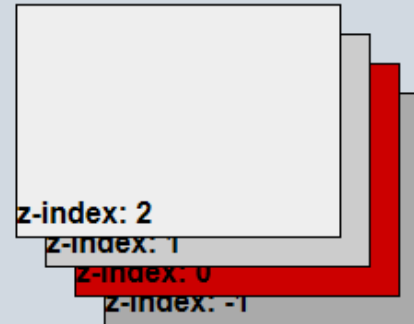


```
img
{
  position: fixed;
  left:70px;top:50px
}
```

Positioning

overlapping (z-index)

- defines the overlapping of elements



selector { position:type; other parameters; z-index: number }



```
img
{
  position:fixed;
  left:70px;top:50px
  z-index:-1;
}
```

Positioning

float

- setting a given element relative to elements that are adjacent to it



selector { float: right/left/none; }



```
img
{
  float: right;
  left: 70px; top: 50px
}
```


Transformations

translation

rotation

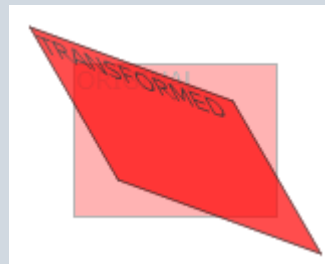
scale

skew

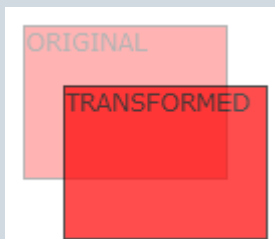
matrix



```
div {  
  -ms-transform: rotate(30deg); /* IE 9 */  
  -webkit-transform: rotate(30deg); /* Chrome, Safari, Opera */  
  transform: rotate(30deg);  
}
```



```
div {  
  -ms-transform: skew(30deg,20deg); /* IE 9 */  
  -webkit-transform: skew(30deg,20deg); /* Chrome, Safari, Opera */  
  transform: skew(30deg,20deg);  
}
```



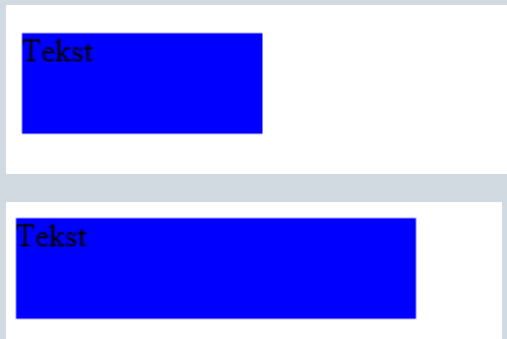
```
div {  
  -ms-transform: translate(50px,100px); /* IE 9 */  
  -webkit-transform: translate(50px,100px); /* Chrome, Safari, Opera */  
  transform: translate(50px,100px);  
}
```

Transitions

effects that let an element gradually change from one style to another

you must specify

- property
- duration



```
<style>
div {
  width: 120px;
  height: 50px;
  background: blue;
  /* For Safari 3.1 to 6.0 */
  -webkit-transition-property: width;
  -webkit-transition-duration: 1s;
  -webkit-transition-timing-function: linear;
  -webkit-transition-delay: 2s;
  /* Standard syntax */
  transition-property: width;
  transition-duration: 1s;
  transition-timing-function: linear;
  transition-delay: 1s;
}
div:hover {
  width: 200px;
}
</style>
</head>
<body>
<p>    </p>
<div>  Tekst</div>
<p></p>
</body>
```

Animations

the @keyframes rules specify the animation

the need to link the rule with the selector

- animation name
- duration



```
<style>
div {
  width: 100px;
  height: 100px;
  background: red;
  position: relative;
  /* Chrome, Safari, Opera */
  /* Standard syntax */
  animation-name: myfirst;
  animation-duration: 5s;
  animation-timing-function: linear;
  animation-delay: 2s;
  animation-iteration-count: infinite;
  animation-direction: alternate;
  animation-play-state: running;
}

/* Chrome, Safari, Opera */
/* Standard syntax */
@keyframes myfirst {
  0%   {background:red; left:0px; top:0px;}
  25%  {background:yellow; left:200px; top:0px;}
  50%  {background:blue; left:200px; top:200px;}
  75%  {background:green; left:0px; top:200px;}
  100% {background:red; left:0px; top:0px;}
}
</style>
</head>
<body>
<div></div>
</body>
```