



Mreže računala

Vježbe 10

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XHTML

- HTML == HyperText Markup Language
 - služi za definiciju strukture i sadržaja dokumenata na internetu
 - aktualna verzija: 4.01
- XHTML == XML HyperText Markup Language
 - "A reformulation of HTML in XML."
— W3C Recommendation @ <http://www.w3.org/TR/xhtml1/>

Važna napomena:

HTML/XHTML treba koristiti samo za strukturiranje i opisivanje sadržaja dokumenata!
(ne i za dizajn)

Što je XML?

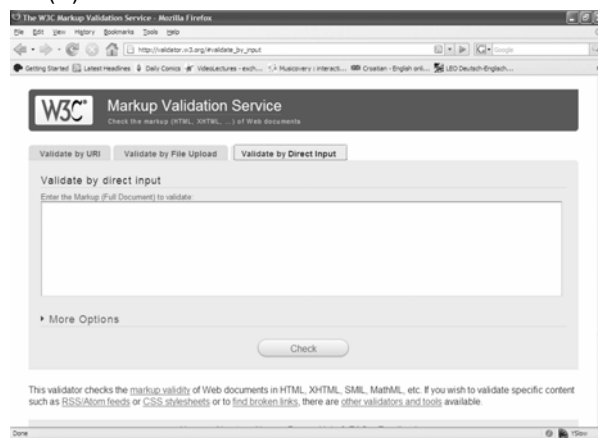
- XML == EXtensible Markup Language
- Općeniti markup jezik za strukturirano opisivanje podataka.
- Primjer:
 - `<?xml version="1.0" encoding="UTF-8"?>`
 - `<note>`
 - `<author>André Gide</author>`
 - `<quote>Believe those who are seeking the truth; doubt those who find it.</quote>`
 - `</note>`

Najvažnija pravila za XHTML

- Imena svih elemenata i atributa pišu se malim slovima
- Svi neprazni elementi (npr. `<p>`, ``) moraju imati zatvarajući tag (npr. `</p>`, ``), te biti dobro ugniježdeni
- Svi prazni elementi (npr. `br`, `hr`, `img`) moraju biti zatvoreni ili imati / na kraju (npr. `
`, `<hr />`, ``)
- Vrijednosti atributa pišu se unutar dvostrukih navodnika
- Tip dokumenta specificira se putem tzv. doctype deklaracije:
 - XHTML 1.0 Transitional
 - `<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN" "http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">`
 - XHTML 1.0 Strict
 - `<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Strict//EN" "http://www.w3.org/TR/xhtml1/DTD/xhtml1-strict.dtd">`
 - ...

(X)HTML validator

- <http://validator.w3.org/>
- Provjera markup validnosti (X)HTML dokumenata
 - putem URL-a
 - uploadom datoteke
 - direktnim unosom



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HTML primjer

- ```
<CENTER>
<img
src=http://upload.wikimedia.org/wikipedia/en/8/80/Garfield.JPG border=0 alt="Garfield"
width="193" height="262">
</center>

<hr size = 1>

Fact 1
<p>Garfield was born in the kitchen of Mama Leoni's Italian Restaurant and developed a
taste for lasagna the day he was born. This was revealed on a Garfield TV special called
Garfield: His nine lives. Ever since then, it has always been his favorite food.

Fact 2
<p>Garfield is not exclusively drawn by its creator. Jim Davis still writes and makes
rough sketches for the strip, but his company, Paws, employs cartoonists and assistants
who do most of the work of the finished drawing and inking, while Davis's final job is
usually confined to approving and signing the finished strip. Otherwise, Davis spends
most of his time managing the business and merchandising of Garfield.

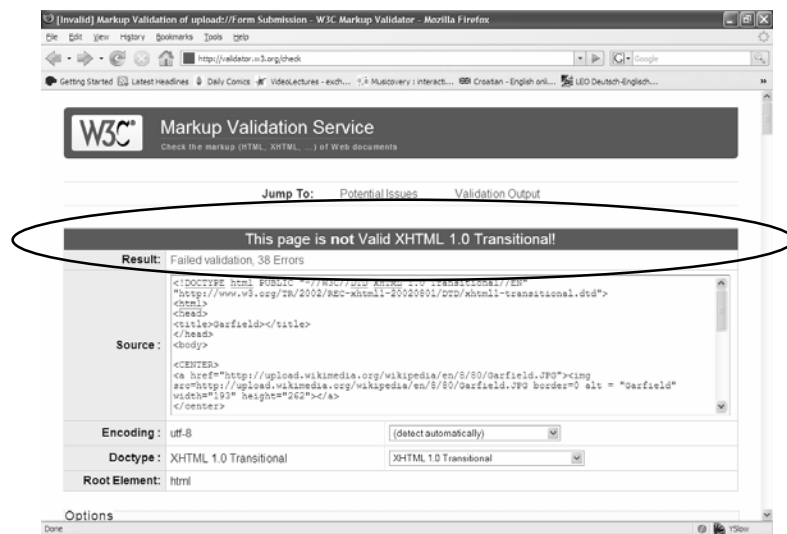

```

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## Da li se ovaj HTML kod validira kao XHTML?



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## XHTML-iziranje primjera [1]

- ```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
"http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">
<html xmlns="http://www.w3.org/1999/xhtml" xml:lang="en">
<head>
<title>Garfield</title>
</head>

<body>
...slijedeći slide...
</body>
</html>
```

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XHTML-iziranje primjera [2]

```
<div align="center">  
<a href="http://upload.wikimedia.org/wikipedia/en/8/80/Garfield.JPG"></a>  
</div>
```

```
<hr />
```

```
<font size = "+3" color = "#990000"><b>Fact 1</b></font>
```

```
<p>Garfield was born in the kitchen of Mama Leoni's Italian Restaurant and developed a  
taste for lasagna the day he was born. This was revealed on a Garfield TV special called  
Garfield: His nine lives. Ever since then, it has always been his favorite food.</p>
```

```
<br />
```

```
<br />
```

```
<font size = "+3" color = "#990000"><b>Fact 2</b></font>
```

```
<p>Garfield is not exclusively drawn by its creator. Jim Davis still writes and makes  
rough sketches for the strip, but his company, Paws, employs cartoonists and assistants  
who do most of the work of the finished drawing and inking, while Davis's final job is  
usually confined to approving and signing the finished strip. Otherwise, Davis spends  
most of his time managing the business and merchandising of Garfield.</p>
```

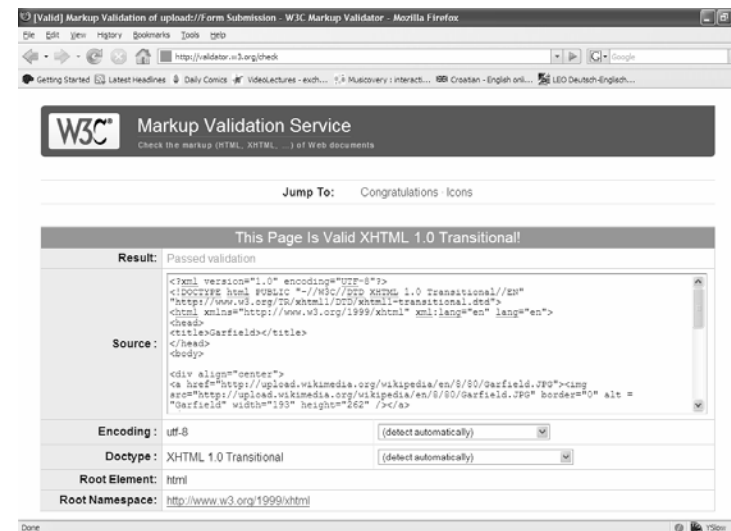
```
<br />
```

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Validan XHTML kod!



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Zapravo...

The screenshot shows the W3C Markup Validation Service interface. The main heading reads "This page is not Valid XHTML 1.0 Strict!". Below this, the "Result" section indicates "Failed validation, 9 Errors". A text box is overlaid on the screenshot, containing the following text:

- XHTML Strict == XHTML Transitional u kojem:
 - nisu dozvoljeni neki prezentacijski elementi i atributi
 - postoje stroža pravila o gniježdenju elemenata
- <http://www.zvon.org/xxl/xhtmlReference/Output/comparison.html>

The screenshot also shows the "Source" section with the HTML code and the "Root Element" and "Root Namespace" information.

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Literatura za XHTML

- XHTML materijali za ex. RP1 (by Vedran Čačić)
 - <http://web.math.hr/~veky/rp1/vjezbe3/>
- W3Schools XHTML Tutorial
 - <http://www.w3schools.com/xhtml/default.asp>
- New York Public Library XHTML Guidelines and Benefits
 - <http://www.nypl.org/styleguide/xhtml/index.html>
- XHTML 1.0 W3C Recommendation
 - <http://www.w3.org/TR/xhtml1/>
- XHTML 1.0 reference with examples
 - <http://www.zvon.org/xxl/xhtmlReference/Output/index.html>

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CSS

- CSS == Cascading Style Sheets
- Stilske kartice (engl. style sheets) opisuju kako (X)HTML dokument treba prikazati
 - sastoje se od niza pravila koje se primjenjuju na elemente stranice
 - kontroliraju razmještaj elemenata na stranici, njihov stil i prikaz

Važna napomena:

Sve stilske aspekte (X)HTML dokumenta treba zapisati korištenjem CSS-a!
(na taj način stil je moguće u potpunosti odvojiti od sadržaja)

Demonstracija mogućnosti CSS-a

- CSS Zen Garden
 - <http://www.csszengarden.com/>





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Status CSS-a na početku 2008.

- Standardizirana verzija: CSS 1
- Pred standardizacijom: CSS 2.1
- U pripremi: CSS 3
- Podrška web preglednika:
 - Firefox 2.x – kompletni CSS 1, veći dio CSS 2.1
 - Opera 9.x – kompletni CSS 1, veći dio CSS 2.1
 - Internet Explorer 6+ – kompletni CSS 1 (s nekim bugovima), manji dio CSS 2.1
 - Internet Explorer 7 – neka poboljšanja

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Standards vs. Quirks

- Moderni web preglednici podržavaju dva moda rada: Standards i Quirks
- Standards mod
 - za prikazivanje koda koji je u skladu sa (nekim) standardom
 - nužno potrebno navesti doctype deklaraciju
- Quirks mod
 - za prikazivanje starog koda ili koda koji nije u skladu sa (nekim) standardom

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Gdje se sve mogu nalaziti CSS pravila

- Unutar elemenata
 - korištenjem atributa style na (X)HTML tagu
 - `<p style="color: #990000;"> ... </p>`
- Umetnuti u vlastitom style elementu
 - `<style> p {color: #990000;} </style>`
- U vanjskoj datoteci povezanoj s (X)HTML dokumentom
 - `<link rel="stylesheet" href="stil.css" type="text/css" />`

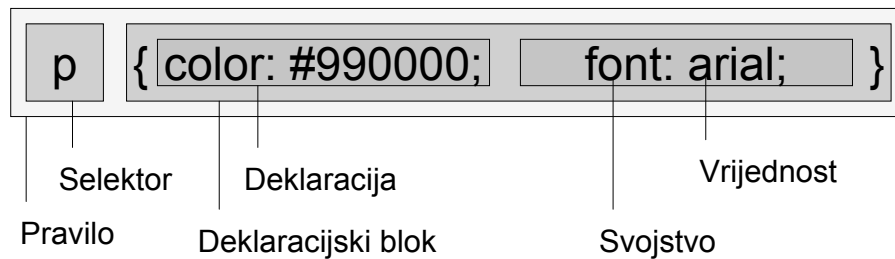
preferirani način

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Struktura CSS pravila



Osnovni tipovi CSS selektora

Tag

```
<p>Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed do  
eiusmod tempor incididunt ut labore et dolore magna aliqua.</p>  
<p>Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris  
nisi ut aliquip ex ea commodo consequat.</p>
```

```
p {  
  color: #990000;  
}
```

Class

```
<p class="latin">Lorem ipsum dolor sit amet, consectetur adipisicing elit,  
sed do eiusmod tempor incididunt ut labore et dolore magna aliqua.</p>  
<p class="latin">Ut enim ad minim veniam, quis nostrud exercitation  
ullamco laboris nisi ut aliquip ex ea commodo consequat.</p>
```

```
p.latin {  
  color: #990000;  
}
```

Id

```
<p id="latin1">Lorem ipsum dolor sit amet, consectetur adipisicing elit,  
sed do eiusmod tempor incididunt ut labore et dolore magna aliqua.</p>  
<p id="latin2">Ut enim ad minim veniam, quis nostrud exercitation  
ullamco laboris nisi ut aliquip ex ea commodo consequat.</p>
```

```
p#latin1, #latin2 {  
  color: #990000;  
}
```

Još o CSS selektorima

```
P { color: black; } /* Tag */  
P, H1, H2 { color: black; } /* Grupiranje */  
* { color: black; } /* Univerzalni selektor */  
P.urgent, .Error { color: black; } /* Selektor klase */  
#Menu { color: black; } /* Selektor id-a */  
*[title], A[href][title] { color: black; } /* Selektor atributa */  
A[title="home page"] { color: black; } /* Selektor atributa - egzaktni */  
A[title~="foo"] { color: black; } /* Selektor atributa - parcijalni */  
*[lang="en"] { color: black; } /* Selektor atributa - partikularni */  
UL LI UL { color: black; } /* Selektor potomka */  
P > STRONG { color: black; } /* Selektor djeteta */  
A:hover { color: black; } /* Selektor pseudoklase */  
P:first-letter { font-size: 200%; } /* Selektor pseudoelementa */
```

Česta svojstva u deklaracijama

background	background-attachment	background-color
background-repeat	border	bottom
color	cursor	display
float	font	font-family
font-size	font-style	font-weight
height	left	letter-spacing
line-height	list-style-image	list-style-position
list-style-type	margin	overflow
padding	position	right
text-align	text-decoration	text-indent
text-transform	top	vertical-align
visibility	white-space	width
word-spacing	word-wrap	z-index

Što označava "cascading" u CSS-u?

- Pravila se nasljeđuju od roditeljskih elemenata (dakle, propadaju prema "dolje")
- Što je CSS pravilo specifičnije, ima veći proritet
 - Pogledajte npr.
<http://web.math.hr/~veky/rp1/vjezbe4/vjezbe43.html>
za točnu formulu kojom se određuju prioriteti
- Ukoliko pravila imaju isti prioritet, primjenjuje se ono koje je posljednje specificirano

XHTML primjer

- ```
<div align="center">

</div>

<hr />

Fact 1
<p>Garfield was born in the kitchen of Mama Leoni's Italian Restaurant and developed a
taste for lasagna the day he was born. This was revealed on a Garfield TV special called
Garfield: His nine lives. Ever since then, it has always been his favorite food.</p>

Fact 2
<p>Garfield is not exclusively drawn by its creator. Jim Davis still writes and makes
rough sketches for the strip, but his company, Paws, employs cartoonists and assistants
who do most of the work of the finished drawing and inking, while Davis's final job is
usually confined to approving and signing the finished strip. Otherwise, Davis spends
most of his time managing the business and merchandising of Garfield.</p>


```

## Izbacivanje stilova [1]

- ```
<div id="header">
<a href="http://upload.wikimedia.org/wikipedia/en/8/80/Garfield.JPG"></a>
</div>

<h2 class="fact">Fact 1</h2>
<p>Garfield was born in the kitchen of Mama Leoni's Italian Restaurant and developed a
taste for lasagna the day he was born. This was revealed on a Garfield TV special called
Garfield: His nine lives. Ever since then, it has always been his favorite food.</p>

<h2 class="fact">Fact 2</h2>
<p>Garfield is not exclusively drawn by its creator. Jim Davis still writes and makes
rough sketches for the strip, but his company, Paws, employs cartoonists and assistants
who do most of the work of the finished drawing and inking, while Davis's final job is
usually confined to approving and signing the finished strip. Otherwise, Davis spends
most of his time managing the business and merchandising of Garfield.</p>
```

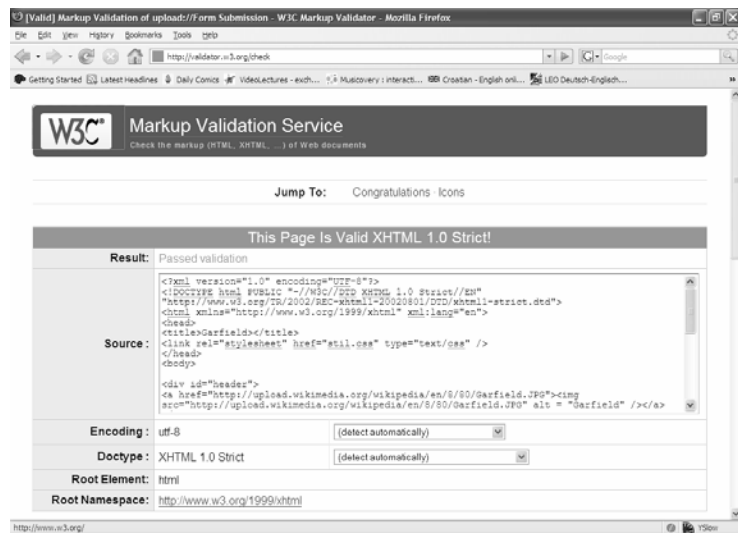
Izbacivanje stilova [2]

- ```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
"http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">
<html xmlns="http://www.w3.org/1999/xhtml" xml:lang="en">
<head>
<title>Garfield</title>
<link rel="stylesheet" href="stil.css" type="text/css" />
</head>

<body>

</body>
</html>
```

# Validan kod kao XHTML Strict!



# Definicija stilova pomoću CSS-a

## stil.css

```

• p {
 margin-bottom: 50px;
}

h2.fact {
 font-weight: bold;
 color: #990000;
 font-size: 200%;
}

#header {
 text-align: center;
 border-bottom-style: ridge;
 padding-bottom: 10px;
}

#garfield_img {
 border: none;
 width: 193px;
 height: 262px;
}

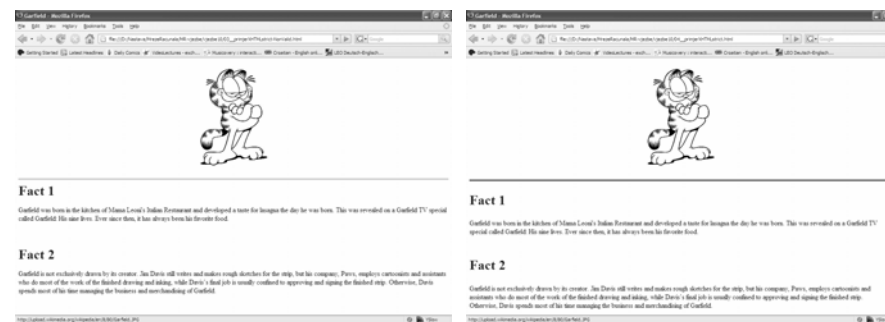
```

# CSS Validator

- <http://jigsaw.w3.org/css-validator/>



# Primjer: prije i poslije





## div i span (X)HTML elementi

- U Strict XHTML-u nisu dozvoljeni stilizirajući elementi, pa stilove primjenjujemo na generičke kontejnerske elemente kojima "obuhvatimo" elemente na koje želimo primijeniti stil
  - div – za blokovske elemente
  - span – za linijske elemente

• Primjer:

```
<p>Lorem ipsum dolor sit amet,
consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et
dolore magna aliqua.</p>
<div id="two-three">
<p>Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi
ut aliquip ex ea commodo consequat.</p>
<p>Duis aute irure dolor in reprehenderit in voluptate velit esse cillum
dolore eu fugiat nulla pariatur.</p>
</div>
<p>Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia
deserunt mollit anim id est laborum.</p>
```

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- CSS:

```
.begin-end {
font-size: 32px;
color: red;
background: black;
}
#two-three {
color: blue;
font-family: tahoma,verdana;
}
```

**Lorem** ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua.

Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat.

Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur.

Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est

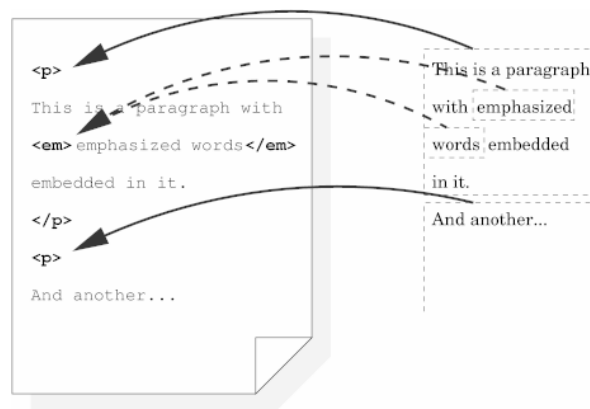
**laborum**

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## CSS box model [1]



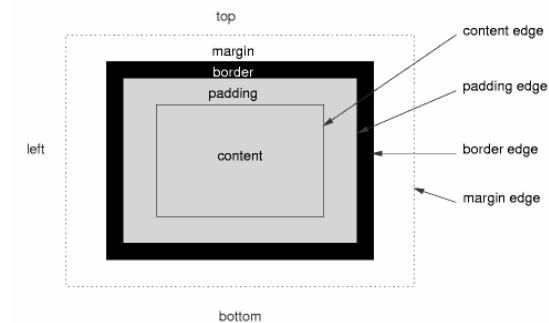
<http://www.w3.org/TR/css3-box/>

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## CSS box model [2]



Objašnjenje ovih pojmova:

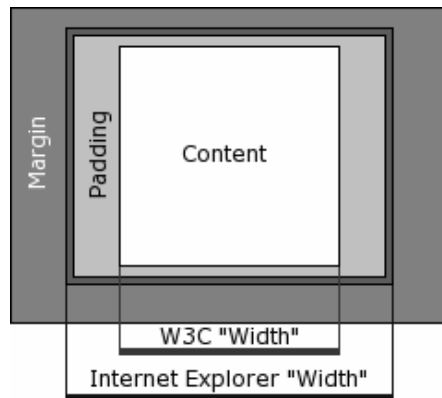
<http://web.math.hr/~veky/rp1/vjezbe4/vjezbe45.html>

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## Bug u implementaciji CSS-a kod Internet Explorera



[http://en.wikipedia.org/wiki/Internet\\_Explorer\\_box\\_model\\_bug](http://en.wikipedia.org/wiki/Internet_Explorer_box_model_bug)  
(do verzije 6 u Standards modu, te sve verzije u Quirks modu)

## Strukturiranje izgleda stranice

- Rasporedite dizajn stranice u sekcije
- Koristite div elemente kako biste definirali sekcije unutar (X)HTML dokumenta
- Stilizirajte sekcije pomoću CSS-a
- Koristite float svojstva kako biste pozicionirali sekcije
- Važna napomena:  
(X)HTML tabele treba koristiti samo za tabelarni prikaz podataka, ne i za strukturiranje izgleda web stranice.

## Float svojstvo

- Upotreba float svojstva omogućava svrstavanje elemenata na lijevu ili desnu stranu prozora web preglednika  
float: left | right | none | inherit
- Primjer: col1 i col2 bit će prikazani jedan do drugoga s lijeve strane, a col3 će biti gurnut na desnu stranu.  
<div id="col1" style="float:left;">...</div>  
<div id="col2" style="float:left;">...</div>  
<div id="col3" style="float:right;">...</div>
- Još primjera...

## Literatura za CSS

- CSS materijali za ex. RP1 (by Vedran Čačić)
  - <http://web.math.hr/~veky/rp1/vjezbe4/>
- W3Schools CSS Tutorial
  - <http://www.w3schools.com/css/>
- HTML Dog CSS tutorials
  - <http://www.htmldog.com/guides/cssbeginner/>
- W3C Cascading Style Sheets home page
  - <http://www.w3.org/TR/xhtml1/>
- CSS 2 reference with examples
  - <http://www.zvon.org/xxl/CSS2Reference/Output/index.html>
- Cascading Style Cheatsheet
  - <http://home.tampabay.rr.com/bmerkey/cheatsheet.htm>

## Preporuke: plug-inovi za Firefox

- Web Developer Toolbar
  - <http://addons.mozilla.org/en-US/firefox/addon/60>
- Firebug
  - <http://addons.mozilla.org/en-US/firefox/addon/1843>
- Html validator
  - <http://addons.mozilla.org/en-US/firefox/addon/249>
- CSS validator
  - <http://addons.mozilla.org/en-US/firefox/addon/2289>