

GESTIONE DEL BOX

Il box model

- Ogni elemento html è contenuto in un box rettangolare
- Le proprietà css sono applicate al box
 - width, height, padding, borders, e margins
- Visualizziamo i box con la proprietà border
 - border: 1px solid black;

The Back of the New \$20

Have you seen the "Series 2004 \$20 Notes"? The U.S. Treasury has rolled out yet another revamp of the U.S. twenty dollar bill in an effort to stop those pesky counterfeiters once and for all. It features high-tech fake-busting elements like a watermark, a security thread, and color-shifting ink. It also features crappy design.

I'm not going to concern myself here with a critique of the front of the bill (my friend Jeff says "it looks like it spilled on it."). It's the **back** of the note that's driving me crazy.

Too Many 20s



concern myself
the **back** of the

In particular, it's all those little 20s haphazardly sprinkled in the white space. They are nails-on-a-chalkboard to my design senses.

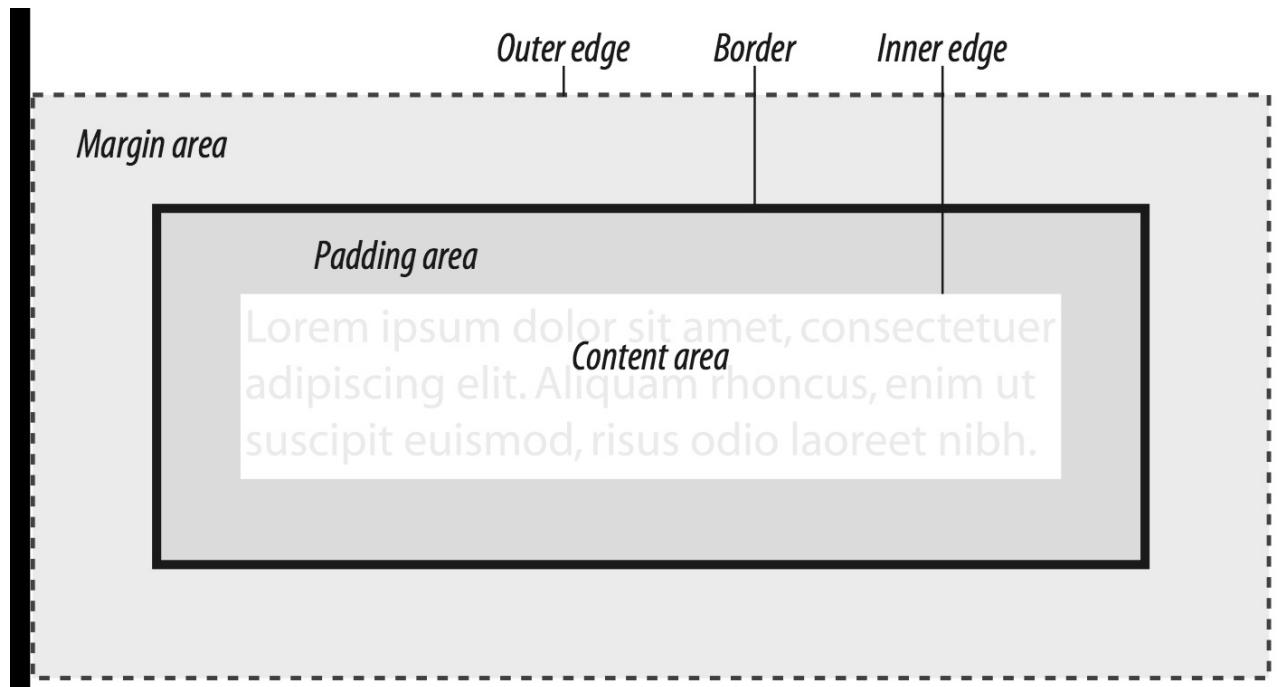
Are they supposed to be another security feature? ("They'll **NEVER** be able to duplicate this \$20... look at those 20s... they're all **OVER** the place!") Did they let a summer intern at the Bureau of Engraving and Printing design it? ("Hey, let Jimmy try it!") Were they concerned the \$20 bill might be confused with a \$10? ("What this 20 needs is a **LOT** more 20s.")

Connect-the-Dots

There must be more to it. My theory: the new 20s contain subliminal connect-the-dots messages, like tiny constellations. So, perhaps the 20s connect to form a secret message designed to stimulate the economy ("SPEND MORE") or boost patriotism ("WE'RE NO.1").

I'm not sure I've successfully cracked the code, so I'm asking for your help. I encourage you all to get a new \$20 bill, connect the dots to find the message on the back (pencil is best), and mail it to me for review. Together, we can get to the bottom of this.

Il box degli elementi



Program

Styles Computed Event Listeners DOM Breakpoints Properties

The screenshot shows the browser's developer tools with the "Computed" tab selected. It displays the box model structure with the following dimensions:

- margin: 48
- border: -
- padding: -
- content: 1112 x 80
- total width: 48

Show inherited properties

Dimensioni

width

Values: *length measurement | percentage | auto | inherit*

Default: auto

Applies to: *block-level elements and replaced inline elements (such as images)*

Inherits: no

height

Values: *length measurement | percentage | auto | inherit*

Default: auto

Applies to: *block-level elements and replaced inline elements (such as images)*

Inherits: no

Padding

padding-top, padding-right, padding-bottom, padding-left

Values: *length measurement | percentage | inherit*

Default: 0

Applies to: *all elements except table-row, table-row group, table-header-group, table-footer-group, table-column, and table-column-group*

Inherits: no

padding

Values: *length measurement | percentage | inherit*

Default: 0

Applies to: *all elements*

Inherits: no

1em
3em 3em
Applying the masks to the glasses is the most labor-intensive part of the process. Not only do you have to measure, place, and burnish on each mask, but you also need to completely cover the remainder of the glass in heavy paper. Any exposed areas (even inside) will get scratched by the flying sand, so it has to be a good seal. The only part of the glass that should be visible is the part that I want frosted.
1em

```
blockquote {  
  padding-top: 1em;  
  padding-right: 3em;  
  padding-bottom: 1em;  
  padding-left: 3em;  
  background-color: #D098D4;  
}
```

```
blockquote {  
  padding: 1em 3em 1em 3em;  
  background-color: #D098D4;  
}
```

Margin

margin-top, margin-right, margin-bottom, margin-left

Values: *length measurement | percentage | auto | inherit*

Default: auto

Applies to: all elements

Inherits: no

margin

Values: *length measurement | percentage | auto | inherit*

Default: auto

Applies to: all elements except elements with table display types other than table-caption, table, and inline-table

Inherits: no

After the blasting, the protective paper and the resist masks needs to be removed from the glasses. A cycle in the dishwasher finishes the job.

margin-top: 2em;
margin-right: 250px;
margin-bottom: 1em;
margin-left: 4em;

Border

- Del contorno di un elemento potete specificare:
 - border-style
 - border-width
 - border-color

Stile del border

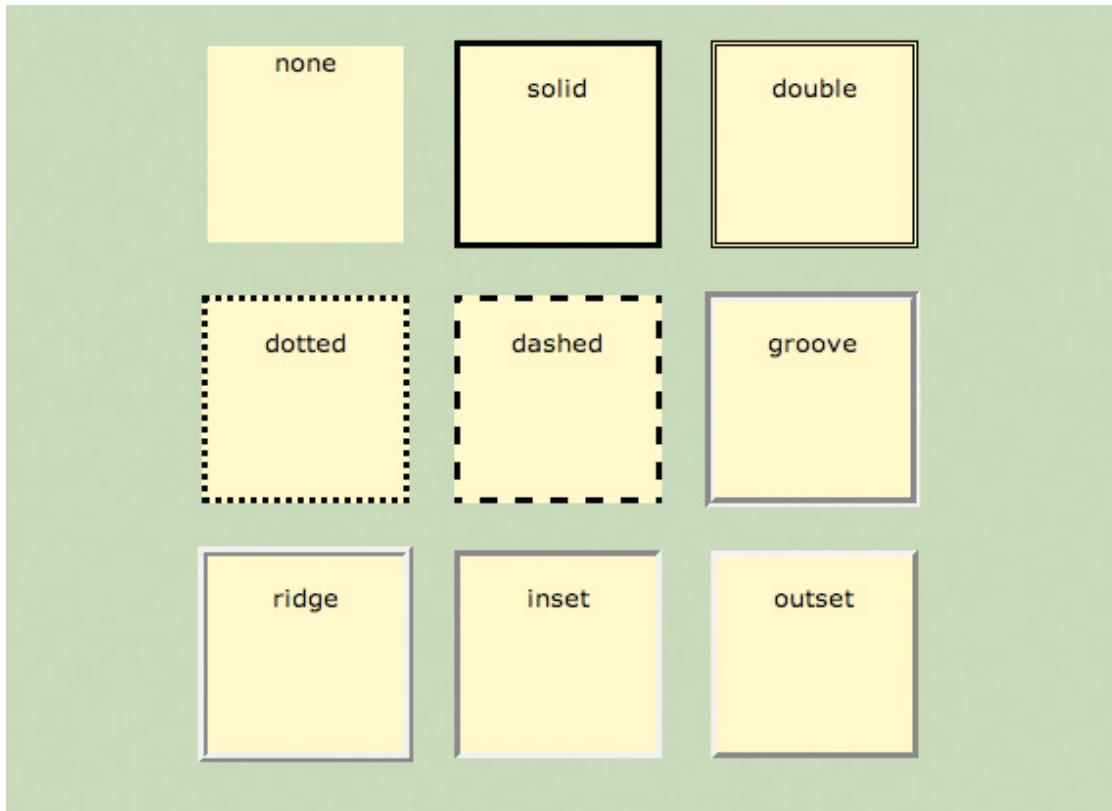
**border-top-style, border-right-style,
border-bottom-style, border-left-style**

Values: none | dotted | dashed | solid | double | groove | ridge | inset | outset | inherit

Default: none

Applies to: all elements

Inherits: no



border-style

Values: none | dotted | dashed | solid | double | groove | ridge | inset | outset | inherit

Default: none

Applies to: all elements

Inherits: no

Dimensione del border

**border-top-width, border-right-width,
border-bottom-width, border-left-width**

Values: *length units* | thin | medium | thick | inherit

Default: medium

Applies to: all elements

Inherits: no

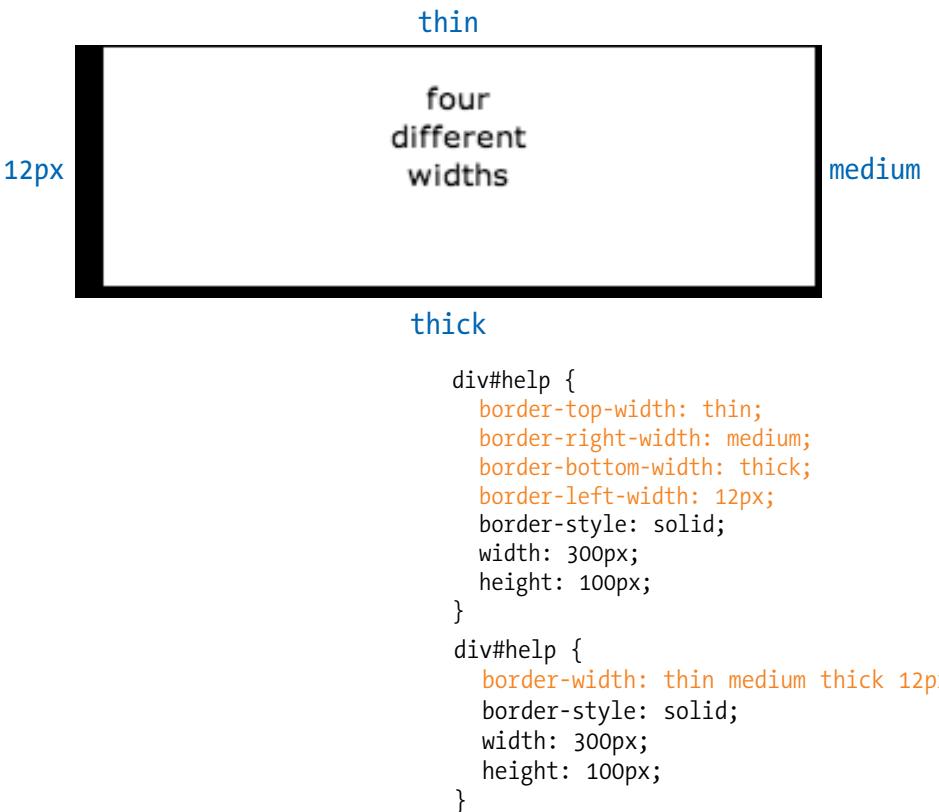
border-width

Values: *length units* | thin | medium | thick | inherit

Default: medium

Applies to: all elements

Inherits: no



Colore del border

**border-top-color, border-right-color,
border-bottom-color, border-left-color**

Values: *color name or RGB value | transparent | inherit*

Default: *the value of the color property for the element*

Applies to: *all elements*

Inherits: *no*

border-color

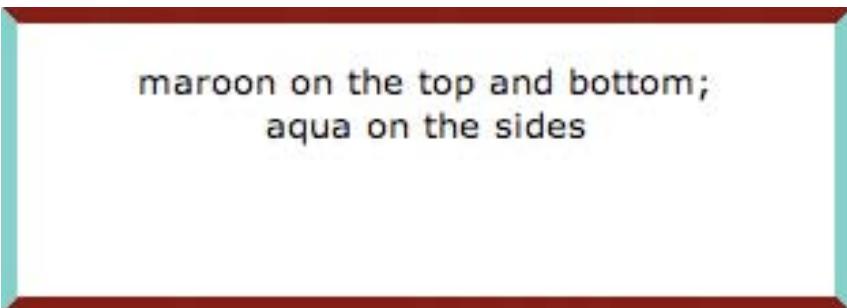
Values: *color name or RGB value | transparent | inherit*

Default: *the value of the color property for the element*

Applies to: *all elements*

Inherits: *no*

maroon on the top and bottom;
aqua on the sides



```
div#special {  
    border-color: maroon aqua;  
    border-style: solid;  
    border-width: 6px;  
    width: 300px;  
    height: 100px;  
}
```

Singole dichiarazione border

border-top, border-right, border-bottom, border-left

Values: *border-style border-width border-color* | *inherit*

Default: *defaults for each property*

Applies to: *all elements*

Inherits: *no*

border

Values: *border-style border-width border-color* | *inherit*

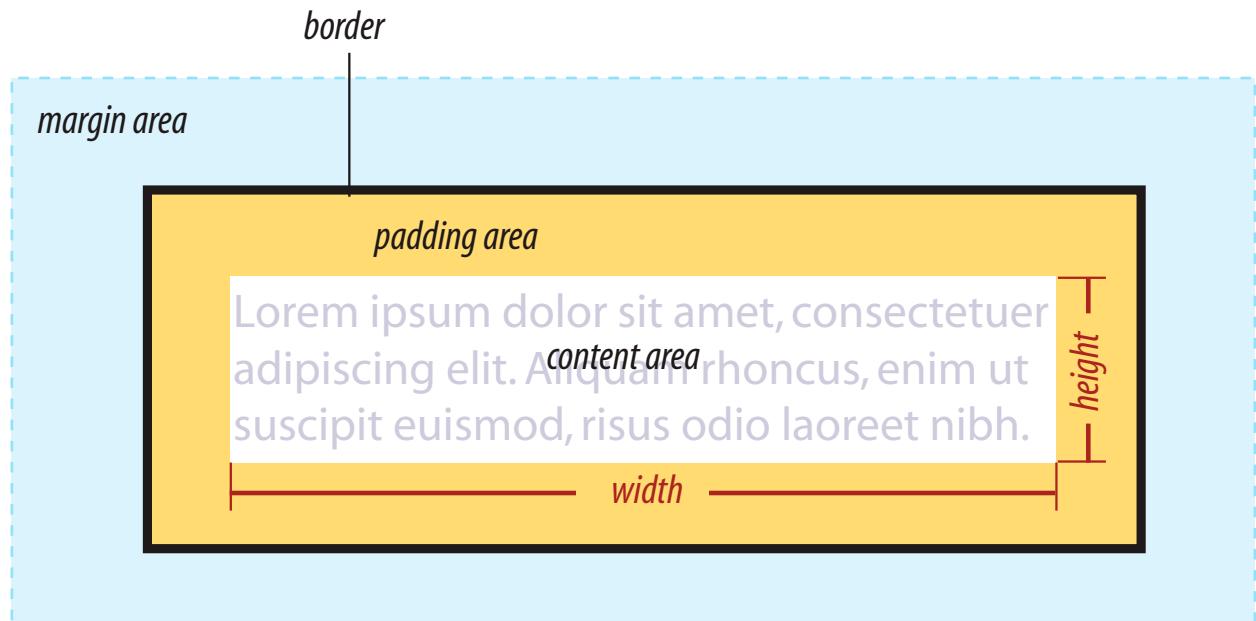
Default: *defaults for each property*

Applies to: *all elements*

Inherits: *no*

```
h1 { border-left: red .5em solid; }      /* left border only */  
h2 { border-bottom: 1px solid; }           /* bottom border only */  
p.example { border: 2px dotted #663; }     /* all four sides */
```


Esempio di sizing



```
p {  
background: #c2f670;  
width: 500px;  
height: 150px;  
padding: 20px;  
border: 2px solid gray;  
margin: 20px;  
}
```

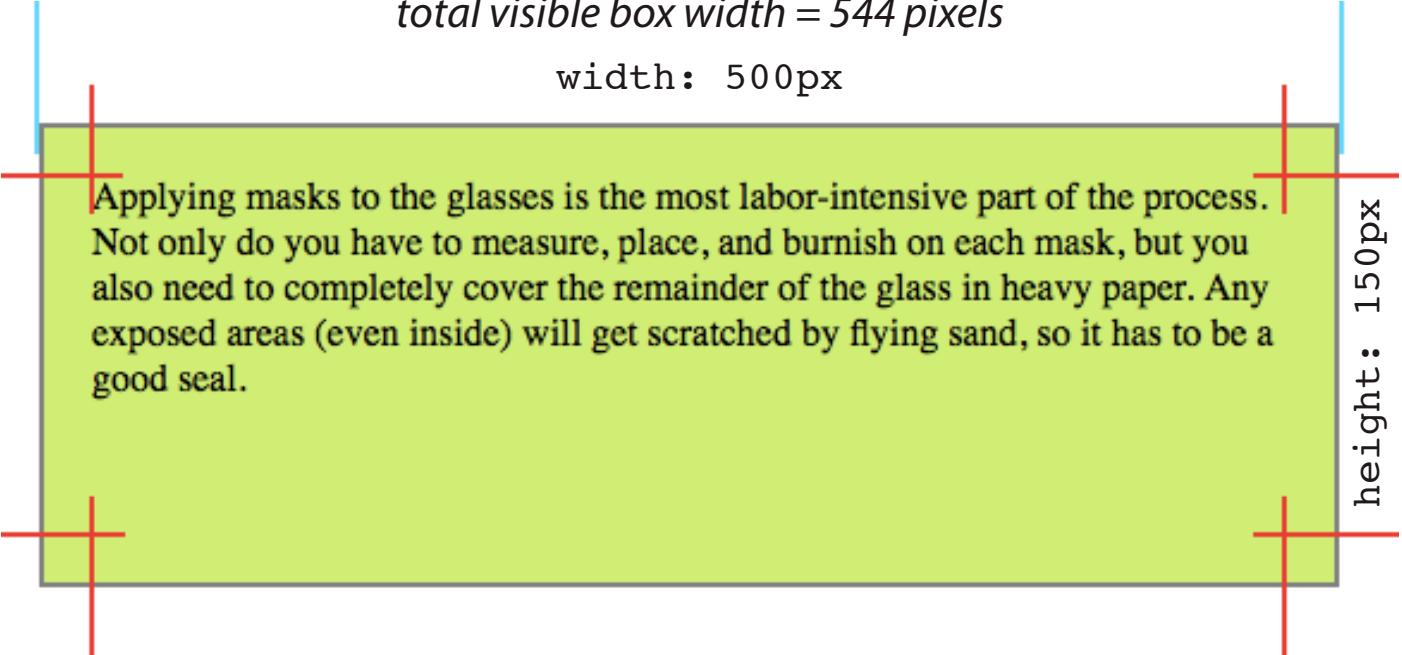
20px + 2px + 20px + 500px width + 20px + 2px + 20px = 584 pixels

Area visibile

total visible box width = 544 pixels

width: 500px

height: 150px



Applying masks to the glasses is the most labor-intensive part of the process. Not only do you have to measure, place, and burnish on each mask, but you also need to completely cover the remainder of the glass in heavy paper. Any exposed areas (even inside) will get scratched by flying sand, so it has to be a good seal.

box-sizing

box-sizing

NEW IN CSS3

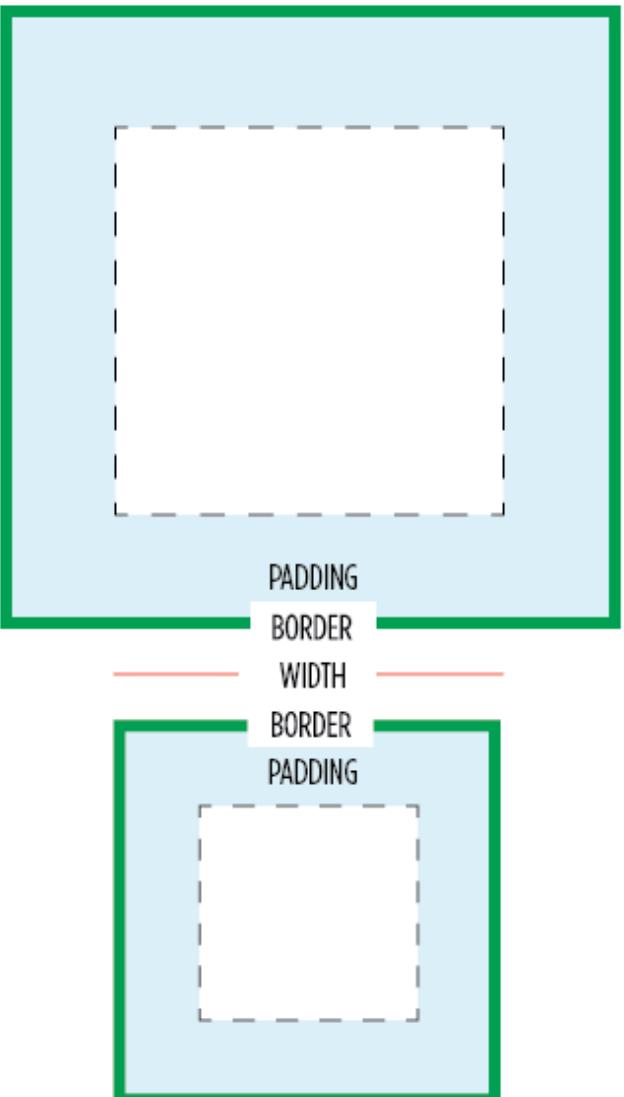
Values: content-box | border-box

Default: content-box

Applies to: all elements

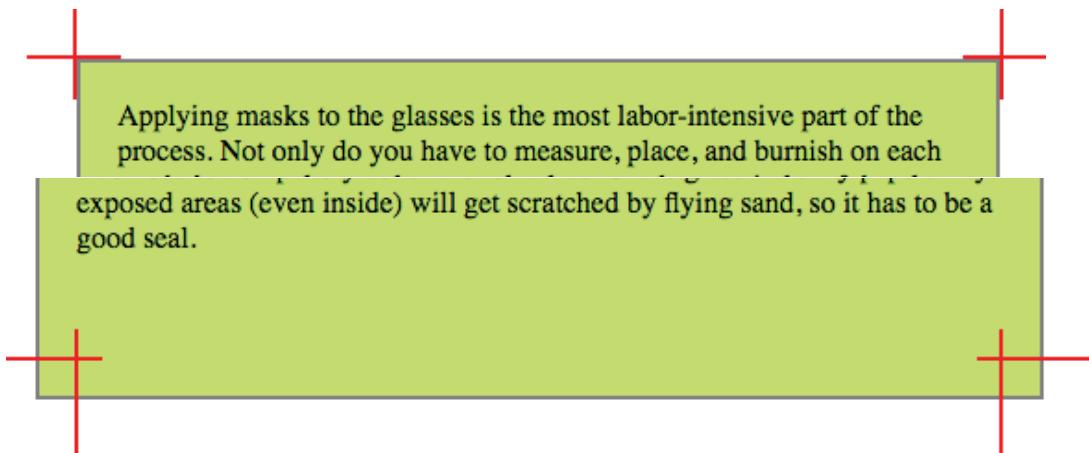
Inherits: no

- **border-box**
 - include nel size padding e border
- **content-box**
 - solo contenuto



Esempio

```
p {  
  ...  
  -webkit-box-sizing: border-box;  
  -moz-box-sizing: border-box;  
  box-sizing: border-box;  
  width: 500px;  
  height: 150px;  
}
```

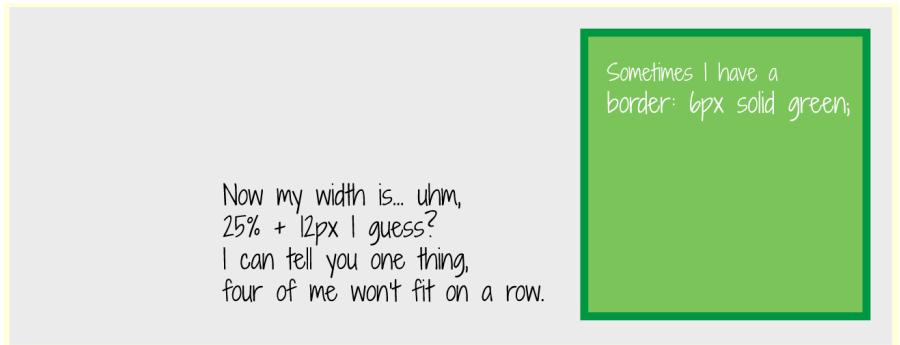
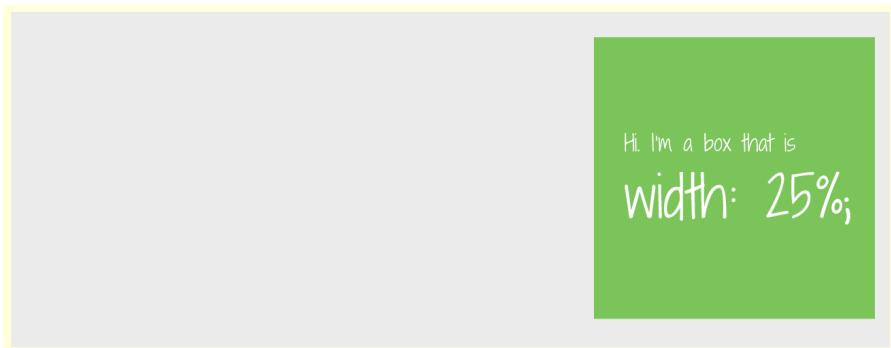


```
box-sizing: border-box;  
width: 500;  
  
box-sizing: content-box;  
width: 500;
```

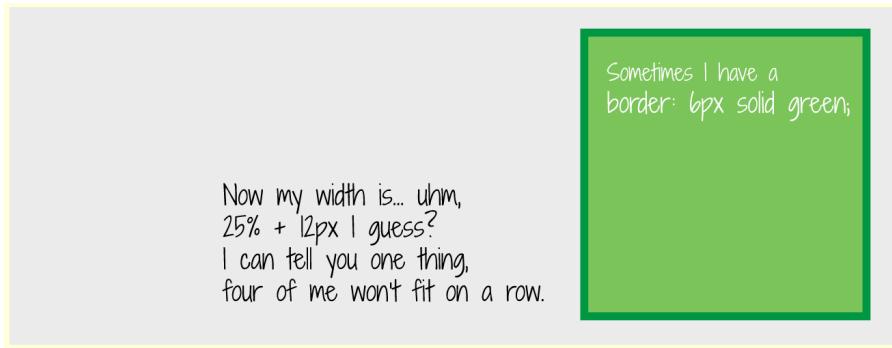
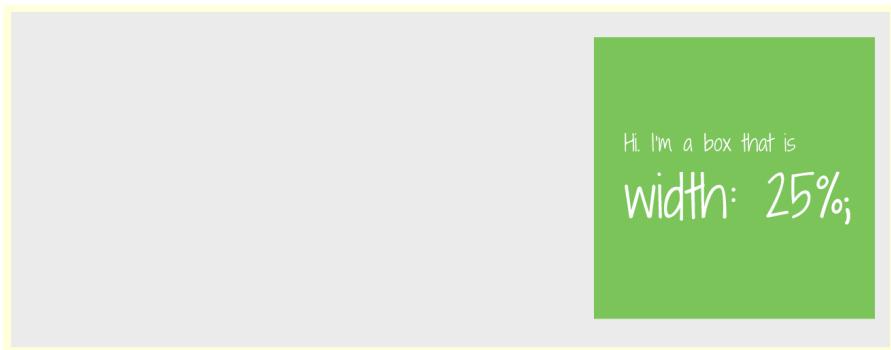
Perché border-box?



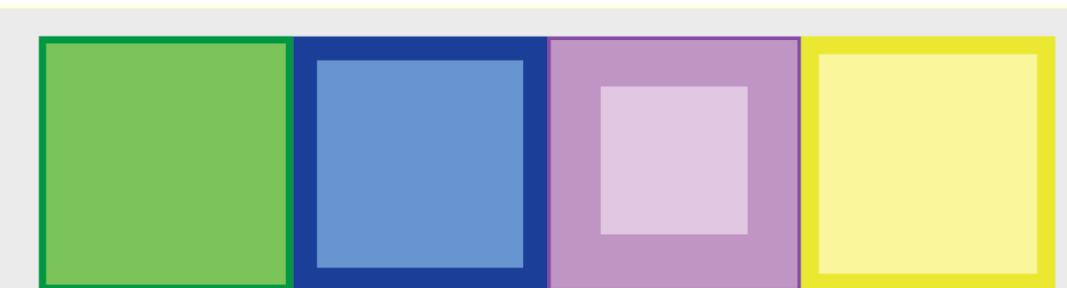
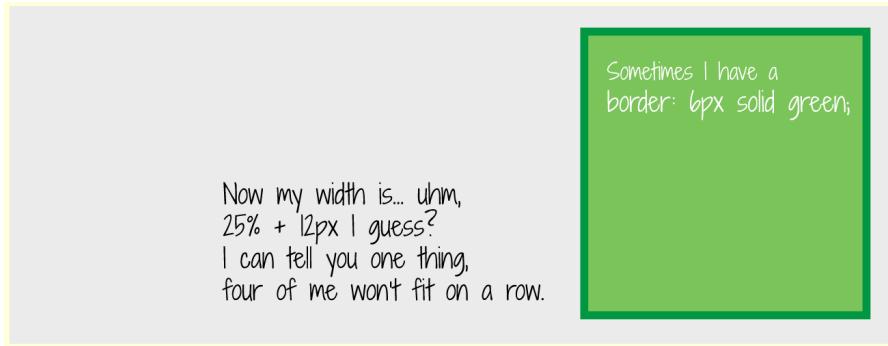
Perché border-box?



Perché border-box?



Perché border-box?



Four of me can sit in a row no matter what border and padding we have.
life = easy street.

ANCORA SUL MARGINE

Margini elementi inline

```
em { margin: 2em; }
```

Only horizontal margins are rendered on non-replaced (text) elements.

Applying the masks to the glasses is the most labor-intensive part of the process. Not only do you have to measure, place, and burnish on each mask, but you also need to completely cover the remainder of the glass in heavy paper. Any exposed areas (even inside) will get scratched by the flying sand, so it has to be a good seal.

```
img { margin: 2em; }
```

Margins are rendered on all sides of replaced elements, such as images.

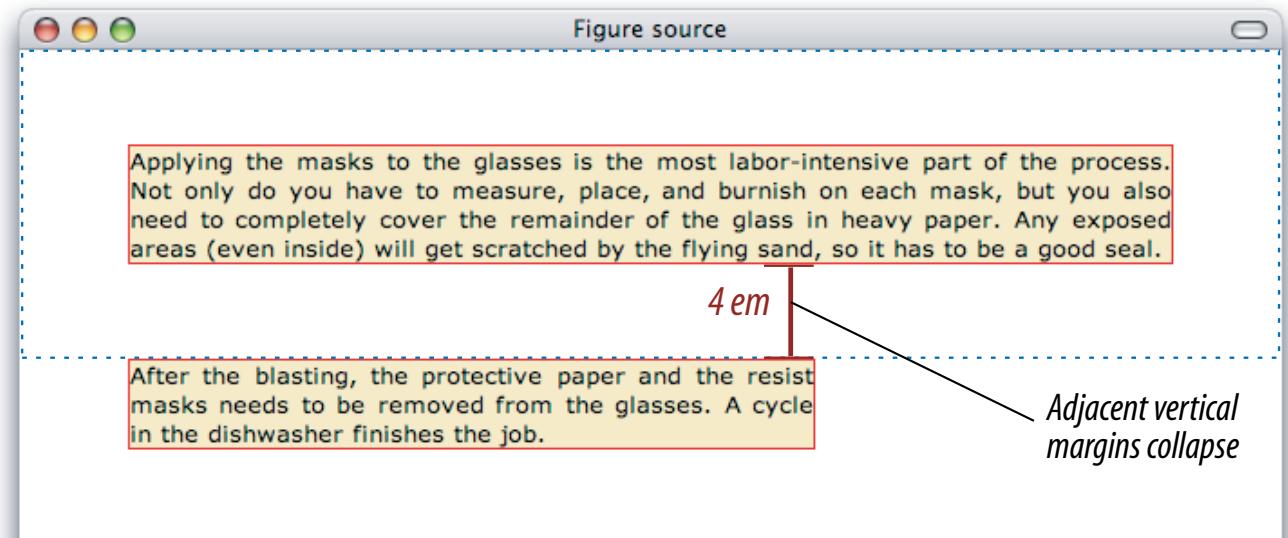
Applying the masks to the glasses is the most labor-intensive part of the process. Not only do you have to measure, place, and burnish on each



mask, but you also need to completely cover the remainder of the glass in heavy paper. Any exposed areas (even inside) will get scratched by the flying sand, so it has to be a good seal.

- Gli elementi inline ignorano il margine top e bottom
 - ad eccezione di quelli replaced (e.g. le immagini)

Margini che collassano



- Collassano il margine top e quello bottom in uno solo
 - il massimo dei due
- Non collassano se elemento float o absolute

Margini Negativi

p.top { margin-bottom: 4em; }

Pushes the following paragraph element away by 4 ems

Applying the masks to the glasses is the most labor-intensive part of the process. Not only do you have to measure, place, and burnish on each mask, but you also need to completely cover the remainder of the glass in heavy paper. Any exposed areas (even inside) will get scratched by the flying sand, so it has to be a good seal.

Applying the masks to the glasses is the most labor-intensive part of the process. Not only do you have to measure, place, and burnish on each mask, but you also need to completely cover the remainder of the glass in heavy paper. Any exposed areas (even inside) will get scratched by the flying sand, so it has to be a good seal.

p.top { margin-bottom: -4em; }

The following element moves back by 4 ems

Applying the masks to the glasses is the most labor-intensive part of the process. Not only do you have to measure, place, and burnish on each mask, but you also need to completely cover the remainder of the glass in heavy paper. Any exposed areas (even inside) will get scratched by the flying sand, so it has to be a good seal.

- Si può impostare un valore negativo al margine

ALTRÉ PROPRIETÀ DEL BOX

Overflow

overflow

Values: visible | hidden | scroll | auto | inherit

Default: visible

Applies to: block-level elements and replaced inline elements (such as images)

Inherits: no

visible

Applying the masks to the glasses is the most labor-intensive part of the process. Not only do you have to measure, place, and burnish on each mask, but you also need to completely cover the remainder of the glass in heavy paper. Any exposed areas (even inside) will get scratched by the flying sand, so it has to be a good seal.

hidden

Applying the masks to the glasses is the most labor-intensive part of the process. Not only do you have to measure, place, and burnish on each mask, but you also need to completely

scroll

Applying the masks to the glasses is the most labor-intensive part of the process. Not only do you have to measure, place, and burnish on each

auto (short text)

Applying the masks to the glasses is the most labor-intensive part of the process.

auto (long text)

Applying the masks to the glasses is the most labor-intensive part of the process. Not only do you have to measure, place, and burnish on each mask, but you also

GESTIONE DEL BACKGROUND

Background

- **background-color**
 - opacity
- **Immagini nel background**
 - background-image
 - background-repeat
 - background-position
 - background-attachment

Colore del background

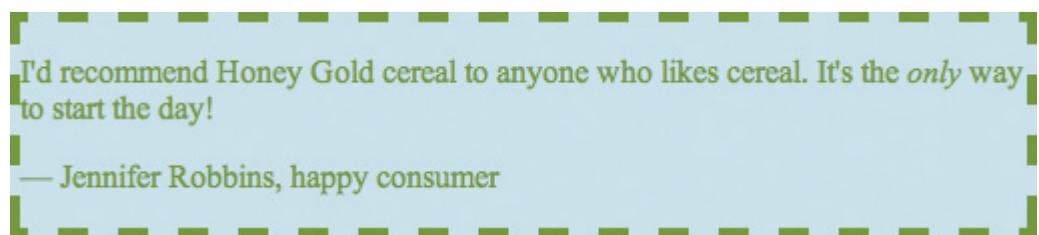
background-color

Values: *color value (name or numeric)* | transparent | inherit

Default: transparent

Applies to: all elements

Inherits: no



```
blockquote {  
  border: 4px dashed;  
  color: #508C19;  
  background-color: #B4DBE6;  
}
```

- Attenti alla leggibilità

Trasparenza

opacity

NEW IN CSS3

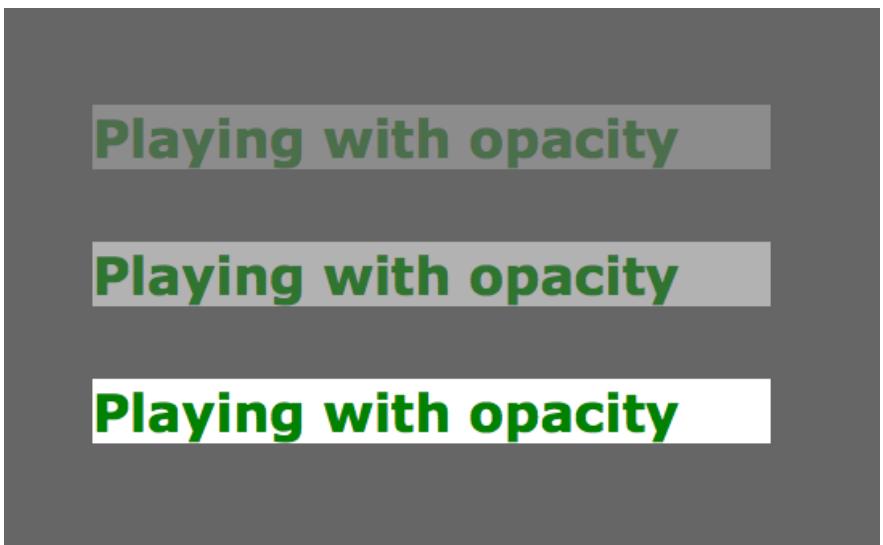
Values: *number (0 to 1)*

Default: 1

Applies to: *all elements*

Inherits: no

```
h1 {color: green; background: white; opacity: .25;}  
h1 {color: green; background: white; opacity: .5;}  
h1 {color: green; background: white; opacity: 1;}
```



opacity: .25

opacity: .5

opacity: 1

Immagini per bg

background-image

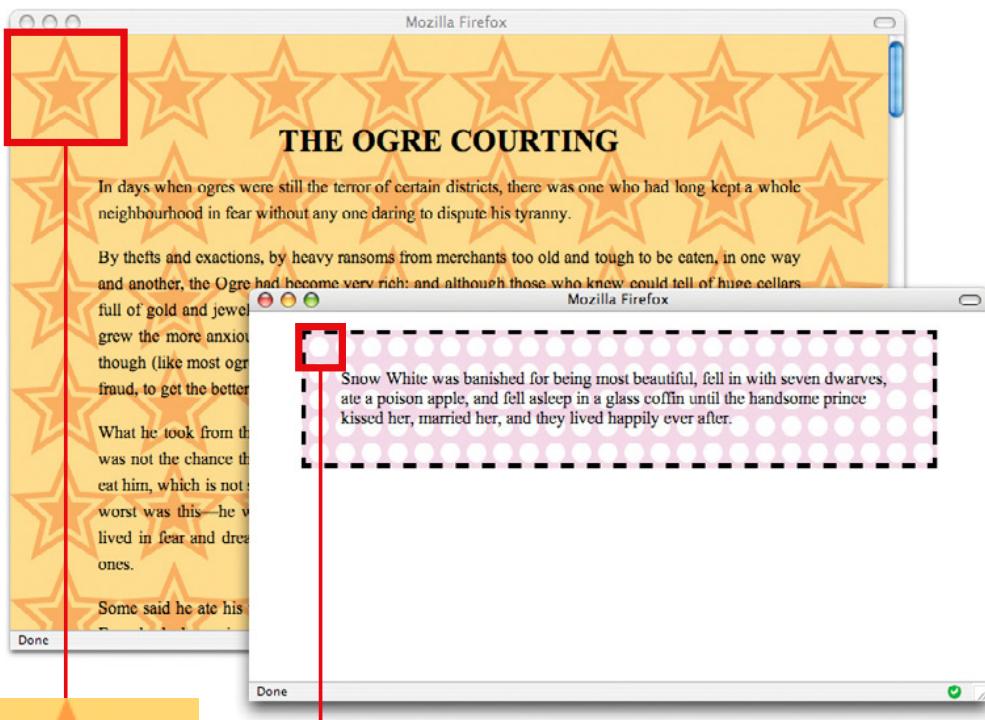
Values: `url (location of image)` | `none` | `inherit`

Default: `none`

Applies to: `all elements`

Inherits: `no`

```
body {  
  background-image: url(star.gif);  
}  
  
blockquote {  
  background-image: url(dot.gif);  
  padding: 2em;  
  border: 4px dashed;  
}
```



dot.gif (24 x 24 pixels)

Gestire il tiling

background-repeat

Values: repeat | repeat-x | repeat-y | no-repeat | inherit

Default: repeat

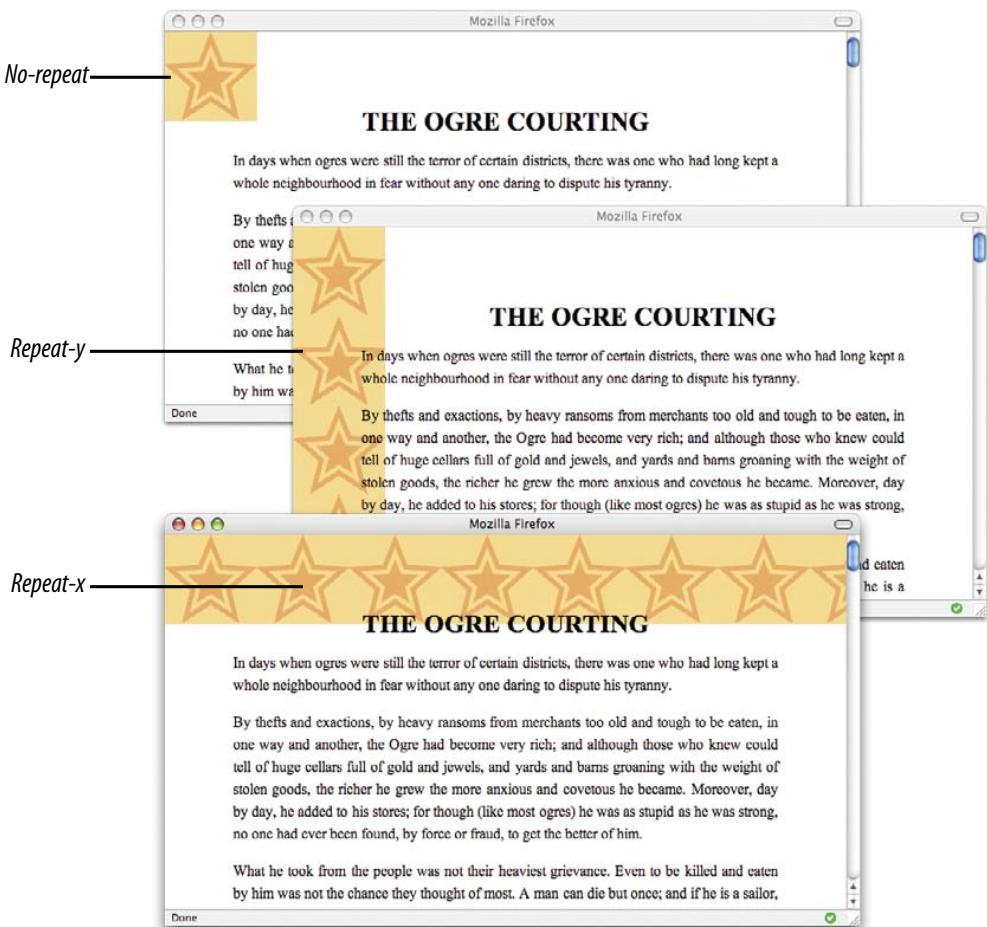
Applies to: all elements

Inherits: no

```
body {  
  background-image: url(star.gif);  
  background-repeat: no-repeat;  
}
```

```
body {  
  background-image: url(star.gif);  
  background-repeat: repeat-x;  
}
```

```
body {  
  background-image: url(star.gif);  
  background-repeat: repeat-y;  
}
```



Posizione del bg

background-position

Values: *length measurement | percentage | left | center | right | top | bottom | inherit*

Default: 0% 0% (*same as left top*)

Applies to: *all elements*

Inherits: *no*

background-position: 200px 50px;

background-position: 15% 100%;

Snow White was banished for being most beautiful, fell in with seven dwarves, ate a poison apple, and fell asleep in a glass coffin until the handsome prince kissed her, married her, and they lived happily ever after.

Snow White was banished for being most beautiful, fell in with seven dwarves, ate a poison apple, and fell asleep in a glass coffin until the handsome prince kissed her, married her, and they lived happily ever after.

Snow White was banished for being most beautiful, fell in with seven dwarves, ate a poison apple, and fell asleep in a glass coffin until the handsome prince kissed her, married her, and they lived happily ever after.

Snow White was banished for being most beautiful, fell in with seven dwarves, ate a poison apple, and fell asleep in a glass coffin until the handsome prince kissed her, married her, and they lived happily ever after.

Gestione dello scroll

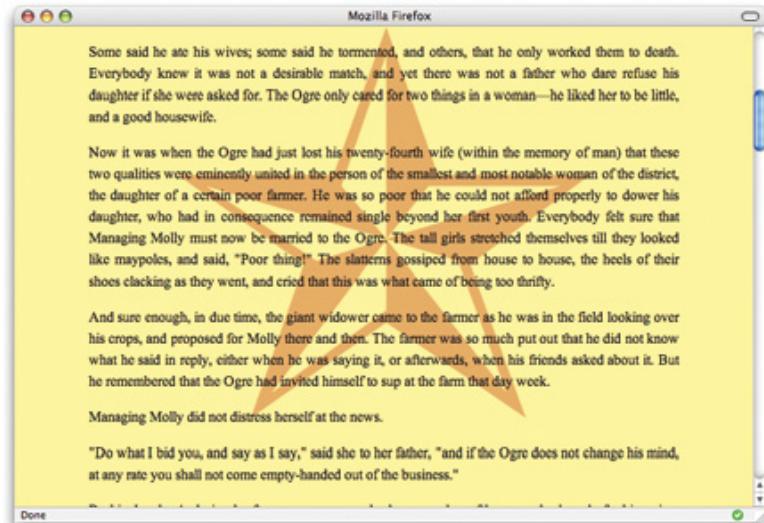
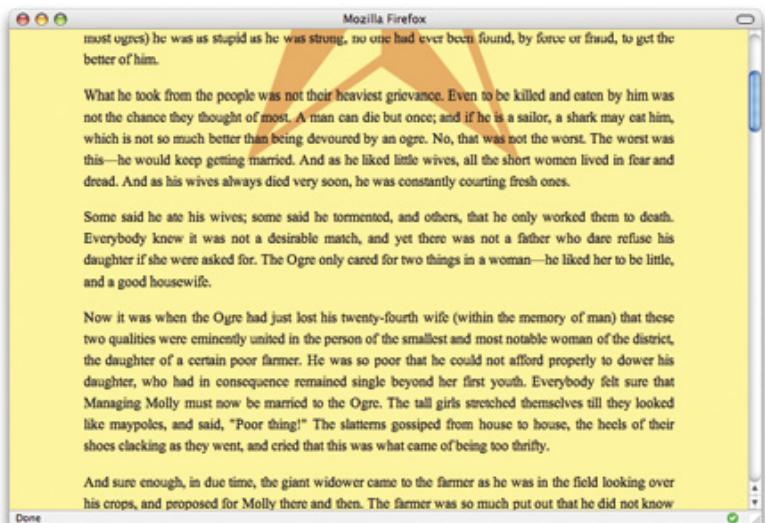
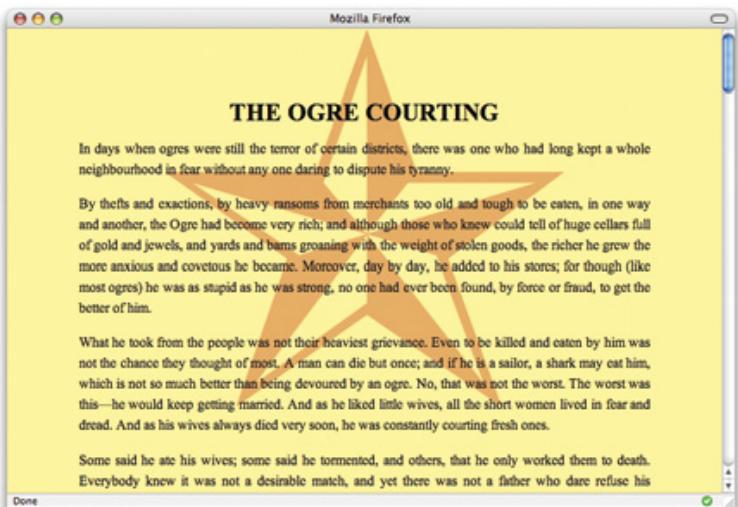
background-attachment

Values: scroll | fixed | local (new in CSS3) | inherit

Default: scroll

Applies to: all elements

Inherits: no



Proprietà background

background

Values: *background-color* *background-image* *background-repeat* *background-attachment* *background-position* | *inherit*

Default: *see individual properties*

Applies to: *all elements*

Inherits: *no*

```
body { background: white url(arlo.png) no-repeat right top fixed; }
```

```
body {  
  background-color: white;  
  background-image: url(arlo.png);  
  background-repeat: no-repeat;  
  background-position: right top;  
  background-attachment: fixed;  
}
```

Esercizio BG + Esempi

- Esempi con ogre-bg.html
- Esempi con bg fisso

Cambiare il display

display

Values: inline|block|list-item|inline-block|table|inline-table|table-row-group|table-header-group|table-footer-group|table-row|table-column-group|table-column|table-cell|table-caption|none
The following are new in CSS3: run-in|compact|ruby|ruby-base|ruby-text|ruby-base-container|ruby-text-container

Default: inline

Applies to: all elements

Inherits: yes

LISTE

Stile per liste

- **list-style-type**
- **list-style-position**
- **list-style-image**

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

Tipo di lista

list-style-type

Values: none | disc | circle | square | decimal | decimal-leading-zero | lower-alpha | upper-alpha | lower-latin | upper-latin | lower-roman | upper-roman | lower-greek | inherit

Default: disc

Applies to: ul, ol, and li (or elements whose display value is list-item)

Inherits: yes

- *disc*
 - crimson
 - cobalt
 - veridian
 - umber
 - ultramarine
-
- *circle*
 - crimson
 - cobalt
 - veridian
 - umber
 - ultramarine

Keyword	System
decimal	1, 2, 3, 4, 5...
decimal-leading-zero	01, 02, 03, 04, 05...
lower-alpha	a, b, c, d, e...
upper-alpha	A, B, C, D, E...
lower-latin	a, b, c, d, e... (same as lower-alpha)
upper-latin	A, B, C, D, E... (same as upper-alpha)
lower-roman	i, ii, iii, iv, v...
upper-roman	i, ii, iii, iv, v...
lower-greek	α, β, γ, δ, ε...

Posizione marker

list-style-position

Values: inside | outside | inherit

Default: outside

Applies to: ul, ol, and li (or elements whose display value is list-item)

Inherits: yes

Outside

- crimson
- cobalt
- veridian
- umber
- ultramarine

Inside

- crimson
- cobalt
- veridian
- umber
- ultramarine

Immagini per marker

list-style-image

Values: *url* | *none* | *inherit*

Default: *none*

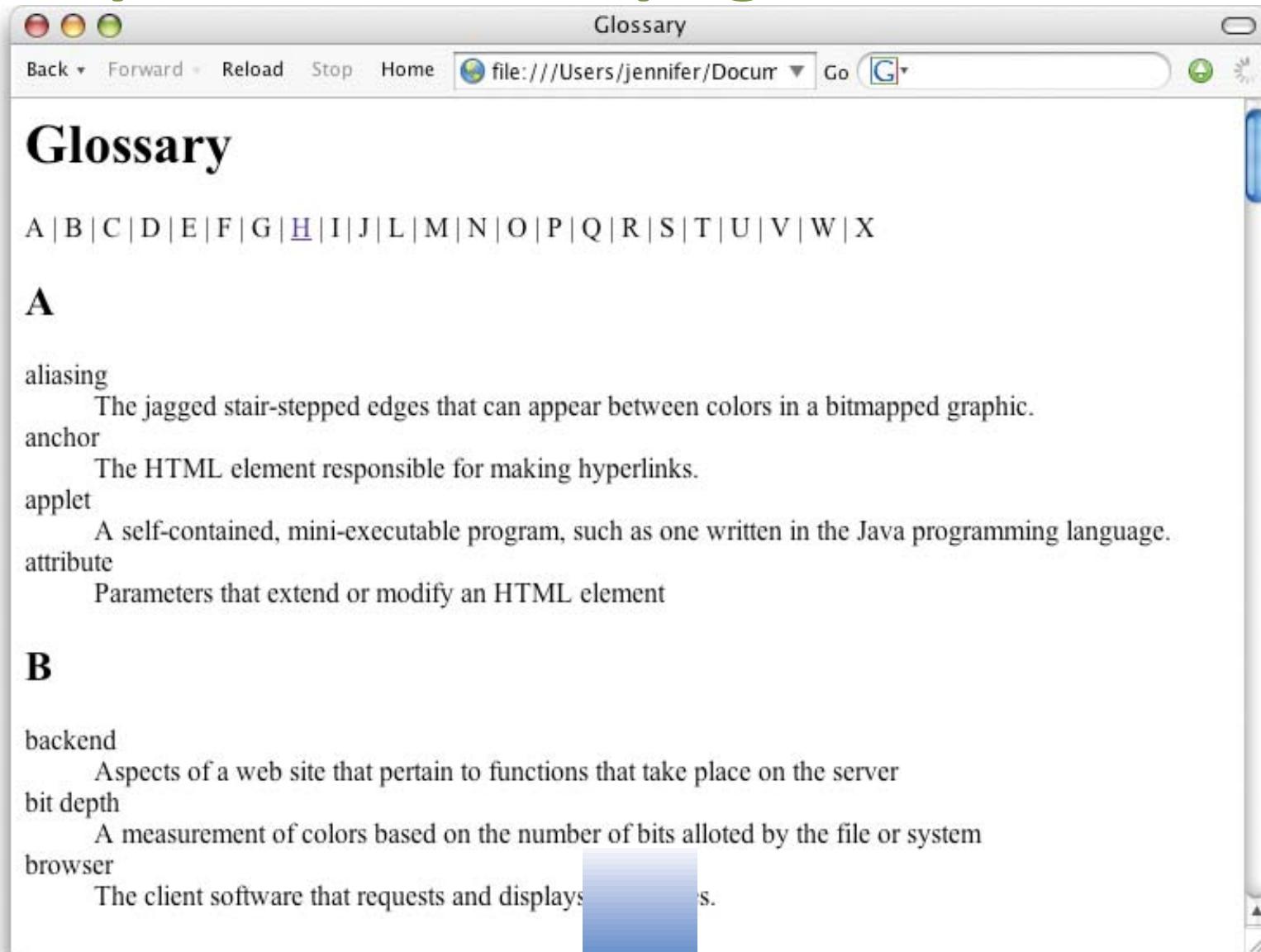
Applies to: *ul*, *ol*, and *li* (or elements whose *display* value is *list-item*)

Inherits: *yes*

-  Puppy dogs
-  Sugar frogs
-  Kitten's baby teeth

```
ul {  
  list-style-image: url(/images/happy.gif);  
  list-style-type: circle;  
  list-style-position: outside;  
}
```


Punti specifici di una pagina



The image shows a screenshot of a web browser window with a title bar 'Glossary'. The address bar shows 'file:///Users/jennifer/Docum'. The page content is a glossary starting with 'A' and listing terms like 'aliasing', 'anchor', 'applet', 'attribute', 'backend', 'bit depth', and 'browser' with their definitions. A large blue arrow points from the bottom of the glossary list towards the bottom of the slide.

Glossary

A | B | C | D | E | F | G | [H](#) | [I](#) | [J](#) | [L](#) | [M](#) | [N](#) | [O](#) | [P](#) | [Q](#) | [R](#) | [S](#) | [T](#) | [U](#) | [V](#) | [W](#) | [X](#)

A

aliasing
The jagged stair-stepped edges that can appear between colors in a bitmapped graphic.

anchor
The HTML element responsible for making hyperlinks.

applet
A self-contained, mini-executable program, such as one written in the Java programming language.

attribute
Parameters that extend or modify an HTML element

B

backend
Aspects of a web site that pertain to functions that take place on the server

bit depth
A measurement of colors based on the number of bits allotted by the file or system

browser
The client software that requests and displays web pages.



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Punti specifici di una pagina

Identificazione dell'ancora

- Ogni id può essere usato come ancora
 - <h1 id="startH">H</h1>

Creazione del link

- Si usa come # ed il nome dell'identificatore
 - <p>... F | G | H | I | J ...</p>

Punti specifici in altre pagine

Si aggiunge alla url, # nome identificatore

- Esempio
 - `See the Glossary, letter H`
 - `See the Glossary, letter H`
- Se l'id non è presente funziona comunque come un link normale

Attributo target

- **Specifica in quale finestra dove aprire il link**
 - target="_blank" dice di aprire il link in una nuova finestra
- **Esempio**
 - `O'Reilly`
- **Posso dare un nome ad una finestra ed usarla più volte**
 - `O'Reilly`
 - Spesso non ha un effetto piacevole. sembra che i link non funzionano
- **Con javascript riesco a controllare meglio la nuova finestra**
 - Gestisco i pop up

Altri link

• Link a mail

- [Pierpaolo Loreti](mailto:pierpaolo.loreti@uniroma2.it)
- Il Browser lancia normalmente il vostro programma di posta con un mail in composizione per pierpaolo.loreti@uniroma2.it
 - deve essere configurato per farlo
- Posso anche specificare altri campi della mail
 - subject, body, etc.

• Link a numeri di telefono

- [Pierpaolo Loreti](tel:+390672597440)
- Su cellulare parte la chiamata
- Se desktop parte skype

STILE DEI LINK

Selettori per link

Specifici dei link

- **:link**
 - link non visitati
- **:visited**
 - link già visitati dall'utente (cache del browser)

Legati ad azioni dell'utente

- **:focus**
 - l'elemento è selezionato
- **:hover**
 - il mouse è sopra l'elemento
 - deve essere dichiarato dopo :link e :visited
- **:active**
 - nel momento del click
 - deve essere dichiarato dopo :over

Stile dei link

```
a { text-decoration: none; } /* turns underlines off for all links */

a:link { color: maroon; }

a:visited { color: gray; }

a:focus { color: maroon; background-color: #ffd9d9; }

a:hover { color: maroon; background-color: #ffd9d9; }

a:active { color: red; background-color: #ffd9d9; }
```

Samples of my work:

- Pen and Ink Illustrations
- Paintings
- Collage

a:link

Links are maroon and not underlined.

Samples of my work:

- Pen and Ink Illustrations
- Paintings
- Collage

a:focus

While the mouse is over the link or when the link has focus, the pink background color appears.

Samples of my work:

- Pen and Ink Illustrations
- Paintings
- Collage

a:active

As the mouse button is being pressed, the link turns bright red.

Samples of my work:

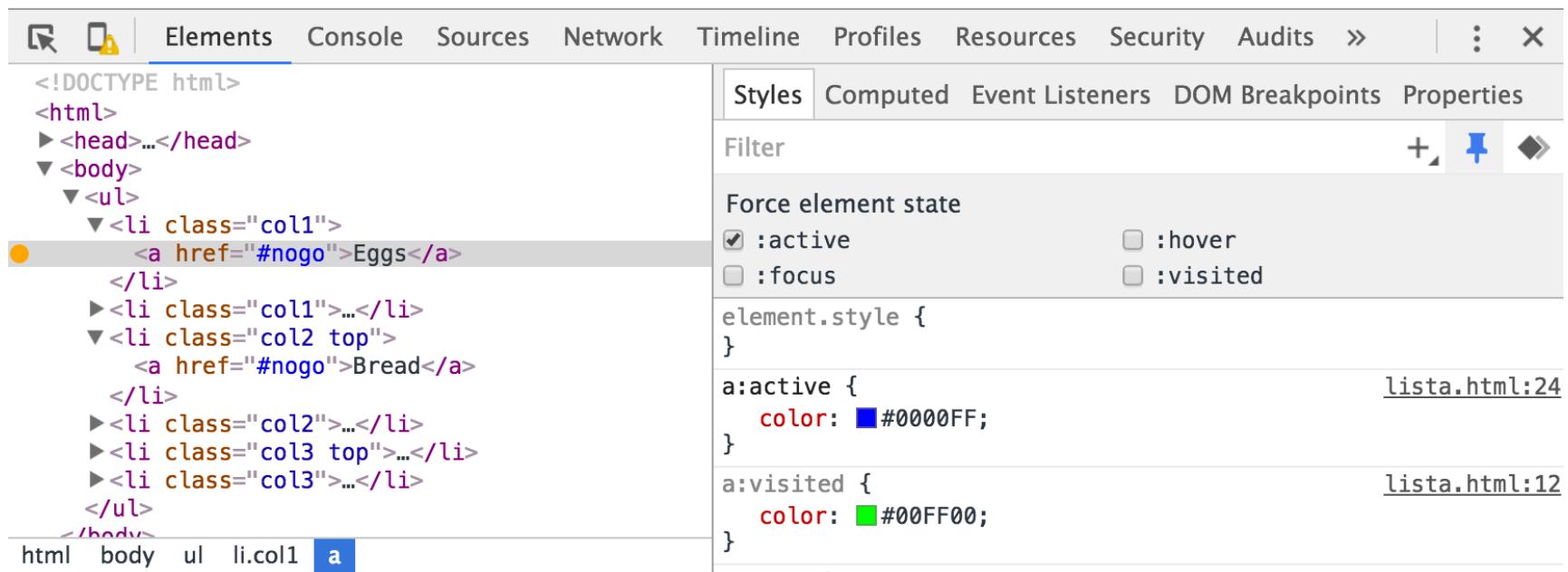
- Pen and Ink Illustrations
- Paintings
- Collage

a:visited

After that page has been visited, the link is gray.

Debug

- [Eggs](#)
- [Ham](#)
- [Bread](#)
- [Butter](#)
- [Flour](#)
- [Cream](#)



The screenshot shows the developer tools of a web browser. The top navigation bar includes Elements, Console, Sources, Network, Timeline, Profiles, Resources, Security, Audits, and a menu with three dots. The main area has tabs for Styles, Computed, Event Listeners, DOM Breakpoints, and Properties, with Styles selected. The left sidebar shows the DOM tree with a node for 'Eggs' highlighted. The right panel displays CSS rules for the active element, with a 'Force element state' section and a list of styles including `a:active` and `a:visited`.

```

<!DOCTYPE html>
<html>
  <head>...</head>
  <body>
    <ul>
      <li class="col1">
        <a href="#nogo">Eggs</a>
      </li>
      <li class="col1">...</li>
      <li class="col2 top">
        <a href="#nogo">Bread</a>
      </li>
      <li class="col2">...</li>
      <li class="col3 top">...</li>
      <li class="col3">...</li>
    </ul>
  </body>
</html>

```

Styles (selected tab)

Computed Event Listeners DOM Breakpoints Properties

Filter

Force element state

:active :hover

:focus :visited

```

element.style {
}
a:active {
  color: #0000FF;
}
a:visited {
  color: #00FF00;
}

```

lista.html:24

lista.html:12

reset.css

```
html, body, div, span, applet, object, iframe,
h1, h2, h3, h4, h5, h6, p, blockquote, pre,
a, abbr, acronym, address, big, cite, code,
del, dfn, em, img, ins, kbd, q, s, samp,
small, strike, strong, sub, sup, tt, var,
b, u, i, center, dl, dt, dd, ol, ul, li,
fieldset, form, label, legend,
table, caption, tbody, tfoot, thead, tr, th, td,
article, aside, canvas, details, embed,
figure, figcaption, footer, header, hgroup,
menu, nav, output, ruby, section, summary,
time, mark, audio, video {
    margin: 0;
    padding: 0;
    border: 0;
    font-size: 100%;
    font: inherit;
    vertical-align: baseline;
}
/* HTML5 display-role reset for older browsers */
article, aside, details, figcaption, figure,
footer, header, hgroup, menu, nav, section {
    display: block;
}
```

```
body {
    line-height: 1;
}
ol, ul {
    list-style: none;
}
blockquote, q {
    quotes: none;
}
blockquote:before, blockquote:after,
q:before, q:after {
    content: '';
    content: none;
}
table {
    border-collapse: collapse;
    border-spacing: 0;
}
```