```
<html lang="en" xmlns="http://www.w3.0
<head>
    <meta charset="utf-8" />
    <title></title>
```

Web Coding
***Prototipazione di ipertesti e siti web in HTML
ed introduzione alla creazione di stili grafici con fogli di stile CSS.***

**Unità Didattica UD05: anteprima CSS3, fonts personalizzati, trasparenze, arrotondamenti,
sovrapposizioni, video embedding, effetti, CSS Media rule**

prof. Giovanni Borga

CSS3 overview

Introduzione al CSS versione 3

CSS3 è la versione più recente dei fogli di stile.

E' totalmente compatibile con le versioni precedenti.

Il CSS3 è stato diviso in «moduli» (che comprendono anche tutte le specifiche del CSS2).

Tra le **principali novità** vi sono i moduli
- TEXT EFFECTS,
- 2D/3D TRANSFORMATIONS,
- ANIMATIONS,
- MULTIPLE COLUMN LAYOUT
- USER INTERFACE.

Altri nuovi elementi sono integrativi nei moduli selectors, box model, background and borders, image values and replaced content. A questo riguardo sono da segnalare in particolare **nuovi tipi e forme di bordi e gradienti di sfondo e le ombreggiature**.

Rounded corners

CSS3 Rounded Corners

With the CSS3 `border-radius` property, you can give any element "rounded corners".

```
#example1 {
    border: 2px solid green;
    border-radius: 25px;
}
```

```
#example2 {
    border: 2px solid green;
    border-radius: 50px 20px;
}
```

www.w3schools.com/css/css3_borders.asp

Border images

CSS3 Border Images

With the CSS3 `border-image` property, you can set an image to be used as the border around an element.

Value	Description	Play it
border-image-source	The path to the image to be used as a border	
border-image-slice	How to slice the border image	Play it »
border-image-width	The width of the border image	
border-image-outset	The amount by which the border image area extends beyond the border box	
border-image-repeat	Whether the border image should be repeated, rounded or stretched	Play it »
initial	Sets this property to its default value. Read about *initial*	
inherit	Inherits this property from its parent element. Read about *inherit*	

www.w3schools.com/css/css3_border_images.asp

Backgrounds

CSS3 Backgrounds

CSS3 contains a few new background properties, which allow greater control of the background element.

In this chapter you will learn how to add multiple background images to one element.

...perties:

Value	Description	CSS
background-color	Specifies the background color to be used	1
background-image	Specifies ONE or MORE background images to be used	1
background-position	Specifies the position of the background images	1
background-size	Specifies the size of the background images	3
background-repeat	Specifies how to repeat the background images	1
background-origin	Specifies the positioning area of the background images	3
background-clip	Specifies the painting area of the background images	3
background-attachment	Specifies whether the background images are fixed or scrolls with the rest of the page	1
initial	Sets this property to its default value. Read about initial	3
inherit	Inherits this property from its parent element. Read about inherit	2

www.w3schools.com/css/css3_backgrounds.asp

Gradients
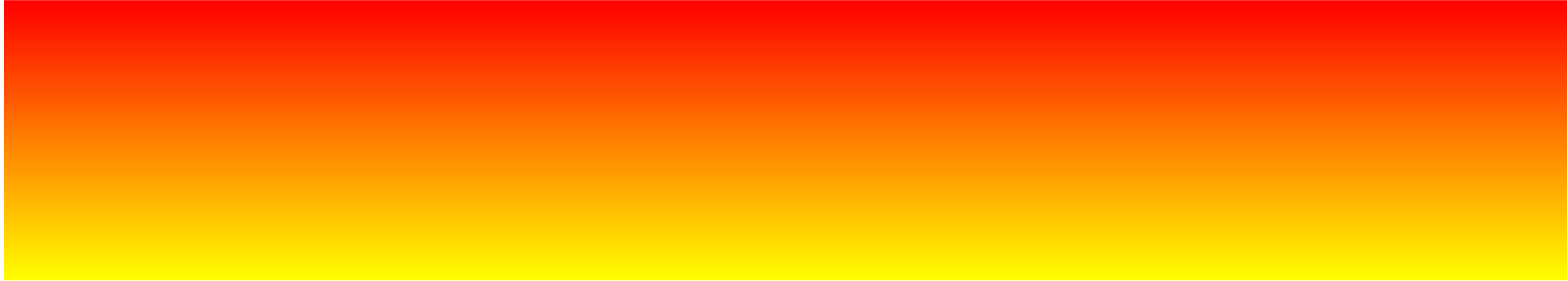
Example

```
#grad {
    background: red; /* For browsers that do not support gradients */
    background: -webkit-linear-gradient(red, yellow); /* For Safari 5.1 to 6.0 */
    background: -o-linear-gradient(red, yellow); /* For Opera 11.1 to 12.0 */
    background: -moz-linear-gradient(red, yellow); /* For Firefox 3.6 to 15 */
    background: linear-gradient(red, yellow); /* Standard syntax */
}
```

www.w3schools.com/css/css3_gradients.asp

Shadows

Box Shadow

With CSS3 you can create shadow effects!

Hover over me!

www.w3schools.com/cssref/css3_pr_box-shadow.asp

Text / Fonts

Proprietà di gestione del testo e possibilità di inserire nuovi fonts.

The CSS3 `word-wrap` property allows long words to be able to be broken and wrap onto the next line.

If a word is too long to fit within an area, it expands outside:

This paragraph contains a very long word: thisisaveryveryveryveryveryverylongword. The long word will break and wrap to the next line.

The word-wrap property allows you to force the text to wrap - even if it means splitting it in the middle of a word:

This paragraph contains a very long word: thisisaveryveryveryv eryveryverylongword . The long word will break and wrap to the next line.

With CSS3, web designers are no longer forced to use only "web-safe" fonts.

www.w3schools.com/css/css3_text_effects.asp   www.w3schools.com/css/css3_fonts.asp

Transforms

The `rotate()` method rotates an element clockwise or counter-clockwise according to a given degree.

The following example rotates the <div> element clockwise with 20 degrees:

Example

```
div {
    -ms-transform: rotate(20deg); /* IE 9 */
    -webkit-transform: rotate(20deg); /* Safari */
    transform: rotate(20deg);
}
```

www.w3schools.com/css/css3_2dtransforms.asp

Transitions/Animations (regola @keyframes)

Caratteristiche avanzate di «dinamicizzazione» e interattività degli elementi HTML.

```css
/* The animation code */
@keyframes example {
    0%   {background-color: red;}
    25%  {background-color: yellow;}
    50%  {background-color: blue;}
    100% {background-color: green;}
}

/* The element to apply the animation to */
div {
    width: 100px;
    height: 100px;
    background-color: red;
    animation-name: example;
    animation-duration: 4s;
}
```

www.w3schools.com/cssref/css3_pr_animation-keyframes.asp

Border-radius applicato alle immagini

Example

Rounded Image:

```
img {
    border-radius: 8px;
}
```

Example

Circled Image:

```
img {
    border-radius: 50%;
}
```

Personalizzazione dei pulsanti

Default Button   CSS Button

Example

```css
.button {
    background-color: #4CAF50; /* Green */
    border: none;
    color: white;
    padding: 15px 32px;
    text-align: center;
    text-decoration: none;
    display: inline-block;
    font-size: 16px;
}
```

www.w3schools.com/css/css3_buttons.asp

User Interface: resizing, outline offset, box sizing

The `resize` property specifies whether or not an element should be resizable by the user.

This div element is resizable by the user (works in Chrome, Firefox, Safari and Opera).
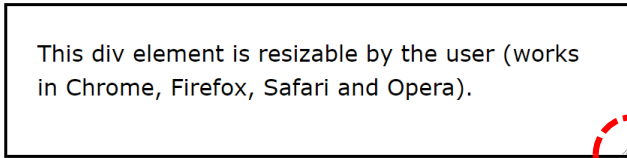
The following example lets the user resize only the width of a <div> element:

Example

```
div {
    resize: horizontal;
    overflow: auto;
}
```

This div has an outline 15px outside the border edge.
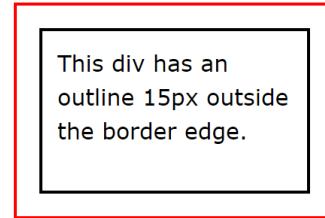
```
div {
    border: 1px solid black;
    outline: 1px solid red;
    outline-offset: 15px;
}
```

Due DIV, pur avendo padding diverso vengono renderizzati 300x100 px grazie alla proprietà **box-sizing**.

```
.div1 {
    width: 300px;
    height: 100px;
    border: 1px solid blue;
    box-sizing: border-box;
}
```

```
.div2 {
    width: 300px;
    height: 100px;
    padding: 50px;
    border: 1px solid red;
    box-sizing: border-box;
}
```

www.w3schools.com/css/css3_user_interface.asp

Media queries

```
@media not|only mediatype and (expressions) {
    CSS-Code;
}
```

Esempio di formattazione del body valida solo per schermi di larghezza superior a 480px:

```
@media screen and (min-width: 480px) {
    body {
        background-color: lightgreen;
    }
}
```

Altri esempi su: www.w3schools.com/css/css3_mediaqueries_ex.asp

Riferimento web per CSS3

Tutorial completi su W3SCHOOLS:

www.w3schools.com/css/css3_intro.asp

Fonts personalizzati e Google fonts

Regola CSS

```
@font-face {
    font-family: myFirstFont;
    src: url(sansation_light.woff);
}
```

Il file del font è un file di tipo **WOFF** e deve essere inserito con il percorso correto come per tutti i riferimenti esterni.

HTML

```
<div style= "font-family: myFirstFont;">
```

Opzioni

Font descriptor	Values	Description
font-family	*name*	Required. Defines the name of the font.
src	*URL*	Required. Defines the URL(s) where the font should be downloaded from
font-stretch	normal condensed ultra-condensed extra-condensed semi-condensed expanded semi-expanded extra-expanded ultra-expanded	Optional. Defines how the font should be stretched. Default value is "normal"
font-style	normal italic oblique	Optional. Defines how the font should be styled. Default value is "normal"
font-weight	normal bold 100 ... 900	Optional. Defines the boldness of the font. Default value is "normal"
unicode-range	*unicode-range*	Optional. Defines the range of unicode characters the font supports. Default value is "U+0-10FFFF"

Esempio

```
@font-face {
    font-family: myFirstFont;
    src: url(sansation_bold.woff);
    font-weight: bold;
}
```

Google fonts

Riferimenti web

Tutorial W3School:

https://www.w3schools.com/cssref/css3_pr_font-face_rule.asp

Google fonts:

https://fonts.google.com/
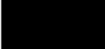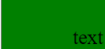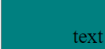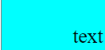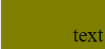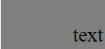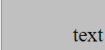
Codici colore RGBA

Codici colore RGBA

color: rgba(0 ,0 ,0 , 0.6)

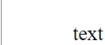| Color Name	rgb(R,G,B)	Swatch	rgba(R,G,B,a) Swatches										
		rgb(R,G,B)	a = 1.0	a = 0.9	a = 0.8	a = 0.7	a = 0.6	a = 0.5	a = 0.4	a = 0.3	a = 0.2	a = 0.1	a = 0.0
black	rgb(0,0,0)			text	text	text	text	text	text	text	text	text	text
navy	rgb(0,0,128)	text	text	text	text	text	text	text	text	text	text	text	text
blue	rgb(0,0,255)	text	text	text	text	text	text	text	text	text	text	text	text
green	rgb(0,128,0)	text	text	text	text	text	text	text	text	text	text	text	text
teal	rgb(0,128,128)	text	text	text	text	text	text	text	text	text	text	text	text
lime	rgb(0,255,0)	text	text	text	text	text	text	text	text	text	text	text	text
aqua	rgb(0,255,255)	text	text	text	text	text	text	text	text	text	text	text	text
maroon	rgb(128,0,0)	text	text	text	text	text	text	text	text	text	text	text	text
purple	rgb(128,0,128)	text	text	text	text	text	text	text	text	text	text	text	text
olive	rgb(128,128,0)	text	text	text	text	text	text	text	text	text	text	text	text
gray	rgb(128,128,128)	text	text	text	text	text	text	text	text	text	text	text	text
silver	rgb(192,192,192)	text	text	text	text	text	text	text	text	text	text	text	text
red	rgb(255,0,0)	text	text	text	text	text	text	text	text	text	text	text	text
fuchsia	rgb(255,0,255)	text	text	text	text	text	text	text	text	text	text	text	text
yellow	rgb(255,255,0)	text	text	text	text	text	text	text	text	text	text	text	text
white	rgb(255,255,255)	text	text	text	text	text	text	text	text	text	text	text	text

Arrotondamento degli angoli

Border-radius

Arrotondamento effetto
cerchio: border radius = w/h
+ padding

```
#rcorners {
        border-radius: 240px;
        background-position: left top;
        background-repeat: repeat;
        padding: 40px;
        width: 200px;
        height: 200px;
        text-align: center;
        font-weight: bold;
        border: 6px solid red;
}
```
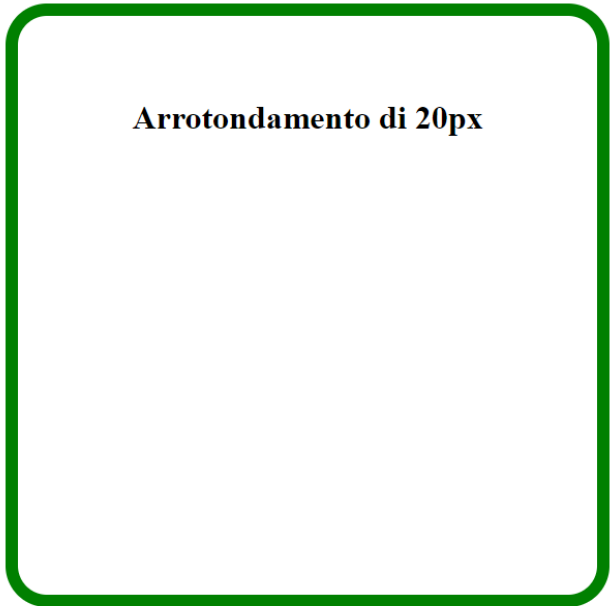
Border-radius

Arrotondamento di 20px

```
#rcorners {
        border-radius: 20px;
        background-position: left top;
        background-repeat: repeat;
        padding: 40px;
        width: 200px;
        height: 200px;
        text-align: center;
        font-weight: bold;
        border: 6px solid green;
    }
```
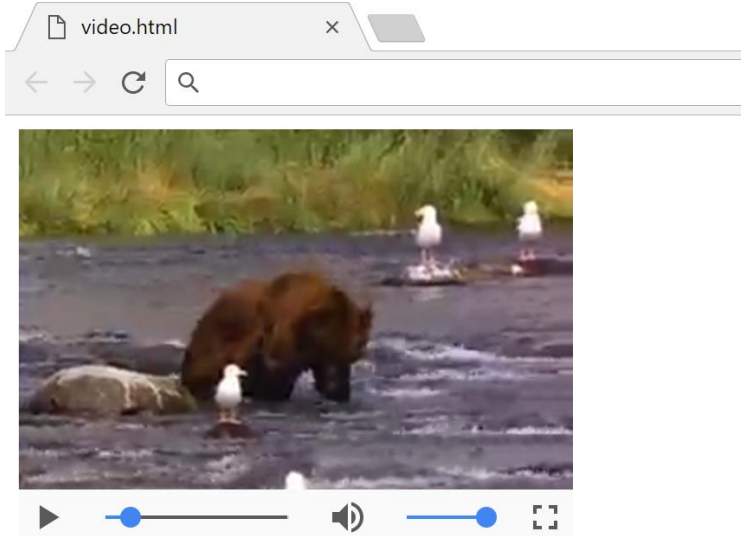
HTML5 video embedding

Video embedding

NB: il formato video più adatto per il web è attualmente l'**MP4** in quanto consente buon rapporto qualità/compressione e supporta il cosiddetto **pseudo-streaming**.

Vedi anche
www.w3schools.com/html/html5_video.asp
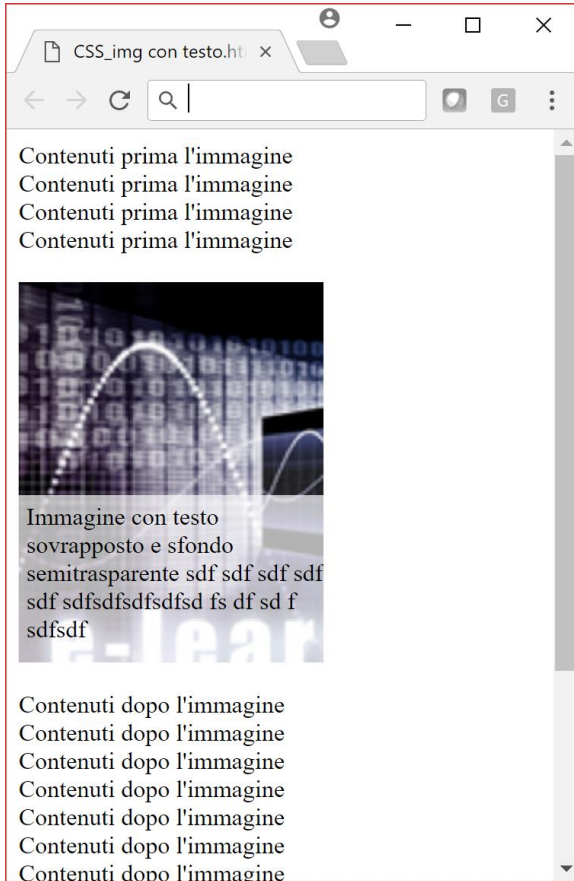
```
<video width="320" height="240" controls>
        <source src="movie.mp4" type="video/mp4">
        Il tuo browser non supporta i video incorporati.
</video>
```

Tecniche di overlay

Utilizzo del posizionamento CSS per creare un overlay di testo


```html
<br />Contenuti prima l'immagine
<br />Contenuti prima l'immagine
<br />Contenuti prima l'immagine
<br /><br />

<div class="sfondo">
    <div class="testo">
        Immagine con testo sovrapposto e sfondo
        semitrasparente sdf sdf sdf sdf sdf
        sdfsdfsdfsdfsd fs df sd f sdfsdf
    </div>
</div>

<br />Contenuti dopo l'immagine
<br />Contenuti dopo l'immagine
<br />Contenuti dopo l'immagine
<br />Contenuti dopo l'immagine
```
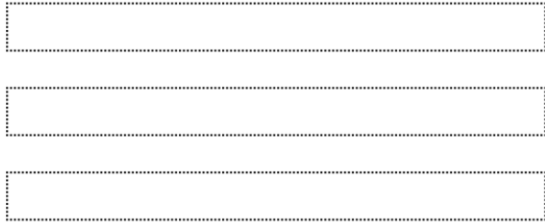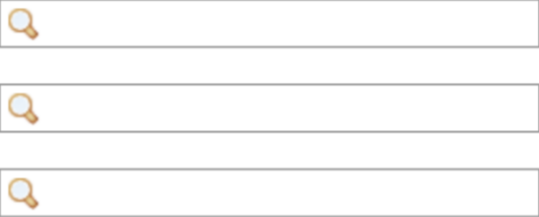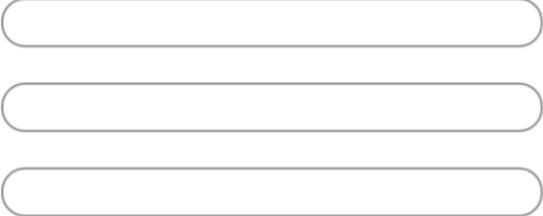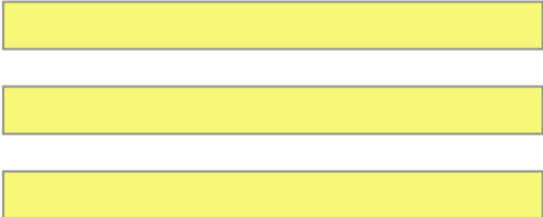
CSS

```
<style>
    .sfondo {
        position: relative;
        background: url(http://www.mysite.com/images/image.jpg);
        width: 200px;
        height: 250px;
        overflow: hidden;
    }

    .testo {
        position: absolute;
        bottom: 0px;
        width: 100%;
        background-color: rgba(255, 255, 255, 0.5);
        padding: 5px;
        height: 100px;
    }
</style>
```
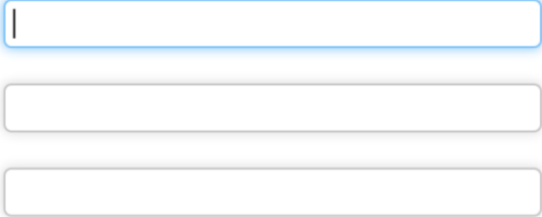
Stili per gli elementi dei moduli
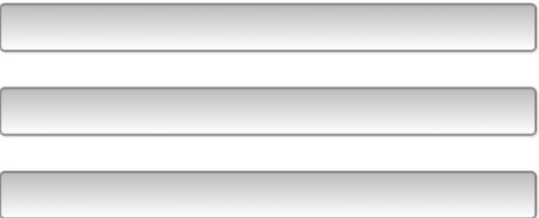
```
<style>
 .textbox {
    border: 1px dotted #000000;
    outline:0;
    height:25px;
    width: 275px;
 }
</style>
```

```
<style>
.textbox {
    border: 3px groove #FFA5A5;
    outline:0;
    height:25px;
  width: 275px;
 }
</style>
```

```
<style>
.textbox {
    background: transparent
url(images/back.png) repeat-x;
    border: 1px solid #999;
    outline:0;
    height:25px;
    width: 275px;
 }
</style>
```
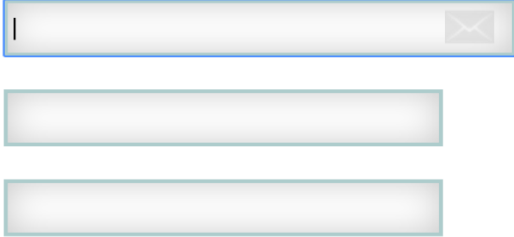
```
<style>
.textbox {
    background: #FFF url(images/sarch.png)
no-repeat 4px 4px;
    border: 1px solid #999;
    outline:0;
    padding-left: 25px;
    height:25px;
    width: 275px;
  }
</style>
```

```
<style>
.textbox {
    border: 1px solid #848484;
    border-radius: 30px;
    outline:0;
    height:25px;
    width: 275px;
    padding-left:10px;
    padding-right:10px;
  }
</style>
```

```
<style>
  .textbox {
    background-color : #F7F778;
    border: 1px solid #848484;
    height:25px;
    width: 275px;
    outline:0;
  }
 </style>
```
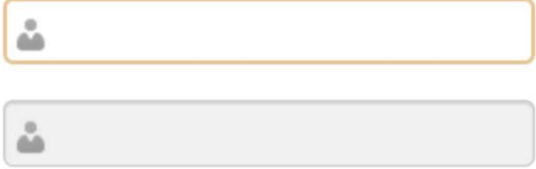
```
<style>
  .textbox {
    background: white;
    border: 1px solid #ffa853;
    border-radius: 5px;
    box-shadow: 0 0 5px 3px #ffa853;
    color: #666;
    outline: none;
    height:23px;
    width: 275px;
  }
</style>
```

```
<style>
  .textbox {
    background: white;
    border: 1px solid #DDD;
    border-radius: 5px;
    box-shadow: 0 0 5px #DDD inset;
    color: #666;
    outline: none;
    height:25px;
    width: 275px;
  }
</style>
```

```
<style>
  .textbox {
    background: white;
    border: 1px double #DDD;
    border-radius: 5px;
    box-shadow: 0 0 5px #333;
    color: #666;
    outline: none;
    height:25px;
    width: 275px;
  }
</style>
```

```
<style>
  .textbox {
    border: 1px solid #c4c4c4;
    height: 25px;
    width: 275px;
    font-size: 13px;
    padding: 4px 4px 4px 4px;
    border-radius: 4px;
    box-shadow: 0px 0px 8px #d9d9d9;
    -moz-box-shadow: 0px 0px 8px #d9d9d9;
    -webkit-box-shadow: 0px 0px 8px
#d9d9d9;
  }

.textbox:focus {
    outline: none;
    border: 1px solid #7bc1f7;
    box-shadow: 0px 0px 8px #7bc1f7;
    -moz-box-shadow: 0px 0px 8px #7bc1f7;
    -webkit-box-shadow: 0px 0px 8px
#7bc1f7;
  }
 </style>
```

```
<style>
  .textbox {
    height: 25px;
    width: 275px;
    background-color: transparent;
    border-style: solid;
    border-width: 0px 0px 1px 0px;
    border-color: darkred;
    outline:0;
  }
 </style>
```

```
<style>
.textbox {
    height: 25px;
    width: 275px;
    border: solid 1px #E5E5E5;
    outline: 0;
    font: normal 13px/100% Verdana,
Tahoma, sans-serif;
    background: #FFFFFF url('bg_form.png')
left top repeat-x;
    background: -webkit-gradient(linear,
left top, left 25, from(#FFFFFF), color-
stop(4%, #EEEEEE), to(#FFFFFF));
    background: -moz-linear-gradient(top,
#FFFFFF, #EEEEEE 1px, #FFFFFF 25px);
    box-shadow: rgba(0, 0, 0, 0.1) 0 0
8px;
    -moz-box-shadow: rgba(0, 0, 0, 0.1) 0
0 8px;
    -webkit-box-shadow: rgba(0, 0, 0, 0.1)
0 0 8px;
}

.textbox:focus {
    border-color: #C9C9C9;
    -webkit-box-shadow: rgba(0, 0, 0,
0.15) 0 0 8px;
}
</style>
```

```
<style>
.textbox {
    border-top: solid 1px #8e8e8e;
    border-right: solid 1px #d1d1d1;
    border-left: solid 1px #d1d1d1;
    border-bottom: solid 1px #e4e4e4;
    height: 25px;
    width: 275px;
  }

.textbox:focus {
    border-color: #4488cc;
    border-style: solid;
    border-width: 2px;
    outline: 0;
      }
</style>
```

```
<style>
.textbox {
    height: 25px;
    width: 275px;
    text-shadow: 0 1px 0 #FFF;
    outline: none;
    background: -webkit-gradient(linear,
left top, left bottom, from(#BCBCBE),
to(#FFF));
    background: -moz-linear-gradient(top,
#BCBCBE, #FFF);
    border-radius: 3px;
    border: 1px solid #717171;
    -webkit-box-shadow: 1px 1px 0 #EFEFEF;
    -moz-box-shadow: 1px 1px 0 #efefef;
    box-shadow: 1px 1px 0 #EFEFEF;
}
</style>
```

```
<style>
#text1 {
    border: 2px solid rgb(173, 204, 204);
    height: 31px;
    width: 223px;
    box-shadow: 0 0 27px rgb(204, 204,
204) inset;
    transition: 500ms all ease;
    padding: 3px 3px 3px 3px;
}

#text1:hover,
#text1:focus {
    width: 260px;
    transition: 500ms all ease;
    background: url(images/bck.png) no-
repeat right;
    background-size: 25px 25px;
    background-position: 96% 62%;
    padding: 3px 32px 3px 3px;
}
</style>
```

```
<style>
    .textbox {
    padding: 1px 20px;
    border: 0;
    height: 25px;
    width: 275px;
    border-radius: 10px;
    box-shadow: 1px 1px 0 0 #FFF, 5px 5px
40px 2px #BBB inset;
    -moz-box-shadow: 1px 1px 0 0 #FFF, 5px
5px 40px 2px #BBB inset;
    -webkit-box-shadow: 1px 1px 0 0 #FFF,
5px 5px 40px 2px #BBB inset;
    -webkit-background-clip: padding-box;
    outline: 0;
}
</style>
```

```
<style>
    .textbox {
    background: #F1F1F1 url(images/text-
40.png) no-repeat;
    background-position: 5px -7px
!important;
    padding: 10px 10px 10px 25px;
    width: 270px;
    border: 1px solid #CCC;
    border-radius: 5px;
    -moz-box-shadow: 0 1px 1px #ccc inset,
0 1px 0 #fff;
    -webkit-box-shadow: 0 1px 1px #CCC
inset, 0 1px 0 #FFF;
    box-shadow: 0 1px 1px #CCC inset, 0
1px 0 #FFF;
    }

.textbox:focus {
    background-color: #FFF;
    border-color: #E8C291;
    outline: none;
    -moz-box-shadow: 0 0 0 1px #e8c291
inset;
    -webkit-box-shadow: 0 0 0 1px #E8C291
inset;
    box-shadow: 0 0 0 1px #E8C291 inset;
    }
</style>
```

e-mail

Password

```html
<input type="text"class="inputs"
placeholder="e-mail" />
 <input type="password"
class="inputs"placeholder="Password" />


<style>
inputs:-webkit-input-placeholder {
    color: #b5b5b5;
}

inputs-moz-placeholder {
    color: #b5b5b5;
}

.inputs {
    background: #f5f5f5;
    font-size: 0.8rem;
    border-radius: 3px;
    border: none;
    padding: 13px 10px;
    width: 270px;
    margin-bottom: 20px;
    box-shadow: inset 0 2px 3px rgba( 0,
0, 0, 0.1 );
    clear: both;
}

.inputs:focus {
    background: #fff;
    box-shadow: 0 0 0 3px #fff38e, inset 0
2px 3px rgba( 0, 0, 0, 0.2 ), 0px 5px 5px
rgba( 0, 0, 0, 0.15 );
    outline: none;
}
</style>
```

e-mail

Password

```html
<input type="text"class="inputs"
placeholder="e-mail" />
<br>
 <input type="password"
class="inputs"placeholder="Password" />
```

```css
<style>
.inputs {
        background: #D3D3D3;
        background: -moz-linear-gradient(top, #D3D3D3 0%, #D9D9D9 38%, #E5E5E5 82%,
                #E7E7E7 100%);
        background: -webkit-gradient(linear, left top, left bottom, color-stop(0%, #D3D3D3),
                color-stop(38%, #D9D9D9), color-stop(82%, #E5E5E5), color-stop(100%, #E7E7E7));
        background: -webkit-linear-gradient(top, #D3D3D3 0%, #D9D9D9 38%, #E5E5E5 82%,
                #E7E7E7 100%);
        background: -o-linear-gradient(top, #D3D3D3 0%, #D9D9D9 38%, #E5E5E5 82%, #E7E7E7 100%);
        background: -ms-linear-gradient(top, #D3D3D3 0%, #D9D9D9 38%, #E5E5E5 82%, #E7E7E7 100%);
        background: linear-gradient(to bottom, #D3D3D3 0%, #D9D9D9 38%, #E5E5E5 82%, #E7E7E7
                100%);
        filter: progid: DXImageTransform.Microsoft.gradient(startColorstr='#d3d3d3',
                endColorstr='#e7e7e7', GradientType=0);
        display: block;
        padding: 12px 10px;
        color: #999;
        font-size: 1.2em;
        font-weight: bold;
        text-shadow: 1px 1px 1px #FFF;
        border: 1px solid rgba(16, 103, 133, 0.6);
        box-shadow: 0 0 3px rgba(255, 255, 255, 0.5), inset 0 1px 4px rgba(0, 0, 0, 0.2);
        border-radius: 3px;
        outline: 0;
        width: 270px;
}
</style>
```

Media rule

Esempio di una regola @media (CSS)

Media type

Media features

```css
@media screen and (min-width: 480px) {

    body {
        background-color: lightgreen;
    }

}
```

Parte di stile «classica»

Questa regola imposta un colore di background quando la pagina è larga almeno 480px.

I media type

all	Tutti i media type
print	Stampanti
screen	Schermi di computer, tablets, smartphones ecc.
speech	Per screenreaders che leggono la pagina in audio

Le media features principali

aspect-ratio	Proporzione tra width e height della finestra
color	Numero di bits per color component del dispositivo
color-index	Numero di colori che il dispositivo supporta
height	Altezza della finestra
max-aspect-ratio	Proporzione massima tra width e height della finestra
max-color	Massimo numero di bits per color component del dispositivo
max-color-index	Massimo numero di colori che il dispositivo supporta
max-device-aspect-ratio	Proporzione massima tra width e height del dispositivo
max-device-height	Height massima del dispositivo
max-device-width	Width massima del dispositivo
max-height	Height massima della finestra
max-resolution	Risoluzione massimo del dispositivo in dpi o dpcm
max-width	Width massima della finestra
min-aspect-ratio	Proporzione minima tra width e height della finestra
min-color	Minimo numero di bits per color component del dispositivo
min-color-index	Minimo numero di colori che il dispositivo supporta
min-device-aspect-ratio	Proporzione minima tra width e height del dispositivo
min-device-width	Width minima del dispositivo
min-device-height	Height minima del dispositivo
min-height	Height minima della finestra
min-resolution	Risoluzione minima del dispositivo in dpi o dpcm
min-width	Width minima della finestra
orientation	Orientamento della finestra (landscape o portrait)
resolution	Risoluzione del dispositivo in dpi o dpcm
width	Width del dispositivo

Riferimenti web

https://www.w3schools.com/cssref/css3_pr_mediaquery.asp