

 免費電子書

學習

CSS

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---

# 1: CSS

HTML。 HTML。 。 HTML。

1	19961217
2	1998512
3	20151013

## Examples

HTML<link>CSSHTML。

<link>rel"stylesheet" href"stylesheet"。 URL。 HTML5 type。

<link>HTML<head>。 。

---

### world.html

```
<!DOCTYPE html>
<html>
  <head>
    <meta charset="utf-8" />
    <link rel="stylesheet" type="text/css" href="style.css">
  </head>
  <body>
    <h1>Hello world!</h1>
    <p>I ♥ CSS</p>
  </body>
</html>
```

### style.css

```
h1 {
  color: green;
  text-decoration: underline;
}
p {
  font-size: 25px;
  font-family: 'Trebuchet MS', sans-serif;
}
```

hrefCSS。 CSSHTMLhref="foldername/style.css"。

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



CSS。 100CSS100""100100。 。

HTMLCSS。

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

CSS。 main.css

```
p.green { color: #00FF00; }
```

“green”.css main.css 。

```
p.green { color: #006600; }
```

“”。

'important'。

HTMLCSS。 HTML; CSS。 。

HTML<style></style>CSSHTML。 。

```
<head>
  <style>
    h1 {
      color: green;
      text-decoration: underline;
    }
    p {
      font-size: 25px;
      font-family: 'Trebuchet MS', sans-serif;
    }
  </style>
</head>
<body>
  <h1>Hello world!</h1>
  <p>I ♥ CSS</p>
</body>
```

。 。

<style>CSS。 。

。

```
<h1 style="color: green; text-decoration: underline;">Hello world!</h1>
<p style="font-size: 25px; font-family: 'Trebuchet MS';">I ♥ CSS</p>
```

。

## CSS @importCSS

@import CSS at-rule。 @charset;@importat-rules。 @import 。

### @import

@import

A.

```
<style>
  @import url('/css/styles.css');
</style>
```

B.

additional-styles.cssadditional-styles.cssCSSCSS

```
@import '/additional-styles.css';
```

CSS。 。

```
@import 'https://fonts.googleapis.com/css?family=Lato';
```

@import

```
@import '/print-styles.css' print;
@import url('landscape.css') screen and (orientation:landscape);
```

## JavaScriptCSS

### JavaScript

styleJavaScriptCSS。

```
var el = document.getElementById("element");
el.style.opacity = 0.5;
el.style.fontFamily = 'sans-serif';
```

。 cssfont-familyjavascriptfontFamily 。

JavaScript<style><link>HTML<body><head> 。

### jQuery

jQueryCSS。

```
$('#element').css('margin', '5px');
```

```
$('#element').css({  
  margin: "5px",  
  padding: "10px",  
  color: "black"  
});
```

jQuerycssfont-size ◦ ◦

```
$('.example-class').css({  
  "background-color": "blue",  
  fontSize: "10px"  
});
```

- 
- [JavaScript - CSS](#) ◦
  - [jQuery - CSS](#)

## CSS

list-style-type list-style-imagelist-style-position ◦ **discoutsidenone** ◦ list-style ◦

**list-style-type** ◦

list-style-type

- 
- 
- 
- 
- 
- 
- 

[W3Cwiki](#)

-

```
li {  
  list-style-type: square;  
}
```

**list-style-image** none URL ◦

```
li {  
  list-style-image: url(images/bullet.png);  
}
```

**list-style-position**

“inside”“outside”。

```
li {  
  list-style-position: inside;  
}
```

CSS <https://riptutorial.com/zh-TW/css/topic/293/css>

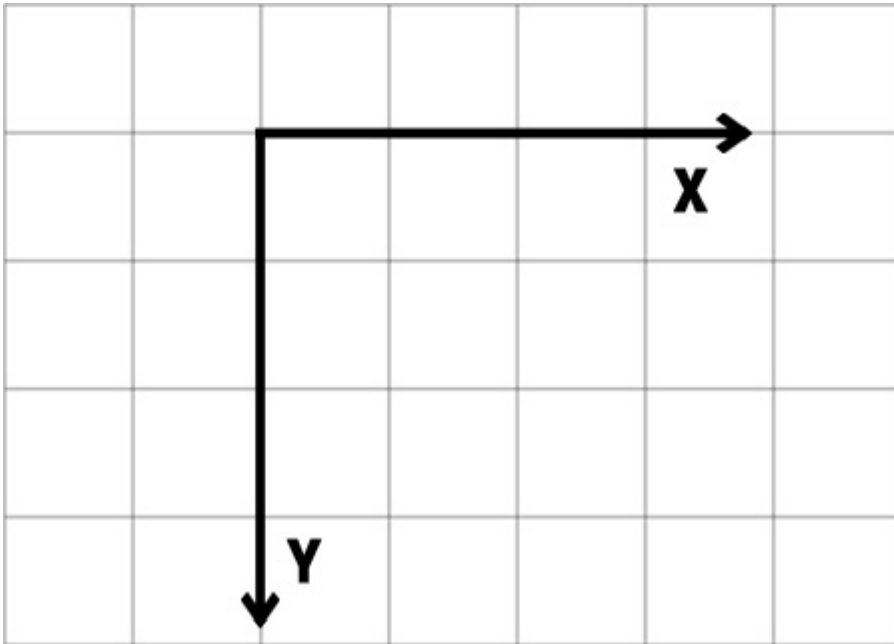
## 2: 2D

- 
- transformrotate<angle>
- 
- transformtranslate<length-or-percentage> [<length-or-percentage>]
- transformtranslateX<length-or-percentage>
- transformtranslateY<length-or-percentage>
- 
- transformskew<angle> [<angle>]
- transformskewX<angle>
- skewY<angle>
- 
- transformscale<scale-factor> [<scale-factor>]
- transformscaleX<scale-factor>
- transformscaleY<scale-factor>
- 
- transformmatrix<number> [<number>] {5,5}

| /              |                                    |
|----------------|------------------------------------|
| rotate(x)      | Z                                  |
| translate(x,y) | XY                                 |
| translateX(x)  | X                                  |
| translateY(y)  | Y                                  |
| scale(x,y)     | XY                                 |
| scaleX(x)      | X                                  |
| scaleY(y)      | Y                                  |
| skew(x,y)      |                                    |
| skewX(x)       |                                    |
| skewY(y)       |                                    |
| matrix()       | 2D。                                |
|                | ◦ deg grad rad turn ◦ skew() ◦ Y0。 |
|                | ◦ translate() ◦ Y0。                |
|                | ◦ scale() ◦ Y。                     |

# 2D Coordinate

2D X / Y。 XY



`translateY()``translateX()`

- IEIE9-`ms-` Edge
- Firefox3.5-`moz-`15
- 434Chrome-`webkit-`
- Safari-`webkit-`8
- Opera11.5-`o-`1522-`webkit-`
- Android2.14.4.4-`webkit-`

```
-webkit-transform: rotate(45deg);  
-ms-transform: rotate(45deg);  
transform: rotate(45deg);
```

## Examples

### HTML

```
<div class="rotate"></div>
```

### CSS

```
.rotate {  
  width: 100px;  
  height: 100px;  
  background: teal;  
  transform: rotate(45deg);  
}
```

div45◦ div50%50%◦ transform-origin◦

```
transform-origin: 100% 50%;
```

◦

## HTML

```
<div class="scale"></div>
```

## CSS

```
.scale {  
  width: 100px;  
  height: 100px;  
  background: teal;  
  transform: scale(0.5, 1.3);  
}
```

divX $100\text{px} * 0.5 = 50\text{px}$  Y $100\text{px} * 1.3 = 130\text{px}$  $100\text{px} * 1.3 = 130\text{px}$ ◦

div 50%50%◦

## HTML

```
<div class="translate"></div>
```

## CSS

```
.translate {  
  width: 100px;  
  height: 100px;  
  background: teal;  
  transform: translate(200px, 50%);  
}
```

Xdiv $200\text{px}$ Y $100\text{px} * 50\% = 50\text{px}$ ◦

◦

## X

```
.translate {  
  transform: translateX(200px);  
}
```

## Y

```
.translate {  
  transform: translateY(50%);  
}
```

```
}
```

## HTML

```
<div class="skew"></div>
```

## CSS

```
.skew {  
  width: 100px;  
  height: 100px;  
  background: teal;  
  transform: skew(20deg, -30deg);  
}
```

divX20Y-30◦

div 50%50%◦

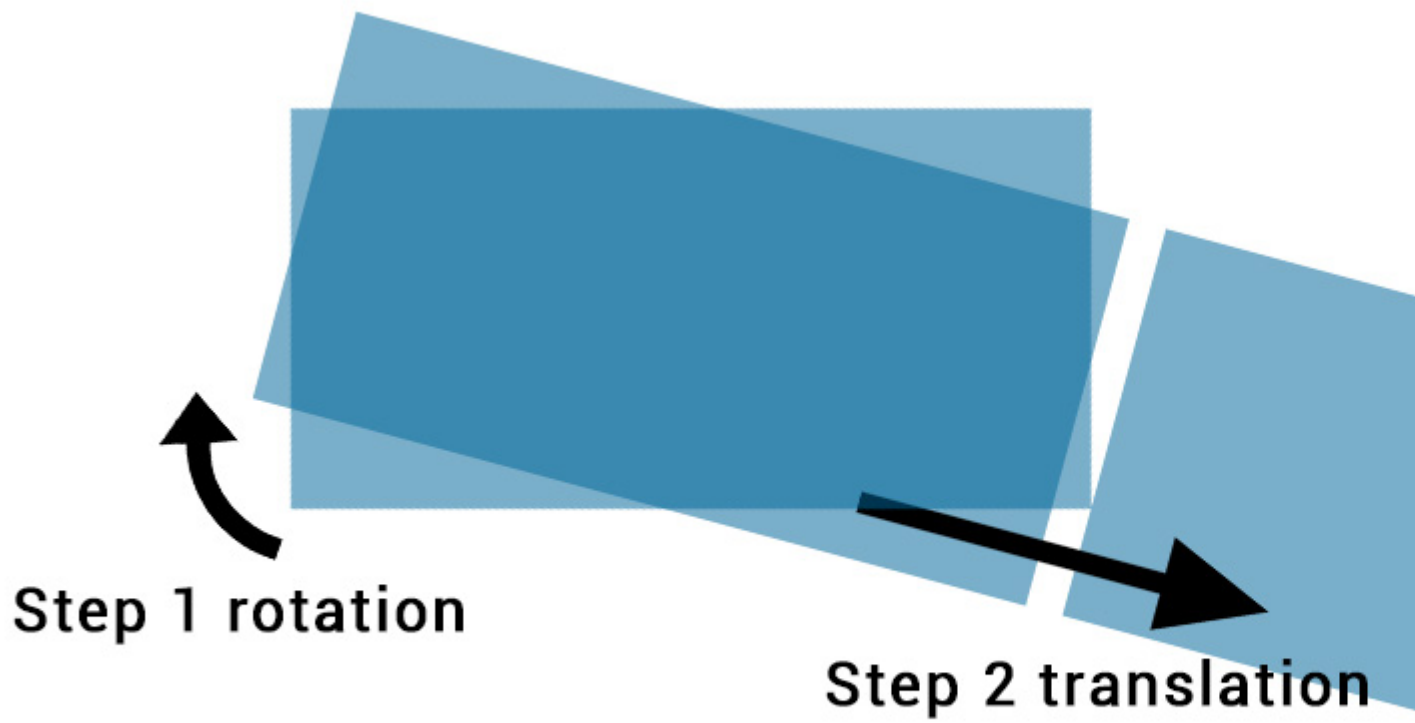
◦

```
transform: rotate(15deg) translateX(200px);
```

15200px◦

◦ 15





o

```
transform: translateX(200px) rotate(15deg);
```

```
<div class="transform"></div>
```

```
.transform {  
  transform: rotate(15deg) translateX(200px);  
}
```



## Step 1 translation

`transform-origin` `transform-origin` ◦

2 `transform-origin: XY;`

`div .tl transform-origin: 0 0; .tr transform-origin: 100% 0 transform-origin: 100% 0` ◦

### HTML

```
<div class="transform origin1"></div>
<div class="transform origin2"></div>
```

### CSS

```
.transform {
  display: inline-block;
  width: 200px;
  height: 100px;
  background: teal;
  transition: transform 1s;
}

.origin1 {
  transform-origin: 0 0;
}

.origin2 {
  transform-origin: 100% 0;
```

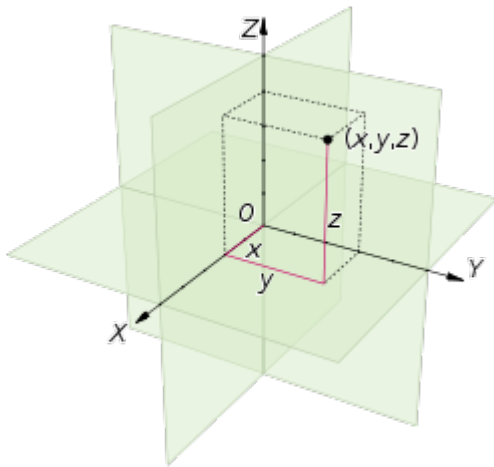
```
}  
  
.transform:hover {  
    transform: rotate(30deg);  
}
```

**transform-origin** 50% 50% ◦

**2D** <https://riptutorial.com/zh-TW/css/topic/938/2d>

# 3: 3D

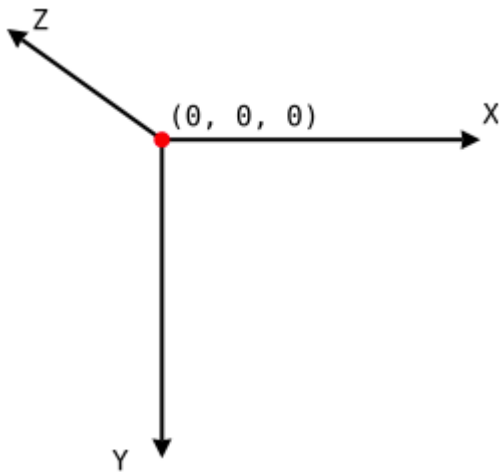
$(x, y, z)$  3D



CSS

- x
- y
- z/

CSS



## Examples

3D

3D3D. 3D CSS

HTML

```
<div class="cube">
```

```
<div class="cubeFace"></div>
<div class="cubeFace face2"></div>
</div>
```

## CSS

```
body {
  perspective-origin: 50% 100%;
  perspective: 1500px;
  overflow: hidden;
}
.cube {
  position: relative;
  padding-bottom: 20%;
  transform-style: preserve-3d;
  transform-origin: 50% 100%;
  transform: rotateY(45deg) rotateX(0);
}
.cubeFace {
  position: absolute;
  top: 0;
  left: 40%;
  width: 20%;
  height: 100%;
  margin: 0 auto;
  transform-style: inherit;
  background: #C52329;
  box-shadow: inset 0 0 0 5px #333;
  transform-origin: 50% 50%;
  transform: rotateX(90deg);
  backface-visibility: hidden;
}
.face2 {
  transform-origin: 50% 50%;
  transform: rotateZ(90deg) translateX(100%) rotateY(90deg);
}
.cubeFace:before, .cubeFace:after {
  content: '';
  position: absolute;
  width: 100%;
  height: 100%;
  transform-origin: 0 0;
  background: inherit;
  box-shadow: inherit;
  backface-visibility: inherit;
}
.cubeFace:before {
  top: 100%;
  left: 0;
  transform: rotateX(-90deg);
}
.cubeFace:after {
  top: 0;
  left: 100%;
  transform: rotateY(90deg);
}
```

- 4
- 

backface-visibility 3D

3D backface-visibility

[jsfiddle](#)

```
<div class="flip">Loren ipsum</div>
<div class="flip back">Lorem ipsum</div>
```

```
.flip {
  -webkit-transform: rotateY(180deg);
  -moz-transform: rotateY(180deg);
  -ms-transform: rotateY(180deg);
  -webkit-backface-visibility: visible;
  -moz-backface-visibility: visible;
  -ms-backface-visibility: visible;
}

.flip.back {
  -webkit-backface-visibility: hidden;
  -moz-backface-visibility: hidden;
  -ms-backface-visibility: hidden;
}
```

Firefox 10+ IE 10+ backface-visibility Opera Chrome Safari iOS Android -webkit-backface-visibility

4

1. -
2. -
3. inherit -
4. initial -

3D

**CSS**

```
div.needle {
  margin: 100px;
  height: 150px;
  width: 150px;
  transform: rotateY(85deg) rotateZ(45deg);
  /* presentational */
  background-image: linear-gradient(to top left, #555 0%, #555 40%, #444 50%, #333 97%);
  box-shadow: inset 6px 6px 22px 8px #272727;
}
```

# HTML

```
<div class='needle'></div>
```

3D ◦ rotateZ ◦ rotateY ◦ Y ◦

◦ XY ◦ transform rotateX(85deg) rotateZ(45deg); ◦

Safari ◦



2D



3D



## 3D

### HTML

```
<div id="title">
  <h1 data-content="HOVER">HOVER</h1>
</div>
```

### CSS

```
*{margin:0;padding:0;}
html,body{height:100%;width:100%;overflow:hidden;background:#0099CC;}
#title{
  position:absolute;
  top:50%; left:50%;
  transform:translate(-50%,-50%);
  perspective-origin:50% 50%;
  perspective:300px;
}
h1{
  text-align:center;
  font-size:12vmin;
  font-family: 'Open Sans', sans-serif;
  color:rgba(0,0,0,0.8);
  line-height:1em;
  transform:rotateY(50deg);
  perspective:150px;
  perspective-origin:0% 50%;
}
h1:after{
  content:attr(data-content);
  position:absolute;
  left:0;top:0;
  transform-origin:50% 100%;
  transform:rotateX(-90deg);
  color:#0099CC;
}
#title:before{
  content:'';
  position:absolute;
  top:-150%; left:-25%;
  width:180%; height:328%;
  background:rgba(255,255,255,0.7);
  transform-origin: 0 100%;
  transform: translatez(-200px) rotate(40deg) skewX(35deg);
  border-radius:0 0 100% 0;
}
```





- 
- dataH1◦

“#title◦ border-radius◦

3D <https://riptutorial.com/zh-TW/css/topic/2446/3d>

## 4: CSS Image Sprites

- //  
backgroundurl"sprite-image.png";  
background-position-20px 50px;
- //  
backgroundurl"sprite-image.png" - 20px 50px;

webfonts [SVG](#).

### Examples

◦ ◦



◦ HTTP.

◦

### HTML

```
<div class="icon icon1"></div>  
<div class="icon icon2"></div>  
<div class="icon icon3"></div>
```

### CSS

```
.icon {  
  background: url("icons-sprite.png");  
  display: inline-block;  
  height: 20px;  
  width: 20px;  
}  
.icon1 {  
  background-position: 0px 0px;  
}  
.icon2 {  
  background-position: -20px 0px;  
}  
.icon3 {  
  background-position: -40px 0px;
```

```
}
```

CSSbackground-positionxyCSS。

CSS Image Sprites <https://riptutorial.com/zh-TW/css/topic/3690/css-image-sprites>

# 5: CSSCSSOM

CSSCSSOM。

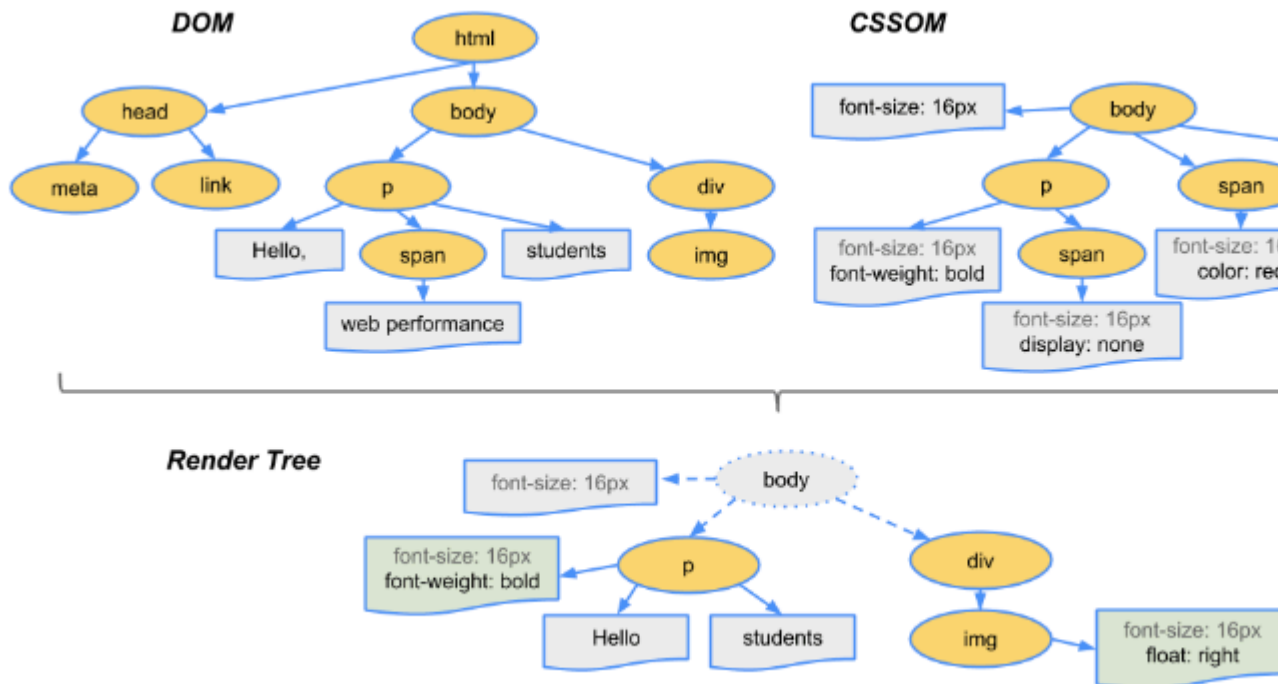
<https://www.w3.org/TR/cssom-1/>

## Examples

◦ CSS。

Web。

1. WebHTMLDOM。
2. WebCSSCSSOMCSS。
3. WebDOMCSSOM。 Web。



## CSSOM

CSSOM

```
var stylesheet = document.styleSheets[0].cssRules;
```

```
var end = stylesheet.length - 1;
```

body

```
stylesheet.insertRule("body { background-image:  
url('http://cdn.sstatic.net/Sites/stackoverflow/img/favicon.ico'); }", end);
```

**CSSCSSOM** <https://riptutorial.com/zh-TW/css/topic/4961/css-cssom->

---

# 6: CSS

◦ ◦

---

```
p {  
  color: maroon;  
  font-size: 16px;  
}
```

---

```
p{  
  color: maroon;  
font-size:16px }
```

---

◦ ◦ ◦

```
p { color: maroon; font-size: 16px; }
```

## Examples

CSS h1 {} ◦

```
h1 {}
```

◦

```
/* Two values in this property list */  
span {  
  text-shadow: yellow 0 0 3px, green 4px 4px 10px;  
}  
  
/* Alternate Formatting */  
span {  
  text-shadow:  
    yellow 0 0 3px,  
    green 4px 4px 10px;  
}
```

CSS ◦ ◦

```
div, p { color: blue }
```

```
<div><p>◦ <p><p> <div>◦
```

o

```
p, .blue, #first, div span{ color : blue }
```

- <p>
- blue
- first**ID**
- <span><span> <div>

CSS <https://riptutorial.com/zh-TW/css/topic/4313/css>

# 7: CSS

CSS [BEM](#) [OOCSS](#) [SMACSS](#)。

[Bootstrap](#) [Foundation](#) CSS。

CSS/。

- [BEM](#)
- [OOCSS](#)
- [SMACSS](#)

[Bootstrap](#) [Foundation](#) CSS。 CSS/CSS/。

## Examples

### BEM

[BEM](#) Blocks, Elements and Modifiers。 [Yandex](#)。

### BEM HTML CSS

- header container menu checkbox text box
- - menu item list item checkbox caption header title
- disabled highlighted checked fixed size big color yellow

---

[BEM](#) CSS。。

- 
- `__`
- `blockname__elementname`
- `blockname--modifiernameblockname__elementname--modifiername`
- 

---

### BEM CSS

```
.form { } // Block
.form--theme-xmas { } // Block + modifier
.form--simple { } // Block + modifier
.form__input { } // Block > element
.form__submit { } // Block > element
.form__submit--disabled { } // Block > element + modifier
```



## HTML

```
<form class="form form--theme-xmas form--simple">
  <input class="form__input" type="text" />
  <input class="form__submit form__submit--disabled" type="submit" />
</form>
```

CSS <https://riptutorial.com/zh-TW/css/topic/10823/css>

---

# 8: Internet Explorer

“”/。。

## Examples

### Internet Explorer 10

Internet Explorer 10+EdgeMicrosoft-`ms-high-contrast`“”。

`-ms-high-contrast`3 active black-on-whitewhite-on-black。 IE10 +noneEdge。

```
@media screen and (-ms-high-contrast: active), (-ms-high-contrast: black-on-white) {
  .header{
    background: #fff;
    color: #000;
  }
}
```

black-on-white。

```
@media screen and (-ms-high-contrast: white-on-black) {
  .header{
    background: #000;
    color: #fff;
  }
}
```

white-on-black。

---

`-ms-high-contrast` [Microsoft](#)

### Internet Explorer 6Internet Explorer 7

Internet Explorer 6Internet Explorer 7\*

```
.hide-on-ie6-and-ie7 {
  *display : none; // This line is processed only on IE6 and IE7
}
```

IE6IE7hackproperty: value。

### Internet Explorer 8

Internet Explorer 8@media \0 screen { }

```
@media \0 screen {
  .hide-on-ie8 {
    display : none;
  }
}
```

```
@media \0 screen { }|
```

## IE6IE7

```
display: inline-block;
```

Internet Explorer 67inline-blockdisplay°

```
zoom: 1;
*display: inline;
```

zoomhasLayoutInternet Explorer° \*display° °

Internet Explorer <https://riptutorial.com/zh-TW/css/topic/5056/internet-explorer>

# 9:

- \*01|||;

backgroundrgba255,255,255,0.6;

- MDN [https //developer.mozilla.org/en/docs/Web/CSS/opacity](https://developer.mozilla.org/en/docs/Web/CSS/opacity) ;
- W3C" <https //www.w3.org/TR/css3-color/#transparency>
- <http //caniuse.com/#feat=css-opacity>

## Examples

opacityopacity ° 0.0 1.0 °

```
<div style="opacity:0.8;">  
  This is a partially transparent element  
</div>
```

opacity: 1.0;	
opacity: 0.75;	2575
opacity: 0.5;	5050
opacity: 0.25;	7525
opacity: 0.0;	

“”IE

IEopacity

```
.transparent-element {  
  /* for IE 8 & 9 */  
  -ms-filter:"progid:DXImageTransform.Microsoft.Alpha(Opacity=60)"; // IE8  
  /* works in IE 8 & 9 too, but also 5, 6, 7 */  
  filter: alpha(opacity=60); // IE 5-7  
  /* Modern Browsers */  
  opacity: 0.6;  
}
```

<https://riptutorial.com/zh-TW/css/topic/2864/>

# 10:

- display:none || list-item | inline-list-item ||| table-cell | table-column | table-column-group | table-footer-group | table-header-group || table-row-group | flex | inline-flex ||||| ruby-text || ruby-text-container |;

none	◦
block	<b>100</b> ◦
inline	◦
inline-block	◦
inline-flex	<b>Flex</b> ◦
inline-table	◦
grid	◦
flex	<b>flexbox</b> ◦
inherit	◦
initial	<b>HTML/</b> ◦
table	<b>HTML</b> table◦
table-cell	<td>
table-column	<col>
table-row	<tr>
list-item	<li>◦

## Examples

display CSSHTML◦ blockinlinedisplay◦

inline◦ ◦

```
<span>This is some <b>bolded</b> text!</span>
```

**This is some bolded text!**

```
inline<span><b>
```

```
block"" inline
```

```
<div>Hello world!</div><div>This is an example!</div>
```

**Hello world!**  
**This is an example!**

```
divblockinline
```

```
inline-blockpadding margin heightinline
```

```
text-align ° °
```

```
<!--Inline: unordered list-->
<style>
li {
  display : inline;
  background : lightblue;
  padding:10px;

  border-width:2px;
  border-color:black;
  border-style:solid;
}
</style>

<ul>
<li>First Element </li>
<li>Second Element </li>
<li>Third Element </li>
</ul>
```

**First Element**

**Second Element**

**Third Element**

```
<!--block: unordered list-->
<style>
li {
  display : block;
  background : lightblue;
  padding:10px;

  border-width:2px;
  border-color:black;
  border-style:solid;
}
</style>
```

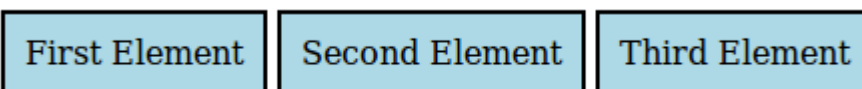
```
<ul>
<li>First Element </li>
<li>Second Element </li>
<li>Third Element </li>
</ul>
```



```
<!--Inline-block: unordered list-->
<style>
li {
  display : inline-block;
  background : lightblue;
  padding:10px;

  border-width:2px;
  border-color:black;
  border-style:solid;
}
</style>

<ul>
<li>First Element </li>
<li>Second Element </li>
<li>Third Element </li>
</ul>
```



display:none.

idmyDivdiv

```
<div id="myDiv"></div>
```

CSS

```
#myDiv {
  display: none;
}
```

display:none; positionfloat . html.

visibility: hidden; ◦ ◦

display: none; JavaScript ◦

## div

## HTML

```
<style>
  table {
    width: 100%;
  }
</style>

<table>
  <tr>
    <td>
      I'm a table
    </td>
  </tr>
</table>
```

```
<style>
  .table-div {
    display: table;
  }
  .table-row-div {
    display: table-row;
  }
  .table-cell-div {
    display: table-cell;
  }
</style>

<div class="table-div">
  <div class="table-row-div">
    <div class="table-cell-div">
      I behave like a table now
    </div>
  </div>
</div>
```

<https://riptutorial.com/zh-TW/css/topic/1473/>



# 11:

CSShtml。

:: first-letter。

- selector ::{propertyvalue}

::after	
::before	
::first-letter	
::first-line	
::selection	
::backdrop	
::placeholder	
::marker	
::spelling-error	
::grammar-error	

- :: :。 Internet Explorer 8 :。
- 。 。
- DOM: hover。

## Examples

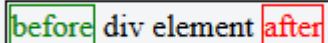
。

content; content: "" 。

```
div::after {
  content: 'after';
  color: red;
  border: 1px solid red;
}

div {
  color: black;
  border: 1px solid black;
  padding: 1px;
}
```

```
div::before {
  content: 'before';
  color: green;
  border: 1px solid green;
}
```



ul ◦


```
ul {
  list-style-type: none;
}
```

◦ ◦

```
li:before {
  content: "";
  display: inline-block;
  margin-right: 10px;
  height: 10px;
  width: 10px;
  background: linear-gradient(red, blue);
}
```

## HTML

```
<ul>
  <li>Test I</li>
  <li>Test II</li>
</ul>
```



<https://riptutorial.com/zh-TW/css/topic/911/>

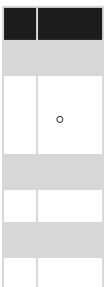
# 12:

- cursorauto ||||| n-resize | ne-resize | nw-resize | s-resize | se-resize | sw-resize | w-resize | ew-resize | ns-resize | nesw-resize | nwse-resize | col-resize |||||;

## Examples

```
cursor: value;
```

	default		n-resize		not-allowed
	crosshair		ne-resize		no-drop
	hand		e-resize		vertical-text
	pointer		se-resize		all-scroll
	Cross browser		s-resize		col-resize
	move		sw-resize		row-resize
	text		w-resize		
	wait		nw-resize		
	help		progress		



pointer-eventsHTML/。

```
.disabled {
  pointer-events: none;
}
```

'none'HTML[[1]]

HTML

- ;
  - 。
1. <https://css-tricks.com/almanac/properties/p/pointer-events/>
  - <https://developer.mozilla.org/en-US/docs/Web/CSS/pointer-events>

- <https://davidwalsh.name/pointer-events>

CSS。

HTML

```
<input id="example" />
```

CSS

```
#example {  
  caret-color: red;  
}
```

- <https://developer.mozilla.org/en-US/docs/Web/CSS/caret-color>

<https://riptutorial.com/zh-TW/css/topic/1742/>

---

# 13:

## Examples

◦ ◦ ◦

---

# HTML

```
<nav>
  <ul>
    <li>abc</li>
    <li>abcdefghijkl</li>
    <li>abcdef</li>
  </ul>
</nav>
```

---

# CSS

```
nav {
  width: 100%;
  line-height: 1.4em;
}
ul {
  list-style: none;
  display: block;
  width: 100%;
  margin: 0;
  padding: 0;
  text-align: justify;
  margin-bottom: -1.4em;
}
ul:after {
  content: "";
  display: inline-block;
  width: 100%;
}
li {
  display: inline-block;
}
```

- 
- nav ul li "" ◦ ◦
  - :after ul 'line' ◦ margin-bottom line-height ◦
  - ◦ ◦

<https://riptutorial.com/zh-TW/css/topic/3308/>

## 14:

- `column-count` `auto` | `number` | `inherit` | `initial` | `unset`;
- `column-width` `auto` | `length`;
- `column`[`column-width`] | [`column-count`];
- `column-span` `none` | `all` | `inherit` | `initial` | `unset`;
- `column-gap` `normal` | `length` | `inherit` | `initial` | `unset`;
- `column-fill` `auto` | `balance` | `inherit` | `initial` | `unset`;
- `column-rule-color` `color` | `inherit` | `initial` | `unset`;
- `column-rule-style` `none` | `hidden` | `dotted` | `dashed` | `solid` | `double` | `groove` | `ridge` | `inset` | `outset` | `inherit` | `initial` | `unset`;
- `column-rule-width` `thin` | `medium` | `thick` | `length` | `inherit` | `initial` | `unset`;
- `column-rule`[`column-rule-width`] | [`column-rule-style`] | [`column-rule-color`];
- `break-after` `auto` | `always` | `left` | `right` | `recto` | `verso` | `page` | `column` | `region` | `avoid` | `avoid-page` | `avoid-column` | `avoid-region`;
- `break-before` `auto` | `always` | `left` | `right` | `recto` | `verso` | `page` | `column` | `region` | `avoid` | `avoid-page` | `avoid-column` | `avoid-region`;
- `break-inside` `auto` | `avoid` | `avoid-page` | `avoid-column` | `avoid-region`;

## Examples

### CSS.

```
<div id="multi-columns">Lorem ipsum dolor sit amet, consectetur adipisicing 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</div>
```

```
.multi-columns {  
  -moz-column-count: 2;  
  -webkit-column-count: 2;  
  column-count: 2;  
}
```

Stack Overflow is a privately held website, the flagship site of the Stack Exchange Network,[4][5][6] created in 2008 by Jeff Atwood and Joel Spolsky. [7][8] It was created to be a more open alternative to earlier Q&A sites such as Experts-Exchange. The name for the website was chosen by voting in April 2008 by readers of Coding Horror, Atwood's popular programming blog.

The website serves as a platform for users to ask and answer questions, and, through membership and active participation, to vote questions and

answers and answers wiki or Di Overflow "badges" awarded receiving given to a badges fo [14] which gamificat or forum. licensed Attribute-

column-width◦ column-count◦

```
<div id="multi-columns">
  Lorem ipsum dolor sit amet, consectetur adipisicing 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
</div>
```

```
.multi-columns {
  -moz-column-width: 100px;
  -webkit-column-width: 100px;
  column-width: 100px;
}
```

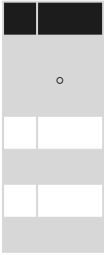
Stack Overflow is a privately held website, the flagship site of the Stack Exchange Network,[4][5][6] created in 2008 by Jeff Atwood and Joel Spolsky. [7][8] It was created to be a more open alternative to earlier Q&A sites such as Experts-	Exchange. The name for the website was chosen by voting in April 2008 by readers of Coding Horror, Atwood's popular programming blog. The website serves as a platform for users to ask and answer	questions, and, through membership and active participation, to vote questions and answers up or down and edit questions and answers in a fashion similar to a wiki or Digg.[13] Users of Stack Overflow can earn reputation	points and "badges"; for example, a person is awarded 10 reputation points for receiving an "up" vote on an answer given to a question, and can receive badges for their valued contributions, [14] which represents a kind of	gamification of the traditional Q&A site or forum. All user-generated content is licensed under a Creative Commons Attribute-ShareAlike license.
--	--	--	--	--

<https://riptutorial.com/zh-TW/css/topic/3042/>



# 15:

- `list-style-type | list-style-position | list-style-image ||;`



```
list-style-type<li> list <ol><ul> ◦ ◦
```

## Examples

```
<ul> <li>
```

```
list-style: disc;           /* A filled circle (default) */
list-style: circle;        /* A hollow circle */
list-style: square;        /* A filled square */
list-style: '-';           /* any string */
```

```
<ol> <li>
```

```
list-style: decimal;        /* Decimal numbers beginning with 1 (default) */
list-style: decimal-leading-zero; /* Decimal numbers padded by initial zeros (01, 02, 03, ... 10) */
list-style: lower-roman;    /* Lowercase roman numerals (i., ii., iii., iv., ...) */
list-style: upper-roman;    /* Uppercase roman numerals (I., II., III., IV., ...) */
list-style-type: lower-greek; /* Lowercase roman letters (α., β., γ., δ., ...) */
list-style-type: lower-alpha; /* Lowercase letters (a., b., c., d., ...) */
list-style-type: lower-latin; /* Lowercase letters (a., b., c., d., ...) */
list-style-type: upper-alpha; /* Uppercase letters (A., B., C., D., ...) */
list-style-type: upper-latin; /* Uppercase letters (A., B., C., D., ...) */
```

```
list-style: none;           /* No visible list marker */
list-style: inherit;        /* Inherits from parent */
```

```
<ul><ol> <li>◦ ◦ ◦
```

```
“”◦ ◦
```

```
list-style-position: inside;
```

```
<li>◦
```

```
list-style-position: outside;
```

<li>◦ ◦

insideoutside [jsfiddle](#)

/

◦ ◦

```
<ul>
  <li>first item</li>
  <li>second item</li>
</ul>
```

## CSS

```
ul {
  list-style-type: none;
}
li {
  margin: 0;
  padding: 0;
}
```

<https://riptutorial.com/zh-TW/css/topic/4215/>

# 16:

- 
- clip-path<clip-source> | [<basic-shape> || <clip-geometry-box>] |
- 
- mask-image[ <mask-reference>]
- mask-mode[<mask-mode>]
- mask-repeat[<repeat-style>]
- mask-position[<position>]
- mask-clip[<geometry-box> | ]
- mask-origin[<geometry-box>]
- mask-size[<bg-size>]
- mask-composite[<compositing-operator>]
- mask[<mask-reference> <masking-mode> || <position> [/ <bg-size>] || <repeat-style> || <geometry-box> || [<geometry-box> | no-clip] || <compositing-operator>]

	URLSVGSVG。
	inset() circle() ellipse()polygon() ° °
	content-box padding-box border-box margin-box fill-box stroke-box view-box ° <basic-shape> ° <basic-shape> °
	noneURL °
	XY ° repeat-x repeat-y repeat space round no-repeat °
	alphaURLalpha ° URLalpha °
	background-position ° 1top 10% 2top right 50% 50% °
	° content-box padding-box border-box margin-box fill-box stroke-box view-box ° W3C °
BG-	background-size ° autocovercontains ° °
	add subtract exclude multiply ° W3C °

## CSS ClippingMasking。

20167ChromeSafariOpera-webkit-°

FirefoxSVG mask ° SVG maskmask: url(#msk) SVGmaskmask:

url('yourfilepath/yourfilename.svg#msk') ◦ #mskmaskid ◦ Firefoxmaskmask-reference◦

Internet ExplorerEdge◦

mask-mode◦

20167ChromeSafariOpera◦ circle polygon SVGurl(#clipper)clip-pathclip-path ◦ SVG◦ -webkit◦

Firefoxclip-pathurl() Internet ExplorerEdge◦

## Examples

### CSS

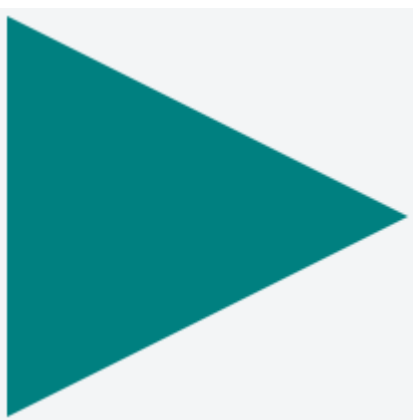
```
div{
  width:200px;
  height:200px;
  background:teal;
  clip-path: polygon(0 0, 0 100%, 100% 50%); /* refer remarks before usage */
}
```

### HTML

```
<div></div>
```

200 x 200◦ 0 0 - 0 100% - 100% 50% ◦ ◦

◦



### CSS

```
div{
```

```
width: 200px;
height: 200px;
background: teal;
clip-path: circle(30% at 50% 50%); /* refer remarks before usage */
}
```

# HTML

```
<div></div>
```

div ◦ 30 ◦ `<clip-geometry-box>border-box` ◦

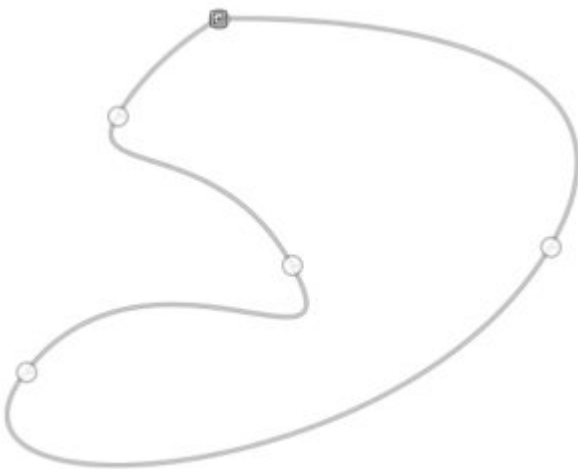
(x, y)

```
circle(radius at x y)
```



◦ HTML ◦

◦ ◦ clip-path ◦ SVG ◦ circle() polygon() ellipse() ◦



```
clip-path: circle(100px at center);
```

100px◦

◦ ◦

◦

**Alpha** ◦



◦

mask◦

```
mask: url(masks.svg#rectangle) luminance;
```

masks.svgrectangle ◦

---

## CSS

```
div {  
  height: 200px;  
  width: 200px;  
  background: url(http://lorempixel.com/200/200/nature/1);  
  mask-image: linear-gradient(to right, white, transparent);  
}
```

---

## HTML

```
<div></div>
```

◦ **CSS**◦

linear-gradient◦ **alpha**◦



-webkit Chrome Safari Opera Firefox linear-gradient

---

## CSS

```
div {  
  width: 200px;  
  height: 200px;  
  background: url(http://lorempixel.com/200/200/abstract/6);  
  mask-image: radial-gradient(circle farthest-side at center, transparent 49%, white 50%); /*  
  check remarks before using */  
}
```

---

## HTML

radial-gradient



---

## CSS

```
div { /* check remarks before usage */
  height: 200px;
  width: 400px;
  background-image: url(http://lorempixel.com/400/200/nature/4);
  mask-image: linear-gradient(to top right, transparent 49.5%, white 50.5%), linear-
  gradient(to top left, transparent 49.5%, white 50.5%), linear-gradient(white, white);
  mask-size: 75% 25%, 25% 25%, 100% 75%;
  mask-position: bottom left, bottom right, top left;
  mask-repeat: no-repeat;
}
```

---

## HTML

```
<div></div>
```

linear-gradient 100x100°





<https://riptutorial.com/zh-TW/css/topic/3721/>

# 17:

- `<calc()> = calc( <calc-sum> )`
- `<calc-sum> = <calc-product> [ [ '+' | '-' ] <calc-product> ]*`
- `<calc-product> = <calc-value> [ '*' <calc-value> | '/' <number> ]*`
- `<calc-value> = <number> | <dimension> | <percentage> | ( <calc-sum> )`

`calc() " - " + " * " / "。`

;

## Examples

### calc

。

px。

+ - /\*。

`calc()` **div**

```
#div1 {
  position: absolute;
  left: 50px;
  width: calc(100% - 100px);
  border: 1px solid black;
  background-color: yellow;
  padding: 5px;
  text-align: center;
}
```

`calc()`

```
background-position: calc(50% + 17px) calc(50% + 10px), 50% 50%;
```

`calc()`

```
height: calc(100% - 20px);
```

### attr

。

**blockquote** `data-*` **CSS**: :before::after 。

```
<blockquote data-mark=""></blockquote>
```

## CSS

```
blockquote[data-mark]::before,  
blockquote[data-mark]::after {  
  content: attr(data-mark);  
}
```

◦

```
linear-gradient( 0deg, red, yellow 50%, blue);
```

50◦

## radial-gradient

```
radial-gradient(red, orange, yellow) /*A gradient coming out from the middle of the  
gradient, red at the center, then orange, until it is finally yellow at the edges*/
```

## var

varCSS◦

```
/* set a variable */  
:root {  
  --primary-color: blue;  
}  
  
/* access variable */  
selector {  
  color: var(--primary-color);  
}
```

◦ [caniuse.com](https://caniuse.com)◦

<https://riptutorial.com/zh-TW/css/topic/2214/>

# 18:

- `@supports [condition] {/ *CSS* /}`

(property: value)	CSStrue◦ ◦
and	true◦
not	
or	true◦
(...)	

EdgeChromeFirefoxOperaSafari 9@supports◦

## Examples

### @supports

```
@supports (display: flex) {  
  /* Flexbox is available, so use it */  
  .my-container {  
    display: flex;  
  }  
}
```

@supports@media@supports @supportsCSS◦

@supports (flex)@supports (flex) @supports (display: flex) ◦

and◦

```
@supports (transform: translateZ(1px)) and (transform-style: preserve-3d) and (perspective:  
1px) {  
  /* Probably do some fancy 3d stuff here */  
}
```

ornot

```
@supports (display: flex) or (display: table-cell) {  
  /* Will be used if the browser supports flexbox or display: table-cell */  
}  
@supports not (-webkit-transform: translate(0, 0, 0)) {  
  /* Will *not* be used if the browser supports -webkit-transform: translate(...) */  
}
```

@supports

```
@supports ((display: block) and (zoom: 1)) or ((display: flex) and (not (display: table-cell))) or (transform: translateX(1px)) {  
  /* ... */  
}
```

1. display: blockzoom: 1
2. display: flex **AND NOT** display: table-cell
3. transform: translateX(1px) °

<https://riptutorial.com/zh-TW/css/topic/5024/>

# 19:

- `transition: <property> <duration> <timing-function> <delay>;`
- `@keyframes <identifier>`
- `[ [ from | to | <percentage> ] [, from | to | <percentage> ]* block ]*`

	CSS <sub>all</sub> ◦
	◦
	◦ ease linearstep-end ◦ ◦
	◦
<b>@keyframes</b>	
<code>[  &lt;percentage&gt; ]</code>	10%, 20% ◦
block	CSS ◦

## Examples

CSS transition CSS ◦

```
.Example{
  height: 100px;
  background: #fff;
}

.Example:hover{
  height: 120px;
  background: #ff0000;
}
```

`.Example.Example120px #ff0000 ◦`

transition

```
.Example{
  ...
  transition: all 400ms ease;
}
```

`all ◦ height top ◦`

400ms ◦ 400◦

ease ◦ ease ◦ linear ◦ ease-out ◦ ease-in ◦

---

## IE 9 ◦ transition ◦ Firefox ◦ Webkit

```
.Example{  
  transition:          all 400ms ease;  
  -moz-transition:    all 400ms ease;  
  -webkit-transition: all 400ms ease;  
}
```

---

transition ◦ 100px50vh ◦ 100pxauto ◦

## `will-change`

GPU ◦ will-change ◦

CSS ◦ transition ◦ GPU ◦ GPU ◦ GPU ◦ will-change ◦

will-change ◦

```
.Example{  
  ...  
  will-change: transform, opacity;  
}
```

will-change ◦ will-change ◦ GPU ◦

CSS ◦ CSS ◦ @keyframes ◦ ◦

---

```
@keyframes rainbow-background {  
  0%      { background-color: #ff0000; }  
  8.333%  { background-color: #ff8000; }  
  16.667% { background-color: #ffff00; }  
  25.000% { background-color: #80ff00; }  
  33.333% { background-color: #00ff00; }  
  41.667% { background-color: #00ff80; }  
  50.000% { background-color: #00ffff; }  
  58.333% { background-color: #0080ff; }  
  66.667% { background-color: #0000ff; }  
  75.000% { background-color: #8000ff; }  
  83.333% { background-color: #ff00ff; }  
  91.667% { background-color: #ff0080; }  
  100.00% { background-color: #ff0000; }  
}
```

```
.RainbowBackground {
  animation: rainbow-background 5s infinite;
}
```

◦ @keyframes◦

```
@keyframes rainbow-background{
```

rainbow-background ◦

```
0% { background-color: #ff0000; }
```

◦ 0%◦ 0%0◦

◦ 8.333% **8.333**◦

```
.RainbowBackground {
  animation: rainbow-background 5s infinite;
}
```

.RainbowBackground◦

◦

- **animation-name** ◦ rainbow-background
- **animation-duration** 5◦
- **animation-iteration-count** ◦ ◦ ◦
- **animation-delay** ◦ 0◦ -2s2◦
- **animation-timing-function** ◦ ease ◦

0%100%{ background-color: #ff0000; }◦ ◦ 0%100%

```
0%, 100% { background-color: #ff0000; }
```

## WebKit@keyframesanimation

```
@-webkit-keyframes{
-webkit-animation: ...
```

/

```
animation: 3s ease-in 1s 2 reverse both
paused slidein;
/* duration | timing-function | delay | iteration-count | direction | fill-mode |
play-state | name */
```



```
animation: 3s          linear          1s      slidein;
/*      duration | timing-function | delay | name */
```

◦

```
animation: 3s          slidein;
/*      duration | name */
```

◦ ◦

---

```
animation-duration: 3s;
animation-timing-function: ease-in;
animation-delay: 1s;
animation-iteration-count: 2;
animation-direction: reverse;
animation-fill-mode: both;
animation-play-state: paused;
animation-name: slidein;
```

<https://riptutorial.com/zh-TW/css/topic/590/>

# 20:

## Examples

◦ widthheight100◦



```
<div class="square"></div>
```

```
.square {  
  width: 100px;  
  height: 100px;  
  background: rgb(246, 156, 85);  
}
```

CSS0. ◦ 04. 0/4.



◦ ◦ ◦



- ◦ 50x50.

-



```
<div class="triangle-up"></div>
```

```
.triangle-up {  
  width: 0;  
  height: 0;  
  border-left: 25px solid transparent;  
  border-right: 25px solid transparent;  
  border-bottom: 50px solid rgb(246, 156, 85);  
}
```

-



```
<div class="triangle-down"></div>
```

```
.triangle-down {  
  width: 0;  
  height: 0;  
  border-left: 25px solid transparent;  
  border-right: 25px solid transparent;  
  border-top: 50px solid rgb(246, 156, 85);  
}
```

-



```
<div class="triangle-right"></div>
```

```
.triangle-right {  
  width: 0;  
  height: 0;  
  border-top: 25px solid transparent;  
  border-bottom: 25px solid transparent;  
  border-left: 50px solid rgb(246, 156, 85);  
}
```

```
}
```

-



```
<div class="triangle-left"></div>
```

```
.triangle-left {  
  width: 0;  
  height: 0;  
  border-top: 25px solid transparent;  
  border-bottom: 25px solid transparent;  
  border-right: 50px solid rgb(246, 156, 85);  
}
```

-/



```
<div class="triangle-up-right"></div>
```

```
.triangle-up-right {  
  width: 0;  
  height: 0;  
  border-top: 50px solid rgb(246, 156, 85);  
  border-left: 50px solid transparent;  
}
```

-/



```
<div class="triangle-up-left"></div>
```

```
.triangle-up-left {  
  width: 0;
```

```
height: 0;
border-top: 50px solid rgb(246, 156, 85);
border-right: 50px solid transparent;
}
```

-/



```
<div class="triangle-down-right"></div>
```

```
.triangle-down-right {
width: 0;
height: 0;
border-bottom: 50px solid rgb(246, 156, 85);
border-left: 50px solid transparent;
}
```

-/



```
<div class="triangle-down-left"></div>
```

```
.triangle-down-left {
width: 0;
height: 0;
border-bottom: 50px solid rgb(246, 156, 85);
border-right: 50px solid transparent;
}
```

◦ ◦

::before::after◦

**8**

82◦ :before◦ 20°135◦



```
<div class="burst-8"></div>

.burst-8 {
  background: rgb(246, 156, 85);
  width: 40px;
  height: 40px;
  position: relative;
  text-align: center;
  -ms-transform: rotate(20deg);
  transform: rotate(20deg);
}

.burst-8::before {
  content: "";
  position: absolute;
  top: 0;
  left: 0;
  height: 40px;
  width: 40px;
  background: rgb(246, 156, 85);
  -ms-transform: rotate(135deg);
  transform: rotate(135deg);
}
```

## 12

123° :before:after° 0°30°60°.



```
<div class="burst-12"></div>

.burst-12 {
  width: 40px;
  height: 40px;
  position: relative;
  text-align: center;
  background: rgb(246, 156, 85);
}

.burst-12::before, .burst-12::after {
  content: "";
  position: absolute;
  top: 0;
  left: 0;
  height: 40px;
}
```

```
width: 40px;
background: rgb(246, 156, 85);
}

.burst-12::before {
-ms-transform: rotate(30deg);
transform: rotate(30deg);
}

.burst-12::after {
-ms-transform: rotate(60deg);
transform: rotate(60deg);
}
```

---

widthheight border-radius50% ◦



## HTML

```
<div class="circle"></div>
```

## CSS

```
.circle {
width: 50px;
height: 50px;
background: rgb(246, 156, 85);
border-radius: 50%;
}
```

---

widthheight◦



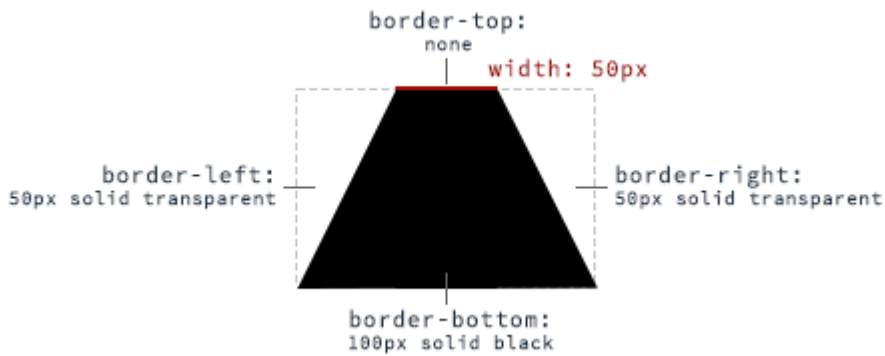
## HTML

```
<div class="oval"></div>
```

## CSS

```
.oval {
  width: 50px;
  height: 80px;
  background: rgb(246, 156, 85);
  border-radius: 50%;
}
```

0px



## HTML

```
<div class="trapezoid"></div>
```

## CSS

```
.trapezoid {
  width: 50px;
  height: 0;
  border-left: 50px solid transparent;
  border-right: 50px solid transparent;
  border-bottom: 100px solid black;
}
```

◦

2D `skewX()` `skewY()` ◦



## HTML

```
<div class="cube"></div>
```



## CSS

```
.cube {
  background: #dc2e2e;
  width: 100px;
  height: 100px;
  position: relative;
  margin: 50px;
}

.cube::before {
  content: '';
  display: inline-block;
  background: #f15757;
  width: 100px;
  height: 20px;
  transform: skewX(-40deg);
  position: absolute;
  top: -20px;
  left: 8px;
}

.cube::after {
  content: '';
  display: inline-block;
  background: #9e1515;
  width: 16px;
  height: 100px;
  transform: skewY(-50deg);
  position: absolute;
  top: -10px;
  left: 100%;
}
```

2D `skewY()` `rotate()` ◦



## HTML

```
<div class="pyramid"></div>
```

## CSS

```
.pyramid {
  width: 100px;
  height: 200px;
```

```
position: relative;
margin: 50px;
}

.pyramid::before, .pyramid::after {
  content: '';
  display: inline-block;
  width: 0;
  height: 0;
  border: 50px solid;
  position: absolute;
}

.pyramid::before {
  border-color: transparent transparent #ff5656 transparent;
  transform: scaleY(2) skewY(-40deg) rotate(45deg);
}

.pyramid::after {
  border-color: transparent transparent #d64444 transparent;
  transform: scaleY(2) skewY(40deg) rotate(-45deg);
}
```

<https://riptutorial.com/zh-TW/css/topic/2862/>

# 21:

widthheight ◦

**Flexbox**◦

## Examples

### HTML

```
<div class="wrapper">
  <div class="outer">
    <div class="inner">
      centered
    </div>
  </div>
</div>
```

### CSS

```
.wrapper {
  height: 600px;
  text-align: center;
}
.outer {
  display: table;
  height: 100%;
  width: 100%;
}
.outer .inner {
  display: table-cell;
  text-align: center;
  vertical-align: middle;
}
```

### HTML

```
<div class="wrapper">
  <div class="centered">
    centered
  </div>
</div>
```

### CSS

```
.wrapper {
  position: relative;
  height: 600px;
}
.centered {
  position: absolute;
  z-index: 999;
}
```

```
transform: translate(-50%, -50%);
top: 50%;
left: 50%;
}
```

## Flexbox

### HTML

```
<div class="container">
  <div class="child"></div>
</div>
```

### CSS

```
.container {
  height: 500px;
  width: 500px;
  display: flex;           // Use Flexbox
  align-items: center;    // This centers children vertically in the parent.
  justify-content: center; // This centers children horizontally.
  background: white;
}

.child {
  width: 100px;
  height: 100px;
  background: blue;
}
```

### HTML

```
<div class="container">
  <span>vertically centered</span>
</div>
```

### CSS

```
.container{
  height: 50px;           /* set height */
  line-height: 50px;     /* set line-height equal to the height */
  vertical-align: middle; /* works without this rule, but it is good having it explicitly
set */
}
```

◦ ◦

### HTML

```
<div class="wrapper">
  
</div>
```

## CSS

```
.wrapper{
  position:relative;
  height: 600px;
}
.wrapper img {
  position: absolute;
  top: 0;
  left: 0;
  right: 0;
  bottom: 0;
  margin: auto;
}
```

◦

## HTML

```
<div class="wrapper">
  <div class="child">
    make me center
  </div>
</div>
```

## CSS

```
.wrapper{
  position:relative;
  height: 600px;
}
.wrapper .child {
  position: absolute;
  top: 0;
  left: 0;
  right: 0;
  bottom: 0;
  margin: auto;
  width: 200px;
  height: 30px;
  border: 1px solid #f00;
}
```

## HTML

```
<div class="wrapper">
  <div class="content"></div>
</div>
```

## CSS

```
.wrapper{
  min-height: 600px;
}
```

```
.wrapper:before{
  content: "";
  display: inline-block;
  height: 100%;
  vertical-align: middle;
}

.content {
  display: inline-block;
  height: 80px;
  vertical-align: middle;
}
```

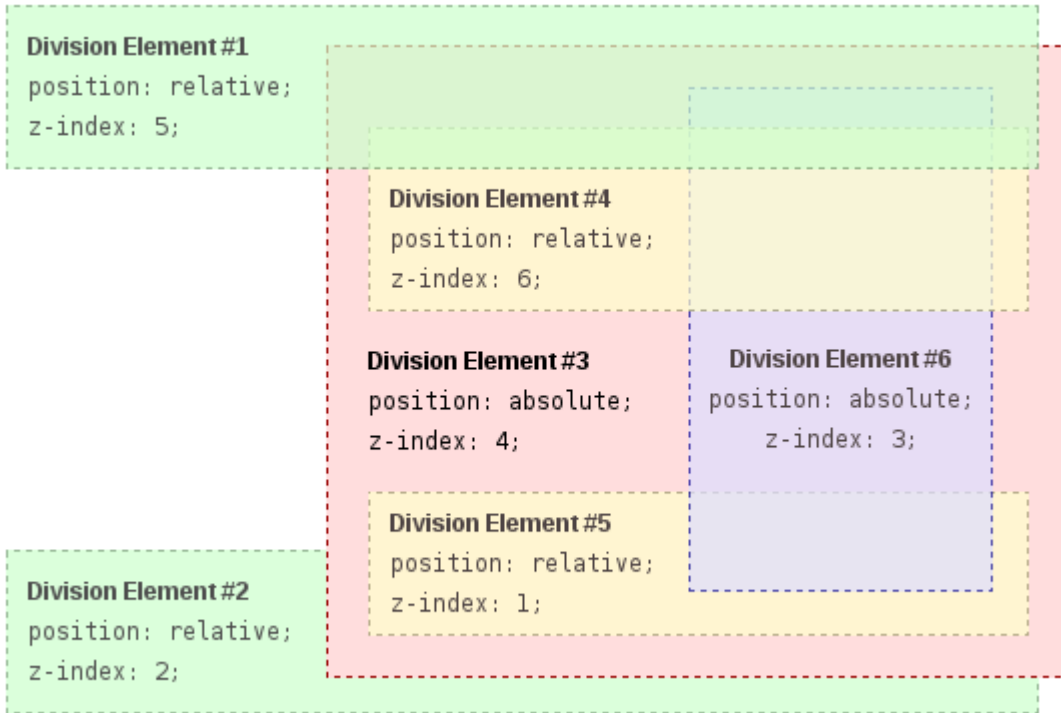
`.wrapper.content .wrapper ° .content.wrapper.wrapper °`

<https://riptutorial.com/zh-TW/css/topic/5070/>

# 22:

## Examples

z-index.



- - DIV1
  - DIV2
  - DIV3
  - DIV4
  - DIV5
  - DIV6

DIV4DIV5DIV6DIV3DIV3. DIV3DIV3DIV.

## HTML

```
<div id="div1">  
  <h1>Division Element #1</h1>  
  <code>position: relative;<br/>  
  z-index: 5;</code>  
</div>  
<div id="div2">  
  <h1>Division Element #2</h1>  
  <code>position: relative;<br/>  
  z-index: 2;</code>  
</div>  
<div id="div3">  
  <div id="div4">  
    <h1>Division Element #4</h1>
```

```
    <code>position: relative;<br/>
    z-index: 6;</code>
</div>
<h1>Division Element #3</h1>
<code>position: absolute;<br/>
z-index: 4;</code>
<div id="div5">
  <h1>Division Element #5</h1>
  <code>position: relative;<br/>
  z-index: 1;</code>
</div>
<div id="div6">
  <h1>Division Element #6</h1>
  <code>position: absolute;<br/>
  z-index: 3;</code>
</div>
</div>
```

## CSS

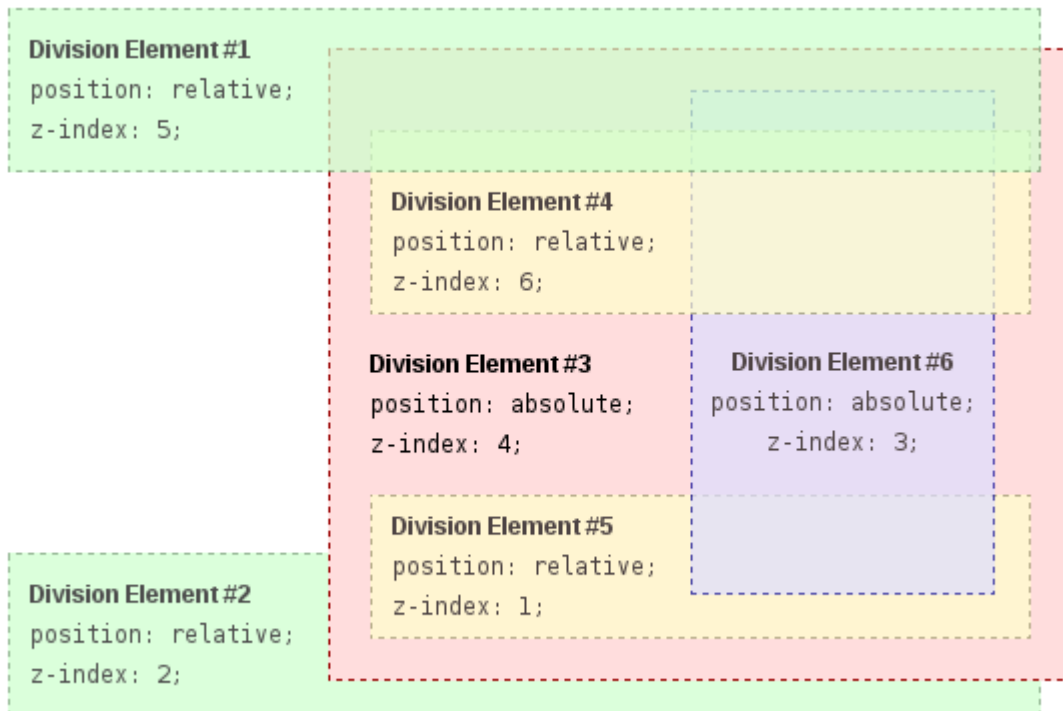
```
* {
  margin: 0;
}
html {
  padding: 20px;
  font: 12px/20px Arial, sans-serif;
}
div {
  opacity: 0.7;
  position: relative;
}
h1 {
  font: inherit;
  font-weight: bold;
}
#div1,
#div2 {
  border: 1px dashed #696;
  padding: 10px;
  background-color: #cfc;
}
#div1 {
  z-index: 5;
  margin-bottom: 190px;
}
#div2 {
  z-index: 2;
}
#div3 {
  z-index: 4;
  opacity: 1;
  position: absolute;
  top: 40px;
  left: 180px;
  width: 330px;
  border: 1px dashed #900;
  background-color: #fdd;
  padding: 40px 20px 20px;
}
#div4,
```



```

#div5 {
  border: 1px dashed #996;
  background-color: #ffc;
}
#div4 {
  z-index: 6;
  margin-bottom: 15px;
  padding: 25px 10px 5px;
}
#div5 {
  z-index: 1;
  margin-top: 15px;
  padding: 5px 10px;
}
#div6 {
  z-index: 3;
  position: absolute;
  top: 20px;
  left: 180px;
  width: 150px;
  height: 125px;
  border: 1px dashed #009;
  padding-top: 125px;
  background-color: #ddf;
  text-align: center;
}

```



[https://developer.mozilla.org/en-US/docs/Web/CSS/CSS\\_Positioning/Understanding\\_z\\_index/The\\_stacking\\_context](https://developer.mozilla.org/en-US/docs/Web/CSS/CSS_Positioning/Understanding_z_index/The_stacking_context) ◦

<https://riptutorial.com/zh-TW/css/topic/5037/>

---

## 23:

[CSS. . ] [1]

[1] [https://developer.mozilla.org/en-US/docs/Web/Guide/CSS/Block\\_formatting\\_context](https://developer.mozilla.org/en-US/docs/Web/Guide/CSS/Block_formatting_context) MDN

## Examples

### overflow

```
img{
  float:left;
  width:100px;
  margin:0 10px;
}
.div1{
  background:#f1f1f1;
  /* does not create block formatting context */
}
.div2{
  background:#f1f1f1;
  overflow:hidden;
  /* creates block formatting context */
}
```

```


1 
2 <div class=div1>
3 <p>Lorem ipsum dolor sit amet, cum no paulo mollis pertinacia. Eam in velit graecis, sea mucius insolens ne. Amet doming at has, omnis errem an cum. Eu vim appareat persecuti, ea putant definitionem has, vis ea legendos expetenda. No eros graeci minimum nam, justo augue instructor usu ne. At ludus suscipit disputationi vel.</p>
4
5 <p>Ad case omnis nam, mutat deseruisse persequeris eos ad, in tollit debitis sea. Cu eos munere virtute vituperata. Exerci bonorum sed id, id nec tantas praesent complectitur. Vel cu legendos mediocritatem. Enim liberavisse ei sea.</p>
6 </div>
7
8 
9 <div class=div2>
10 <p>Lorem ipsum dolor sit amet, cum no paulo mollis pertinacia. Eam in velit graecis, sea mucius insolens ne. Amet doming at has, omnis errem an cum. Eu vim appareat persecuti, ea putant definitionem has, vis ea legendos expetenda. No eros graeci minimum nam, justo augue instructor usu ne. At ludus suscipit disputationi vel.</p>
11
12 <p>Ad case omnis nam, mutat deseruisse persequeris eos ad, in tollit debitis sea. Cu eos munere virtute vituperata. Exerci bonorum sed id, id nec tantas praesent complectitur. Vel cu legendos mediocritatem. Enim liberavisse ei sea.</p>
13 </div>

```

```


1 img{
2   float:left;
3   width:100px;
4   margin:0 10px;
5 }
6 .div1{
7   background:#f1f1f1;
8 }
9 .div2{
10  background:#f1f1f1;
11  overflow:hidden;
12  /* creates block formatting c
13 }

```



Lorem ipsum dolor doming at has, omni expetenda. No eros

Ad case omnis nam, mutat deseruisse p sed id, id nec tantas praesent complecti



Lorem ipsum dolor doming at has, omni expetenda. No eros

Ad case omnis nam, Exerci bonorum sed sea.

<https://jsfiddle.net/MadalinaTn/qkwmmu6m/2/>

[visibleoverflow](#) -

[css-tricks.com](#)

2 [https //developer.mozilla.org/en-US/docs/Web/CSS/overflow](https://developer.mozilla.org/en-US/docs/Web/CSS/overflow) MDN

<https://riptutorial.com/zh-TW/css/topic/5069/>

# 24:

- padding *length* | initial | inherit | unset;
- padding-top *length* | initial | inherit | unset;
- padding-right *length* | initial | inherit | unset;
- padding-bottom *length* | initial | inherit | unset;
- padding-left *length* | initial | inherit | unset;

padding. . .

1 <https://developer.mozilla.org/en/docs/Web/CSS/padding> MDN

“CSS”.

◦ box-sizing/◦

◦

## Examples

padding. . .

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

div5px

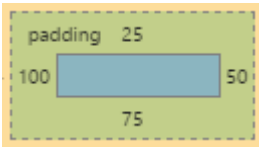
```
<style>
.myClass {
  padding-top: 5px;
}
</style>

<div class="myClass"></div>
```

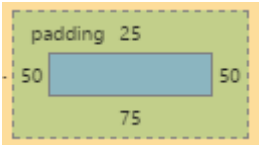
padding. . .

padding-top padding-left

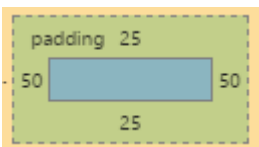
```
<style>
  .myDiv {
    padding: 25px 50px 75px 100px; /* top right bottom left; */
  }
</style>
<div class="myDiv"></div>
```



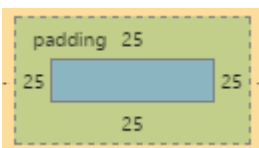
```
<style>
  .myDiv {
    padding: 25px 50px 75px; /* top left/right bottom */
  }
</style>
<div class="myDiv"></div>
```



```
<style>
  .myDiv {
    padding: 25px 50px; /* top/bottom left/right */
  }
</style>
<div class="myDiv"></div>
```



```
<style>
  .myDiv {
    padding: 25px; /* top/right/bottom/left */
  }
</style>
<div class="myDiv"></div>
```



<https://riptutorial.com/zh-TW/css/topic/1255/>

# 25:

CSS。

[CSS12011412W3C](#)。 。 。

201773MicrosoftInternet Explorer 1011Edge。

## Examples

HTML

```
<section>
  <p>Lorem ipsum dolor sit amet, consetetur sadipscing elitr, sed diam nonumy eirmod tempor
  invidunt ut labore et dolore magna aliquyam erat, sed diam voluptua. At vero eos et accusam et
  justo duo dolores et ea rebum.</p>
  <p> Stet clita kasd gubergren, no sea takimata sanctus est Lorem ipsum dolor sit amet. Lorem
  ipsum dolor sit amet, consetetur sadipscing elitr, sed diam nonumy eirmod tempor invidunt ut
  labore et dolore magna aliquyam erat, sed diam voluptua. At vero eos et accusam et justo duo
  dolores et ea rebum. Stet clita kasd gubergren, no sea takimata sanctus est Lorem ipsum dolor
  sit amet.</p>
  <p>Lorem ipsum dolor sit amet, consetetur sadipscing elitr, sed diam nonumy eirmod tempor
  invidunt ut labore et dolore magna aliquyam erat, sed diam voluptua. At vero eos et accusam et
  justo duo dolores et ea rebum. Stet clita kasd gubergren, no sea takimata sanctus est Lorem
  ipsum dolor sit amet.</p>
</section>
```

CSS。

```
section {
  columns: 3;
  column-gap: 40px;
  column-rule: 2px solid gray;
}
```

[JSFiddle](#) 。

```
<div class="content">
  Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed diam nonummy nibh
  euismod tincidunt ut laoreet dolore magna aliquam erat volutpat. Ut wisi enim
  ad minim veniam, quis nostrud exerci tation ullamcorper suscipit lobortis nisl
  ut aliquip ex ea commodo consequat. Duis autem vel eum iriure dolor in
  hendrerit in vulputate velit esse molestie consequat, vel illum dolore eu
  feugiat nulla facilisis at vero eros et accumsan et iusto odio dignissim qui
  blandit praesent luptatum zzril delenit augue dui dolore te feugait nulla
  facilisi. Nam liber tempor cum soluta nobis eleifend option congue nihil
  imperdiet doming id quod mazim placerat facer possim assum.
</div>
```

CSS

```
.content {  
-webkit-column-count: 3; /* Chrome, Safari, Opera */  
-moz-column-count: 3; /* Firefox */  
column-count: 3;  
}
```

<https://riptutorial.com/zh-TW/css/topic/10688/>

# 26:

- @media [not | only] mediatype{/ \* CSS\* /}

mediatype	◦ all screen◦
not	<b>CSS</b> ◦
media feature	<b>CSS</b> ◦ ◦
aspect-ratio	◦
color	◦ ◦
color-index	◦
grid	◦
height	◦
max-width	<b>CSS</b> ◦
min-width	<b>CSS</b> ◦
max-height	<b>CSS</b> ◦
min-height	<b>CSS</b> ◦
monochrome	◦
orientation	<b>CSS</b> ◦ ◦
resolution	◦
scan	◦
width	◦
device-aspect-ratio	<b>Deprecated CSS</b> /◦ deprecated◦
max-device-width	<b>Deprecated</b> max-width◦
min-device-width	<b>Deprecated</b> min-width◦
max-device-height	<b>Deprecated</b> max-height◦



min-device-height	<b>Deprecated</b> min-height
-------------------	------------------------------

Chrome Firefox Opera Internet Explorer 9

---

orientation

- - 
  -
- 

◦ head

```
<meta name="viewport" content="width=device-width, initial-scale=1">
```

---

## Examples

```
@media screen and (min-width: 720px) {
  body {
    background-color: skyblue;
  }
}
```

1. ◦
2. 720◦

- 
- CSS CSS◦ CSS◦

720 720◦ ◦

```
<link rel="stylesheet" media="min-width: 600px" href="example.css" />
```

600px◦

mediatype◦ @media @media mediatype

```
@media print {
  html {
    background-color: white;
  }
}
```

CSS DOM HTML◦

mediatypenotonlymediatype ◦ print◦

```
@media not print {  
  html {  
    background-color: green;  
  }  
}
```

```
@media only screen {  
  .fadeInEffects {  
    display: block;  
  }  
}
```

mediatype

all	
screen	
print	◦
handheld	<b>PDA</b>
projection	
aural	
braille	
embossed	
tv	
tty	◦ ◦

WebCSS◦ CSS◦

```
@media only screen and (min-width: 300px) and (max-width: 767px) {  
  .site-title {  
    font-size: 80%;  
  }  
  
  /* Styles in this block are only applied if the screen size is atleast 300px wide, but no  
  more than 767px */  
}  
  
@media only screen and (min-width: 768px) and (max-width: 1023px) {  
  .site-title {  
    font-size: 90%;  
  }  
  
  /* Styles in this block are only applied if the screen size is atleast 768px wide, but no  
  more than 1023px */  
}
```

```
@media only screen and (min-width: 1024px) {
  .site-title {
    font-size: 120%;
  }

  /* Styles in this block are only applied if the screen size is over 1024px wide. */
}
```

“width”。 <head>◦

```
<meta name="viewport" content="width=device-width,initial-scale=1">
```

MDN“”

◦

View-port。 1280 x 720“1280px”◦

◦ iPhone 6 Plus 1242 x 2208。 414 x 736.31◦

meta◦

WebKit

```
/* ----- Non-Retina Screens ----- */
@media screen
  and (min-width: 1200px)
  and (max-width: 1600px)
  and (-webkit-min-device-pixel-ratio: 1) {
}

/* ----- Retina Screens ----- */
@media screen
  and (min-width: 1200px)
  and (max-width: 1600px)
  and (-webkit-min-device-pixel-ratio: 2)
  and (min-resolution: 192dpi) {
}
```

◦ ◦ ◦ ◦ ◦ MacBook Pro Retina iPhone 42◦

WebKit

- -webkit-◦
- WebKitBlink◦

/CSS◦

```
@media [...] {
  /* One or more CSS rules to apply when the query is satisfied */
}
```

```
}
```

```
@media print {  
    /* One or more CSS rules to apply when the query is satisfied */  
}
```

```
@media screen and (max-width: 600px) {  
    /* One or more CSS rules to apply when the query is satisfied */  
}
```

“”

```
@media (orientation: portrait) {  
    /* One or more CSS rules to apply when the query is satisfied */  
}
```

## IE8

IE8。

## Javascript

IE8JS。 [Respond](#)IE8

```
<!--[if lt IE 9]>  
<script  
    src="respond.min.js">  
</script>  
<![endif]-->
```

[CSS Mediaqueries](#)。 HTML

```
<!--[if lt IE 9]>  
<script  
    src="css3-mediaqueries.js">  
</script>  
<![endif]-->
```

JSIE <9IE <9。 HTML

```
<!--[if lt IE 9]>  
<link rel="stylesheet" type="text/css" media="all" href="style-ielt9.css"/>  
<![endif]-->
```

**CSS** IE <9。 IE <9。 CSSCSS hacks。

<https://riptutorial.com/zh-TW/css/topic/317/>

# 27:

- position: static | absolute | fixed | relative | sticky | initial | inherit | unset;
- z-index: auto | ||;

```
◦ ◦ top right bottom left z-index ◦  
left: 20px; 20px LEFT  
◦  
◦  
◦ position: static position: static position: fixed ◦  
◦ ◦
```

- 1. ◦

## Examples

- ◦

```
#stickyDiv {  
  position: fixed;  
  top: 10px;  
  left: 10px;  
}
```

## z-index

position: relative absolute fixed z-index ◦

z-index ◦

---

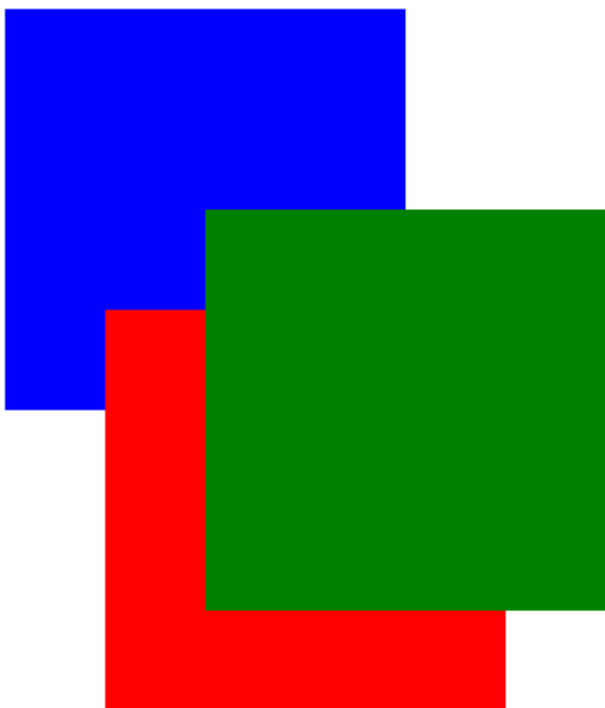
z-index: 3; z-index: 2; z-index: 1; ◦

## HTML

```
<div id="div1"></div>
<div id="div2"></div>
<div id="div3"></div>
```

## CSS

```
div {
  position: absolute;
  height: 200px;
  width: 200px;
}
div#div1 {
  z-index: 1;
  left: 0px;
  top: 0px;
  background-color: blue;
}
div#div2 {
  z-index: 3;
  left: 100px;
  top: 100px;
  background-color: green;
}
div#div3 {
  z-index: 2;
  left: 50px;
  top: 150px;
  background-color: red;
}
```



[JSFiddle](#).

```
z-index: [ number ] | auto;
```

number	◦ z-index ◦ 0 ◦ ◦
auto	◦

CSS3D z-index ◦ z-index: ( [z-index](#) ◦ static ◦

MozillaCSS z-index ◦

◦

- 1.
- 2.
- 3.
- 4.

◦

```
.relpos{  
  position:relative;  
  top:20px;  
  left:30px;  
}
```

class = "relpos" 20px 30px ◦

◦

- 1.
- 2.
- 3.
- 4.

◦

```
.abspos{  
  position:absolute;  
  top:0px;  
  left:500px;  
}
```

class="abspos" 0px 500px ◦

static ◦ [MDN](#)

- top right bottom left z-index ◦



```
.element {  
  position: static;  
}
```

<https://riptutorial.com/zh-TW/css/topic/935/>

# 28:

## Examples

### CSS

[CSS5050](#).

- [SO](#).

### HTML

```
<div class="container">
  <div class="element"></div>
</div>
```

### CSS

```
.container {
  position: relative;
}

.element {
  position: absolute;
  top: 50%;
  left: 50%;
  transform: translate(-50%, -50%);
}
```

### [JSFiddle](#)

[transform](#) ◦ [Chrome <= 35](#)[Safari <= 8](#)[Opera <= 22](#)[Android Browser <= 4.4.4](#)[IE9](#) ◦ [IE8](#)[CSS](#).

```
-webkit-transform: translate(-50%, -50%); /* Chrome, Safari, Opera, Android */
-ms-transform: translate(-50%, -50%); /* IE 9 */
transform: translate(-50%, -50%);
```

### [canluse](#) ◦

- `position: relative absolute``fixed` ◦ ◦
- `left: 50%``transform: translateX(-50%)` ◦ `top: 50%``transform: translateY(-50%)` ◦
- `/` ◦ `margin-right: -50%``margin-bottom: -50%` ◦ ◦

### Flexbox

### HTML

```
<div class="container">
  
</div>
```

## CSS

```
html, body, .container {
  height: 100%;
}
.container {
  display: flex;
  justify-content: center; /* horizontal center */
}
img {
  align-self: center; /* vertical center */
}
```

---

## HTML

```

```

## CSS

```
html, body {
  height: 100%;
}
body {
  display: flex;
  justify-content: center; /* horizontal center */
  align-items: center; /* vertical center */
}
```

[Flexbox](#) [Flexbox](#) ◦

[10IE Flexbox](#) ◦

[Safari 8IE10](#) ◦

[Autoprefixer](#) ◦

[IE 89Polyfill](#) ◦

[flexbox](#) ◦

## positionabsolute

[IE > = 8](#)

[left right top bottom](#) ◦

## HTML

```
<div class="parent">
  
</div>
```

## CSS

```
.parent {
  position: relative;
  height: 500px;
}

.center {
  position: absolute;
  margin: auto;
  top: 0;
  right: 0;
  bottom: 0;
  left: 0;
}
```

◦

## CSS

### Michał Czernow's hack

◦

“ghost”`100vertical-align: middle` ◦

## CSS

```
/* This parent can be any width and height */
.block {
  text-align: center;

  /* May want to do this if there is risk the container may be narrower than the element
inside */
  white-space: nowrap;
}

/* The ghost element */
.block:before {
  content: '';
  display: inline-block;
  height: 100%;
  vertical-align: middle;

  /* There is a gap between ghost element and .centered,
caused by space character rendered. Could be eliminated by
nudging .centered (nudge distance depends on font family),
or by zeroing font-size in .parent and resetting it back
(probably to 1rem) in .centered. */
  margin-right: -0.25em;
}
```

```
/* The element to be centered, can also be of any width and height */
.centered {
  display: inline-block;
  vertical-align: middle;
  width: 300px;
  white-space: normal; /* Resetting inherited nowrap behavior */
}
```

## HTML

```
<div class="block">
  <div class="centered"></div>
</div>
```

## text-align

- CSS `text-align: center`

## HTML

```
<p>Lorem ipsum</p>
```

## CSS

```
p {
  text-align: center;
}
```

- `text-align`

“ ” `text-align`

near

IE8 +

## HTML

```
<div class="content">
  <div class="position-container">
    <div class="thumb">
      
    </div>
    <div class="details">
      <p class="banner-title">text 1</p>
      <p class="banner-text">content content content content content content content content
content content content content content content content content</p>
      <button class="btn">button</button>
    </div>
  </div>
</div>
```

## CSS

```
.content * {
  box-sizing: border-box;
}
.content .position-container {
  display: table;
}
.content .details {
  display: table-cell;
  vertical-align: middle;
  width: 33.333333%;
  padding: 30px;
  font-size: 17px;
  text-align: center;
}
.content .thumb {
  width: 100%;
}
.content .thumb img {
  width: 100%;
}
```

## JSFiddle

### 3 .thumb .details.position-container

- .position-containerdisplay: table ◦
- .detailswidth: ....display: table-cell vertical-align: middle ◦
- .thumbwidth: 100%.details◦
- .thumbwidth: 100% ◦

### 3

## IE11 +

### 3◦ div / image◦

## CSS

```
div.vertical {
  position: relative;
  top: 50%;
  transform: translateY(-50%);
}
```

## HTML

```
<div class="vertical">Vertical aligned text!</div>
```

## div

### HTML

```
<div class="wrap">
  
</div>
```

### CSS

```
.wrap {
  height: 50px; /* max image height */
  width: 100px;
  border: 1px solid blue;
  text-align: center;
}
.wrap:before {
  content: "";
  display: inline-block;
  height: 100%;
  vertical-align: middle;
  width: 1px;
}
img {
  vertical-align: middle;
}
```

table

### HTML

```
<div class="wrapper">
  <div class="parent">
    <div class="child"></div>
  </div>
</div>
```

### CSS

```
.wrapper {
  display: table;
  vertical-align: center;
  width: 200px;
  height: 200px;
  background-color: #9e9e9e;
}
.parent {
  display: table-cell;
  vertical-align: middle;
  text-align: center;
}
.child {
  display: inline-block;
  vertical-align: middle;
}
```

```
text-align: center;
width: 100px;
height: 100px;
background-color: teal;
}
```

## calc

calcCSS3/◦ - calc(100% - 80px)◦

## CSS

```
.center {
  position: absolute;
  height: 50px;
  width: 50px;
  background: red;
  top: calc(50% - 50px / 2); /* height divided by 2*/
  left: calc(50% - 50px / 2); /* width divided by 2*/
}
```

## HTML

```
<div class="center"></div>
```

## CSS

- vertical-align:middle
- margin-top:auto;margin-bottom:auto
- margin-top:-50% margin-top:-50%

## HTML

```
<div class="vcenter--container">
  <div class="vcenter--helper">
    <div class="vcenter--content">
      <!--stuff-->
    </div>
  </div>
</div>
```

## CSS

```
.vcenter--container {
  display: table;
  height: 100%;
  position: absolute;
  overflow: hidden;
  width: 100%;
}
.vcenter--helper {
  display: table-cell;
  vertical-align: middle;
}
```



```
}
.vcenter--content {
  margin: 0 auto;
  width: 200px;
}
```

[jsfiddle](#) ◦

- 
- 
- 

line-height

## CSS

```
div {
  height: 200px;
  line-height: 200px;
}
```

<input />◦ line-height◦ ◦

HTML ◦

- display: table;
- display: table-cell;
- vertical-align: middle;
- text-align: center;
- display: inline-block;
- ◦ text-align: left;text-align: right;

## HTML

```
<div class="outer-container">
  <div class="inner-container">
    <div class="centered-content">
      You can put anything here!
    </div>
  </div>
</div>
```

## CSS

```
body {
  margin : 0;
}

.outer-container {
  position : absolute;
  display: table;
```

```

width: 100%; /* This could be ANY width */
height: 100%; /* This could be ANY height */
background: #ccc;
}

.inner-container {
display: table-cell;
vertical-align: middle;
text-align: center;
}

.centered-content {
display: inline-block;
text-align: left;
background: #fff;
padding: 20px;
border: 1px solid #000;
}

```

50margin

## HTML

```

<div class="center">
  Center vertically and horizontally
</div>

```

## CSS

```

.center {
position: absolute;
background: #ccc;

left: 50%;
width: 150px;
margin-left: -75px; /* width * -0.5 */

top: 50%;
height: 200px;
margin-top: -100px; /* height * -0.5 */
}

```

---

## HTML

```

<div class="center">
  Center only horizontally
</div>

```

## CSS

```

.center {
position: absolute;
background: #ccc;

left: 50%;

```

```
width: 150px;
margin-left: -75px; /* width * -0.5 */
}
```

## HTML

```
<div class="center">
  Center only vertically
</div>
```

## CSS

```
.center {
  position: absolute;
  background: #ccc;

  top: 50%;
  height: 200px;
  margin-top: -100px; /* width * -0.5 */
}
```

## 0;

```
margin: 0 auto;margin: 0 auto;°
```

## HTML

```
<div class="containerDiv">
  <div id="centeredDiv"></div>
</div>

<div class="containerDiv">
  <p id="centeredParagraph">This is a centered paragraph.</p>
</div>

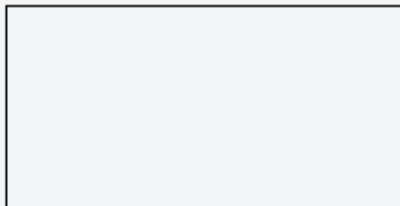
<div class="containerDiv">
  
</div>
```

## CSS

```
.containerDiv {
  width: 100%;
  height: 100px;
  padding-bottom: 40px;
}

#centeredDiv {
  margin: 0 auto;
  width: 200px;
  height: 100px;
  border: 1px solid #000;
}
```

```
#centeredParagraph {  
  width: 200px;  
  margin: 0 auto;  
}  
  
#centeredImage {  
  display: block;  
  width: 200px;  
  margin: 0 auto;  
}
```



**This is a centered paragraph.**



JSFiddle [margin 0 auto](#);

<https://riptutorial.com/zh-TW/css/topic/299/>

# 29:

Internet Explorer `object-fit` `object-position` ◦

## Examples

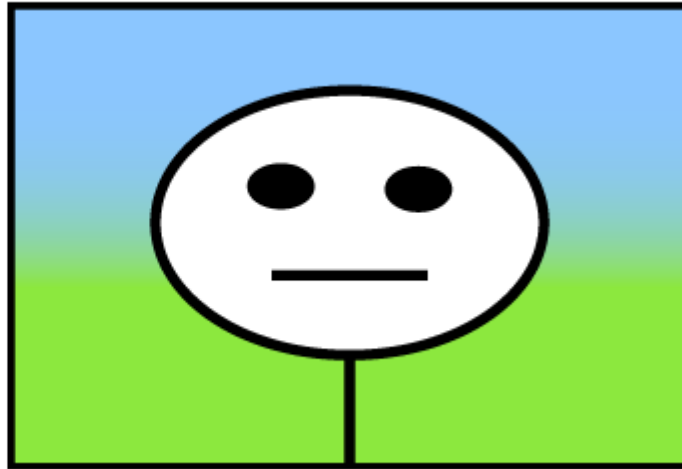
- Object-fit

```
object-fit:fill;
```

original image



object-fit: fill;

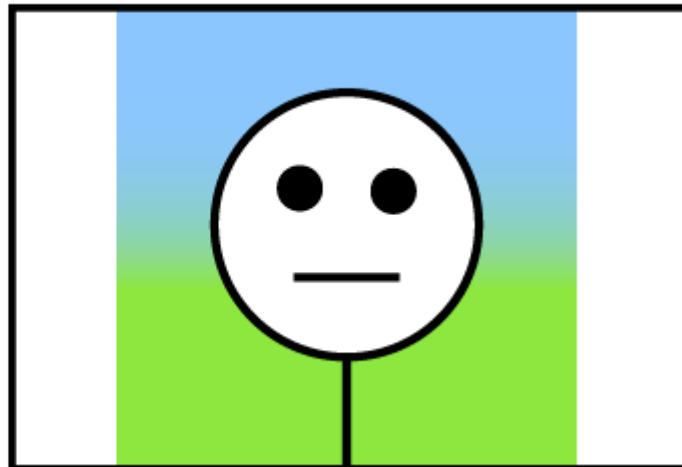


```
object-fit:contain;
```

original image



object-fit: contain;



```
object-fit:cover;
```

original image



object-fit: cover;



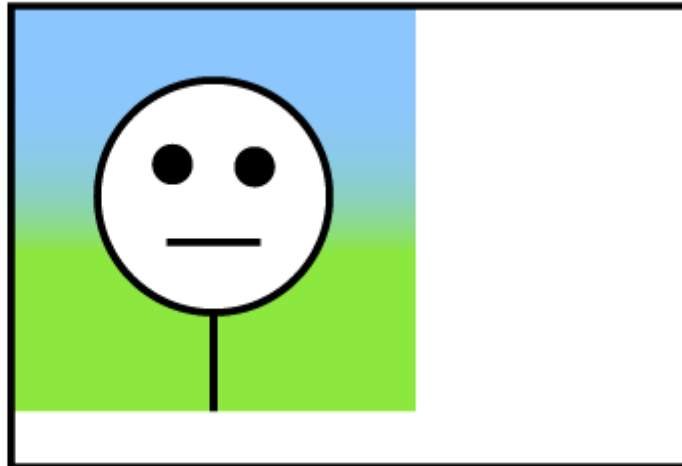
◦ ◦

```
object-fit:none;
```

original image



object-fit: none;



◦

```
object-fit:scale-down;
```

nonecontain ◦ ◦

original image



object-fit: scale-down;



<https://riptutorial.com/zh-TW/css/topic/5520/>

---

# 30:

CSS。

## Examples

CSS。 CSS。

---

# CSS

- 1.
- 2.
3. /
  - .css
  - HTML<style>
4. HTMLstyle

。

---

CSS。

“”。

## 1 -

```
.mystyle { color: blue; } /* specificity: 0, 0, 1, 0 */  
div { color: red; } /* specificity: 0, 0, 0, 1 */
```

```
<div class="mystyle">Hello World</div>
```

“”。

## 2 -

CSS

```
.class {  
  background: #FFF;  
}
```

*cssHTML*

```
<style>
```



```
.class {
  background: #000;
}
<style>
```

“”。

### 3 -

```
body > .mystyle { background-color: blue; } /* specificity: 0, 0, 1, 1 */
.otherstyle > div { background-color: red; } /* specificity: 0, 0, 1, 1 */
```

```
<body class="otherstyle">
  <div class="mystyle">Hello World</div>
</body>
```

◦ .css ◦ .otherstyle > div “”。

- ◦
- ◦
- ◦

!important ◦ property : value !important;

```
#mydiv {
  font-weight: bold !important; /* This property won't be overridden
                                by the rule below */
}

#outerdiv #mydiv {
  font-weight: normal; /* #mydiv font-weight won't be set to normal
                        even if it has a higher specificity because
                        of the !important declaration above */
}
```

!important CSS ◦ !importantona ◦

!important

- htmlstyle ◦
- !importantWeb ◦
- inspect ◦
- [W3C - 6 - 6.4.2](#)

CSS Selector ◦ ◦ A Bc ◦ ◦

id	#foo	
		.bar

		[title] [colspan="2"] :hover :nth-child(2)
C		div li ::before ::first-letter

## ABC

\* >~ 。

## 1

```
#foo #baz {} /* a=2, b=0, c=0 */
#foo.bar {} /* a=1, b=1, c=0 */
#foo {} /* a=1, b=0, c=0 */
.bar:hover {} /* a=0, b=2, c=0 */
div.bar {} /* a=0, b=1, c=1 */
:hover {} /* a=0, b=1, c=0 */
[title] {} /* a=0, b=1, c=0 */
.bar {} /* a=0, b=1, c=0 */
div ul + li {} /* a=0, b=0, c=3 */
p::after {} /* a=0, b=0, c=2 */
*::before {} /* a=0, b=0, c=1 */
::before {} /* a=0, b=0, c=1 */
div {} /* a=0, b=0, c=1 */
* {} /* a=0, b=0, c=0 */
```

## 2

## CSS

```
#foo {
  color: blue;
}

.bar {
  color: red;
  background: black;
}
```

ID color color background ◦

ID#foo.bar ◦ IDAB ◦ ID ◦ color:blue;#foobackground:black;.bar ◦ ID.barcolor ◦

## CSS

```
.bar {
  color: red;
  background: black;
}

.baz {
  background: white;
}
```

;color background background ◦

.bar.baz.bar.bazB ◦ CSS.baz .bar color.barbackground.baz ◦

## 3

2.barcolor.bazcolor ◦

```
.bar {} /* a=0, b=1, c=0 */
.baz {} /* a=0, b=1, c=0 */
```

.bar ◦ .barspan.barspan.bar ◦ C.baz

```
span.bar {} /* a=0, b=1, c=1 */
.baz {} /* a=0, b=1, c=0 */
```

.bar ◦ CSS ◦ .bar .bar.barW3C ◦ .barB

```
.bar.bar {} /* a=0, b=2, c=0 */
.baz {} /* a=0, b=1, c=0 */
```

!important

!importantHTML stylestyle ◦ ◦ !important ◦ ◦

!important ◦ ◦ CSS!important ◦

!important.hidden.background-yellow ◦ ◦ CSSCSS!important ◦

CSSA BC a=1, b=5, c=1 => 151 ◦ ◦ 20BCAB ◦ ◦ ◦

CSS ◦ ◦

```
body.page header.container nav div#main-nav li a {}
```

```

div {
  font-size: 7px;
  border: 3px dotted pink;
  background-color: yellow;
  color: purple;
}

body.mystyle > div.myotherstyle {
  font-size: 11px;
  background-color: green;
}

#elmnt1 {
  font-size: 24px;
  border-color: red;
}

.mystyle .myotherstyle {
  font-size: 16px;
  background-color: black;
  color: red;
}

```

```

<body class="mystyle">
  <div id="elmnt1" class="myotherstyle">
    Hello, world!
  </div>
</body>

```

font-size: 24; #elmnt1<div>#elmnt1

border: 3px dotted red; ◦ red#elmnt1 ◦ **borderborder-thicknessborder-style**div◦

background-color: green; ◦ background-colordiv body.mystyle > div.myotherstyle  
 .mystyle .myotherstyle ◦ 0,0,10,2,20,2,0""◦

color: red; ◦ div.mystyle .myotherstyle ◦ 0,2,0""◦

<https://riptutorial.com/zh-TW/css/topic/450/>

---

# 31:

## Examples

CSS60fps◦

---

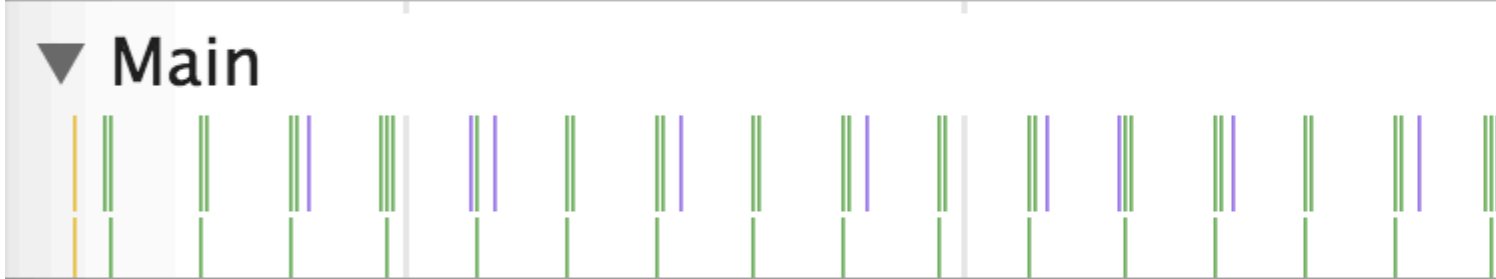
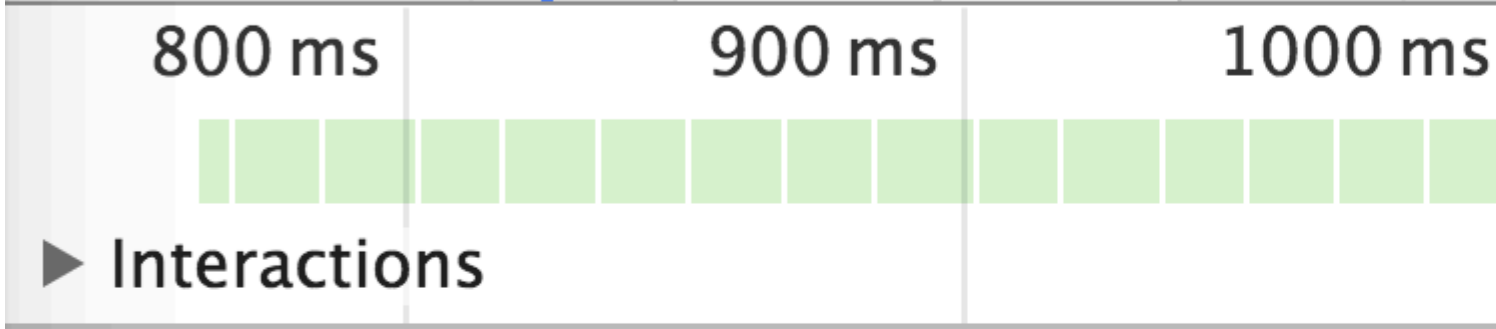
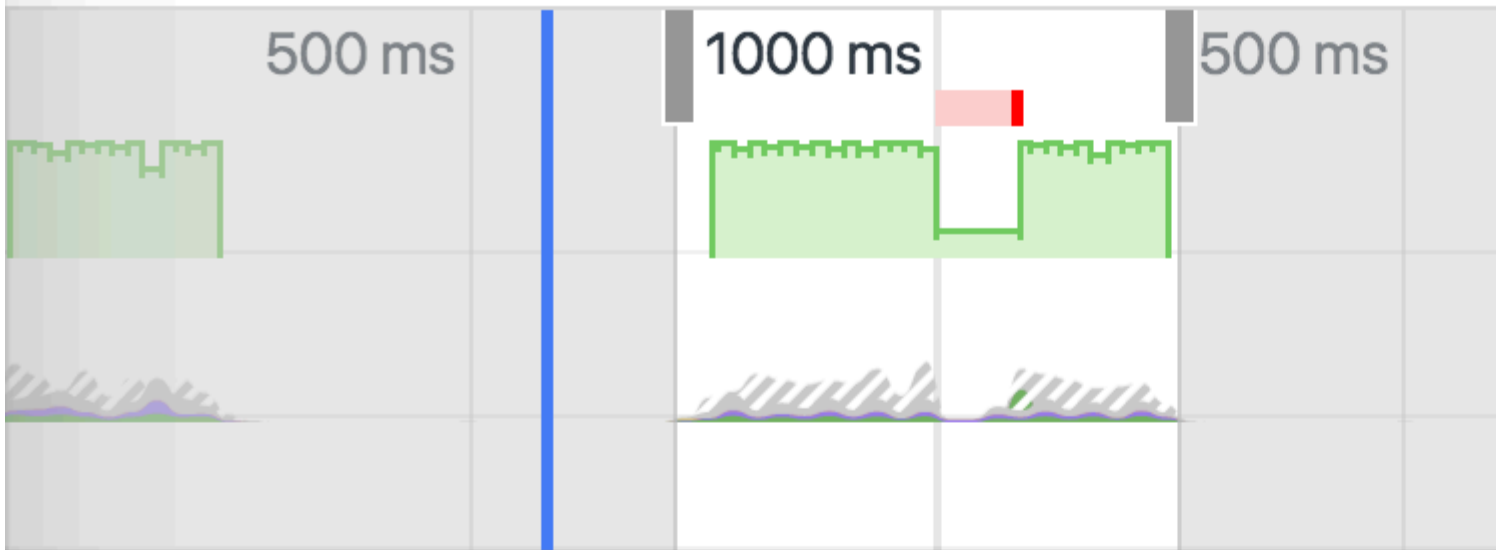
lefttop◦

```
#box {
  left: 0;
  top: 0;
  transition: left 0.5s, top 0.5s;
  position: absolute;
  width: 50px;
  height: 50px;
  background-color: gray;
}

#box.active {
  left: 100px;
  top: 100px;
}
```

### 11.7 9.8

● | Capture:  Network  JS Pro



Summary **Bottom-Up** Call Tree Event Log

Group by Category ▼

Self Time		Total Time		Activ
11.7 ms	54.2 %	11.7 ms	54.2 %	▼
4.2 ms	19.5 %	4.2 ms	19.5 %	
3.9 ms	18.2 %	3.9 ms	18.2 %	
1.8 ms	8.3 %	1.8 ms	8.3 %	

# 32:

CSS。

CSS1201699W3C。 <https://www.w3.org/Style/CSS/current-work>。

201773MicrosoftInternet Explorer 1011Edge。

## Examples



CSS Grid。

```
<section class="container">
  <div class="item1">item1</div>
  <div class="item2">item2</div>
  <div class="item3">item3</div>
  <div class="item4">item4</div>
</section>
```

displaygrid

```
.container {
  display: grid;
}
```

。 。 。

grid.containergrid-columnsgrid-rows

```
.container {
  display: grid;
  grid-columns: 50px 50px 50px;
  grid-rows: 50px 50px;
}
```

。 grid-rowgrid-column

```
.container .item1 {
  grid-column: 1;
  grid-row: 1;
}
.container .item2 {
  grid-column: 2;
  grid-row: 1;
}
.container .item3 {
```

```
grid-column: 1;
grid-row: 2;
}
.container .item4 {
grid-column: 2;
grid-row: 2;
}
```

◦

[JSFiddle](#) ◦ [IE10](#)[IE11](#)[Edge](#)<sub>-ms-</sub> [caniuse](#)[Chrome](#)[Opera](#)[Firefox](#) ◦

<https://riptutorial.com/zh-TW/css/topic/2152/>



## 33:

- font[ *font-style* ] [ *font-variant* ] [ *font-weight* ] *font-size* [/ *line-height*] *font-family* ;
- font-style *font-style*
- font-variant *font-variant*
- font-weight *font-weight* ;
- font-size *font-size* ;
- line-height *line-height* ;
- font-family *font-family* ;
- ;
- `///` ;
- font-stretch *font-stretch* ;
- text-align *text-align* ;
- text-indent *length* | *initial* | *inherit* ;
- text-overflow *clip* `///` ;
- text-transform *none* `///` *initial* | *inherit* ;
- text-shadow *h-shadow* *v-shadow* *blur-radius* *color* | *none* | *initial* | *inherit* ;
- font-size-adjust *number* | *none* | *initial* | *inherit* ;
- font-stretch `////////` ;
- `//`
- tab-size *number* | *length* | *initial* | *inherit* ;
- `///` ;
- `///` ;

<code>italicsoblique</code>
<code>normalsmall-caps</code>
<code>normal bold100900°</code>
<code>% px emCSS</code>
<code>% px emCSS</code>
<code>°</code>
<code>CSS red #00FF00 hsl(240, 100%, 50%)°</code>
<code>confencedexpand face° normal ultra-condensed extra-condensed condensed semi-condensed semi-expanded expanded extra-expandedultra-expanded</code>
<code>start end left right center justify match-parent</code>
<code>none underline overline line-through initial inherit ;</code>

- 10Internet Explorer`text-shadow`

## Examples

### HTML

```
<div id="element-one">Hello I am some text.</div>
<div id="element-two">Hello I am some smaller text.</div>
```

### CSS

```
#element-one {
  font-size: 30px;
}

#element-two {
  font-size: 10px;
}
```

#element-one30px #element-two10px

```
element {
  font: [font-style] [font-variant] [font-weight] [font-size/line-height] [font-family];
}
```

font font

### p20pxArial

```
p {
  font-weight: bold;
  font-size: 20px;
  font-family: Arial, sans-serif;
}
```

```
p {
  font: bold 20px Arial, sans-serif;
}
```

font-style font-variant font-weightline-height font-sizefont-family

- font-style: normal;
- font-variant: normal;
- font-weight: normal;
- font-stretch: normal;
- font-size: medium;
- line-height: normal;
- font-family -

```
font-family: 'Segoe UI', Tahoma, sans-serif;
```

“Segoe UI”。Tahomasans-serif。 “Segoe UI”。

```
font-family: Consolas, 'Courier New', monospace;
```

“Consolas”。 “Courier New”。

```
h2 {  
  /* adds a 1px space horizontally between each letter;  
   also known as tracking */  
  letter-spacing: 1px;  
}
```

letter-spacing。

```
p {  
  letter-spacing: -1px;  
}
```

<https://developer.mozilla.org/en-US/docs/Web/CSS/letter-spacing>

text-transform。 uppercase capitalize lowercase initial inheritnone

CSS

```
.example1 {  
  text-transform: uppercase;  
}  
.example2 {  
  text-transform: capitalize;  
}  
.example3 {  
  text-transform: lowercase;  
}
```

HTML

```
<p class="example1">  
  all letters in uppercase <!-- "ALL LETTERS IN UPPERCASE" -->  
</p>  
<p class="example2">  
  all letters in capitalize <!-- "All Letters In Capitalize (Sentence Case)" -->  
</p>  
<p class="example3">  
  all letters in lowercase <!-- "all letters in lowercase" -->  
</p>
```

```
p {  
  text-indent: 50px;  
}
```

text-indent。

- 
- <https://www.w3.org/TR/CSS21/text.html#propdef-text-indent>
- <https://developer.mozilla.org/en-US/docs/Web/CSS/text-indent>

text-decoration

```
h1 { text-decoration: none; }
h2 { text-decoration: overline; }
h3 { text-decoration: line-through; }
h4 { text-decoration: underline; }
```

text-decoration text-decoration-style text-decoration-color

```
.title { text-decoration: underline dotted blue; }
```

```
.title {
  text-decoration-style: dotted;
  text-decoration-line: underline;
  text-decoration-color: blue;
}
```

## Firefox

- 
- 
- 
- 

text-overflow ellipsis

```
.text {
  overflow: hidden;
  text-overflow: ellipsis;
}
```

text-overflow: ellipsis CSS webkit flexbox

```
.giveMeEllipsis {
  overflow: hidden;
  text-overflow: ellipsis;
  display: -webkit-box;
  -webkit-box-orient: vertical;
  -webkit-line-clamp: N; /* number of lines to show */
  line-height: X; /* fallback */
  max-height: X*N; /* fallback */
}
```

## Chrome Safari

<http://jsfiddle.net/csYjC/1131/>

<https://www.w3.org/TR/2012/WD-css3-ui-20120117/#text-overflow0>

## word-spacing°

- em px vh cm %
- normal
- inherit

## CSS

```
.normal    { word-spacing: normal; }  
.narrow    { word-spacing: -3px; }  
.extensive { word-spacing: 10px; }
```

## HTML

```
<p>  
<span class="normal">This is an example, showing the effect of "word-spacing".</span><br>  
<span class="narrow">This is an example, showing the effect of "word-spacing".</span><br>  
<span class="extensive">This is an example, showing the effect of "word-spacing".</span><br>  
</p>
```

- - [MDN](#)
- - [w3.org](#)

```
div {  
    direction: ltr; /* Default, text read read from left-to-right */  
}  
.ex {  
    direction: rtl; /* text read from right-to-left */  
}  
.horizontal-tb {  
    writing-mode: horizontal-tb; /* Default, text read from left-to-right and top-to-bottom.  
*/  
}  
.vertical-rtl {  
    writing-mode: vertical-rl; /* text read from right-to-left and top-to-bottom */  
}  
.vertical-ltr {  
    writing-mode: vertical-rl; /* text read from left-to-right and top to bottom */  
}
```

## direction°

direction: ltr | rtl | initial | inherit;

---

## writing-mode°

direction: horizontal-tb | vertical-rl | vertical-lr;

°

°

## CSS

```
.smallcaps{
  font-variant: small-caps;
}
```

## HTML

```
<p class="smallcaps">
  Documentation about CSS Fonts
  <br>
  aNd ExAmPLe
</p>
```

## OUTPUT

DOCUMENTATION ABOUT CSS FONTS  
AND EXAMPLE

font-variantfont-variant-capsfont-variant-numericfont-variant-alternatesfont-variant-ligaturesfont-variant-east-asian。

quotes<q>。

```
q {
  quotes: "«" "»";
}
```

text-shadow。

```
text-shadow: horizontal-offset vertical-offset blur color;
```

```
h1 {
  text-shadow: 2px 2px #0000FF;
}
```

blur radius

```
h1 {
  text-shadow: 2px 2px 10px #0000FF;
}
```

```
h1 {
  text-shadow: 0 0 3px #FF0000, 0 0 5px #0000FF;
}
```

<https://riptutorial.com/zh-TW/css/topic/427/>

## 34:

- `shape-outside: none | [<basic-shape> || <shape-box>] | <>`
- `<> | <>`
- `shape-image-threshold: <number>`

<code>none</code>	<code>float</code>	<code>/</code>
<code>inset()</code>	<code>circle()</code>	<code>ellipse()</code> <code>polygon()</code>
<code>margin-box</code>	<code>border-box</code>	<code>padding-box</code> <code>content-box</code>
<code>alpha</code>		

CSS Shapes

Chrome v37 +Opera 24+ / Safari v7.1 +-webkit-

IE Edge Firefox

## Examples

-

shape-outside CSS

### CSS

```
img:nth-of-type(1) {
  shape-outside: circle(80px at 50% 50%);
  float: left;
  width: 200px;
}
img:nth-of-type(2) {
  shape-outside: circle(80px at 50% 50%);
  float: right;
  width: 200px;
}
p {
  text-align: center;
  line-height: 30px; /* purely for demo */
}
```

### HTML

```

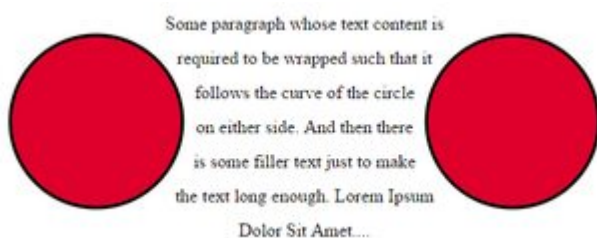

<p>Some paragraph whose text content is required to be wrapped such that it follows the curve
of the circle on either side. And then there is some filler text just to make the text long
enough. Lorem Ipsum Dolor Sit Amet....</p>
```

shape-outside ◦ ◦ shape-outsideshape-outsideshape-outside◦

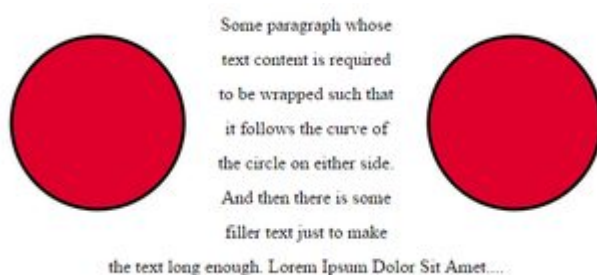
80px◦

shape-outsideshape-outside◦

### shape-outside



### shape-outside



shape-margin CSS shape-outside ◦

## CSS

```
img:nth-of-type(1) {
  shape-outside: circle(80px at 50% 50%);
  shape-margin: 10px;
  float: left;
  width: 200px;
}
img:nth-of-type(2) {
  shape-outside: circle(80px at 50% 50%);
  shape-margin: 10px;
  float: right;
  width: 200px;
}
p {
  text-align: center;
  line-height: 30px; /* purely for demo */
}
```

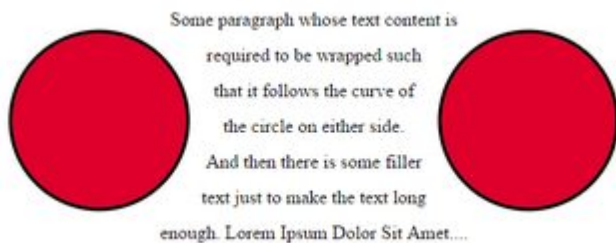
## HTML



```


<p>Some paragraph whose text content is required to be wrapped such that it follows the curve
of the circle on either side. And then there is some filler text just to make the text long
enough. Lorem Ipsum Dolor Sit Amet....</p>
```

shape-margin 10px shape-margin ° °



<https://riptutorial.com/zh-TW/css/topic/2034/>

# 35:

- `||||;`

Overflow	
visible	
scroll	
hidden	
auto	scroll
inherit	

`overflow`

- ◦ `overflow`

`overflow`  
`overflow-x`  
`overflow-y`

`overflow-wrap`  
`word-wrap`

`visible`  
`overflow`

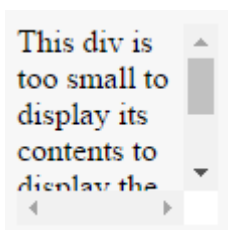
## Examples

### HTML

```
<div>  
  This div is too small to display its contents to display the effects of the overflow  
  property.  
</div>
```

### CSS

```
div {  
  width:100px;  
  height:100px;  
  overflow:scroll;  
}
```



100px×100px。

。 。 。

overflow-wrap。

## CSS

```
div {
  width:100px;
  outline: 1px dashed #bbb;
}

#div1 {
  overflow-wrap:normal;
}

#div2 {
  overflow-wrap:break-word;
}
```

## HTML

```
<div id="div1">
  <strong>#div1</strong>: Small words are displayed normally, but a long word like <span
  style="red;">supercalifragilisticexpialidocious</span> is too long so it will overflow past
  the edge of the line-break
</div>

<div id="div2">
  <strong>#div2</strong>: Small words are displayed normally, but a long word like <span
  style="red;">supercalifragilisticexpialidocious</span> will be split at the line break and
  continue on the next line.
</div>
```

**#div1:** Small words are displayed normally, but a long word like **supercalifragilisticexpialidoc:** is too long so it will overflow past the edge of the line-break

**#div2:** Small words are displayed normally, but a long word like **supercalifragilisticexpialidocious** will be split at the line break and continue on the next line.

<code>overflow-wrap -</code>	
<code>normal</code>	
<code>break-word</code>	
<code>inherit</code>	

## HTML

```
<div>  
  Even if this div is too small to display its contents, the content is not clipped.  
</div>
```

## CSS

```
div {  
  width:50px;  
  height:50px;  
  overflow:visible;  
}
```

Even if this div is too small to display its contents, the content is not clipped.

◦

visibleoverflow ◦ ◦

## CSS

```
img {
  float:left;
  margin-right: 10px;
}
div {
  overflow:hidden; /* creates block formatting context */
}
```

## HTML

```

<div>
  <p>Lorem ipsum dolor sit amet, cum no paulo mollis pertinacia.</p>
  <p>Ad case omnis nam, mutat deseruisse persequeris eos ad, in tollit debitis sea.</p>
</div>
```

100\*100

The containing div of this text does not have overflow set

Lorem ipsum dolor sit amet, cum no paulo mollis pertinacia. Eam in velit graecis, sea mucius insolens ne. Amet doming at has, omnis errem an cum. Eu vim appareat persecuti, ea putant definitionem has, vis ea legendos expetenda. No eros graeci minimum nam, justo augue instructor usu ne. At ludus suscipit disputationi vel.

Ad case omnis nam, mutat deseruisse persequeris eos ad, in tollit debitis sea. Cu eos munere virtute vituperata. Exerci bonorum sed id, id nec tantas praesent complectitur. Vel cu legendos mediocritatem. Enim liberavisse ei sea.

100\*100

The containing div of this text has overflow:hidden

Lorem ipsum dolor sit amet, cum no paulo mollis pertinacia. Eam in velit graecis, sea mucius insolens ne. Amet doming at has, omnis errem an cum. Eu vim appareat persecuti, ea putant definitionem has, vis ea legendos expetenda. No eros graeci minimum nam, justo augue instructor usu ne. At ludus suscipit disputationi vel.

Ad case omnis nam, mutat deseruisse persequeris eos ad, in tollit debitis sea. Cu eos munere virtute vituperata. Exerci bonorum sed id, id nec tantas praesent complectitur. Vel cu legendos mediocritatem. Enim liberavisse ei sea.

overflow

◦

## overflow-xoverflow-y

overflow◦ overflow-x**X**◦ overflow-y**Y**◦

## HTML

```

<div id="div-x">
  If this div is too small to display its contents,
  the content to the left and right will be clipped.
</div>

<div id="div-y">
  If this div is too small to display its contents,
  the content to the top and bottom will be clipped.
</div>

```

## CSS

```

div {
  width: 200px;
  height: 200px;
}

#div-x {
  overflow-x: hidden;
}

#div-y {
  overflow-y: hidden;
}

```

<https://riptutorial.com/zh-TW/css/topic/4947/>

# 36:

	S
-webkit-	SafariOpera 12AndroidUC
-moz-	
-ms-	Internet ExplorerEdge
-xv- -o- - -xv-	Opera12
-khtml-	konquerer

## CSS

o o o

## JavaScript

o

o o

o

## Examples

```
div {  
  -webkit-transition: all 4s ease;  
  -moz-transition: all 4s ease;  
  -o-transition: all 4s ease;  
  transition: all 4s ease;  
}
```

```
div {  
  -webkit-transform: rotate(45deg);  
  -moz-transform: rotate(45deg);  
  -ms-transform: rotate(45deg);  
  -o-transform: rotate(45deg);  
  transform: rotate(45deg);  
}
```

<https://riptutorial.com/zh-TW/css/topic/1138/>



# 37:

- box-sizing ;

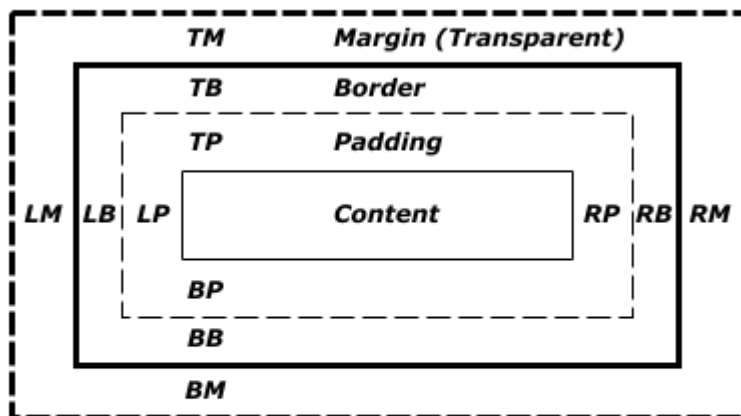
content-box	◦
padding-box	◦
border-box	◦
initial	◦
inherit	◦

Firefox◦ Firefox50.0◦

## Examples

### Box

HTML◦ Box◦



- Margin edge
- Border edge
- - - Padding edge
- Content edge

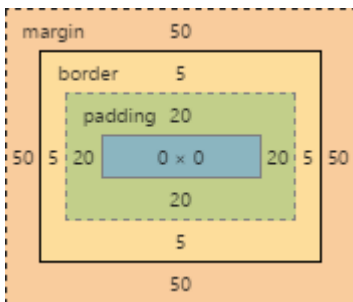
### CSS2.2

◦ ◦

- . . .
- padding padding
- border border
- margin margin

```
div {
  border: 5px solid red;
  margin: 50px;
  padding: 20px;
}
```

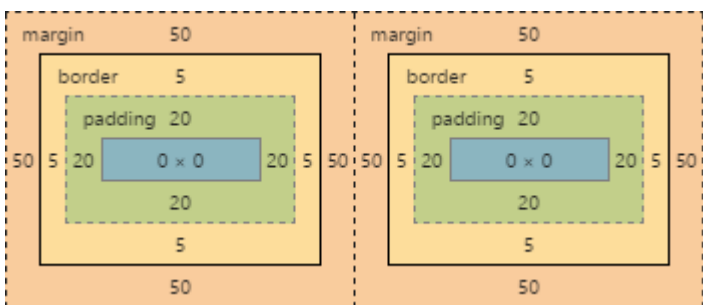
CSS div 5px; 50px ; 20px



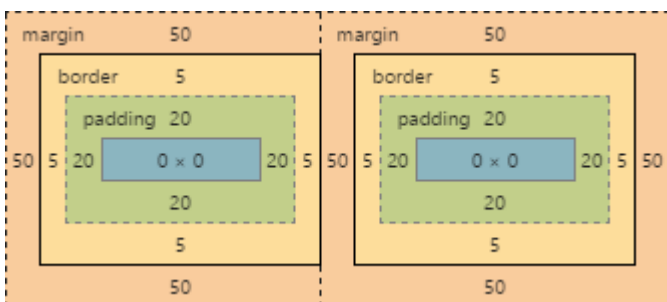
### Google Chrome

- 0px x 0px
- padding 40px x 40px 20px
- border 5px 50px 50px
- margin 50px 150px x 150px

### Box



150px



content-box paddingborderwidth / height°

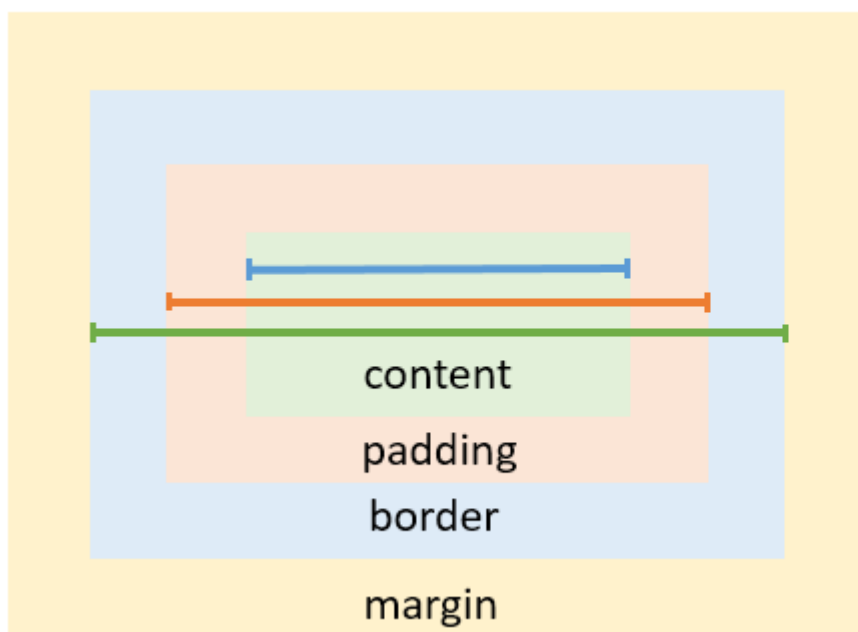
content-box

```
textarea {  
  width: 100%;  
  padding: 3px;  
  box-sizing: content-box; /* default value */  
}
```

textarea100textarea°

CSSbox-sizing°

- content-box -
- padding-box
- border-box



**width**

■ **content-box:** content

■ **padding-box:** content + padding

■ **border-box:** content + padding + border

textareabox-sizingpadding-boxborder-box° border-box°

```
textarea {  
  width: 100%;  
  padding: 3px;  
  box-sizing: border-box;  
}
```

```
html {  
  box-sizing: border-box;  
}
```

```
*, *:before, *:after {  
  box-sizing: inherit;  
}
```

```
}
```

`box-sizing: border-box; * ◦`

<https://riptutorial.com/zh-TW/css/topic/646/>

## 38:

- `page-break-after: auto` |||||;
- `page-break-before: auto` |||||;
- `page-break-inside: auto` |||;



CSS。 3 `page-break-before` `page-break-after` `page-break-inside` 。

`orphans` `widows` 。

## Examples

```
@media print {  
  p {  
    page-break-inside: avoid;  
  }  
  h1 {  
    page-break-before: always;  
  }  
  h2 {  
    page-break-after: avoid;  
  }  
}
```

- `p`。
- `h1`。
- `h2`

<https://riptutorial.com/zh-TW/css/topic/4316/>

# 39:

- box-shadow none | h-shadow v-shadow blur spread color | inset | initial | inherit;

	◦ inset/◦
-X	
-Y	
	0◦ ◦ ◦
	0◦ ◦ ◦
	rgb() rgba() hsl() hsla()

- Chrome 10.0
- IE 9.0
- Firefox 4.0 3.5 -moz
- Safari 5.1 3.1 -webkit-
- Opera 10.5

## Examples

JSFiddle <https://jsfiddle.net/UnsungHero97/80qod7aL/>

### HTML

```
<div class="box_shadow"></div>
```

### CSS

```
.box_shadow {  
  -webkit-box-shadow: 0px 0px 10px -1px #444444;  
  -moz-box-shadow: 0px 0px 10px -1px #444444;  
  box-shadow: 0px 0px 10px -1px #444444;  
}
```

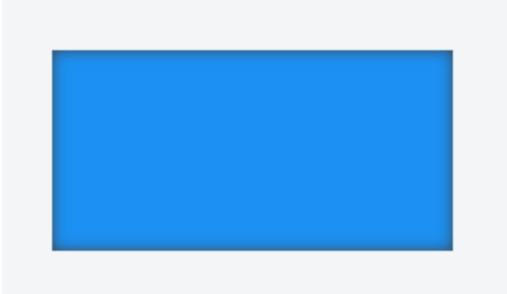
### HTML

```
<div class="box_shadow"></div>
```

### CSS

```
.box_shadow {
```

```
background-color: #1C90F3;
width: 200px;
height: 100px;
margin: 50px;
-webkit-box-shadow: inset 0px 0px 10px 0px #444444;
  -moz-box-shadow: inset 0px 0px 10px 0px #444444;
   box-shadow: inset 0px 0px 10px 0px #444444;
}
```



JSFiddle <https://jsfiddle.net/UnsungHero97/80qod7aL/1/>

JSFiddle <https://jsfiddle.net/UnsungHero97/80qod7aL/2/>

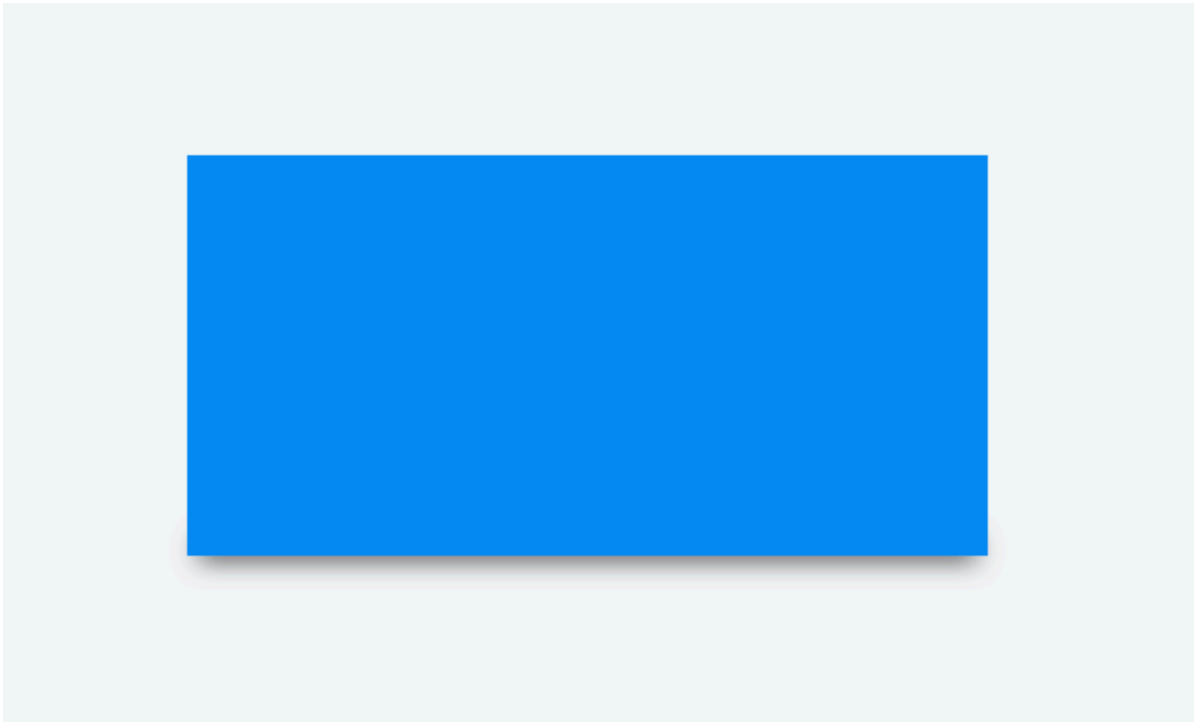
## HTML

```
<div class="box_shadow"></div>
```

## CSS

```
.box_shadow {
  background-color: #1C90F3;
  width: 200px;
  height: 100px;
  margin: 50px;
}

.box_shadow:after {
  content: "";
  width: 190px;
  height: 1px;
  margin-top: 98px;
  margin-left: 5px;
  display: block;
  position: absolute;
  z-index: -1;
  -webkit-box-shadow: 0px 0px 8px 2px #444444;
  -moz-box-shadow: 0px 0px 8px 2px #444444;
  box-shadow: 0px 0px 8px 2px #444444;
}
```



JSFiddle <https://jsfiddle.net/UnsungHero97/80qod7aL/5/>

## HTML

```
<div class="box_shadow"></div>
```

## CSS

```
.box_shadow {  
  width: 100px;  
  height: 100px;  
  margin: 100px;  
  box-shadow:  
    -52px -52px 0px 0px #f65314,  
    52px -52px 0px 0px #7cbb00,  
    -52px 52px 0px 0px #00a1f1,  
    52px 52px 0px 0px #ffbb00;  
}
```

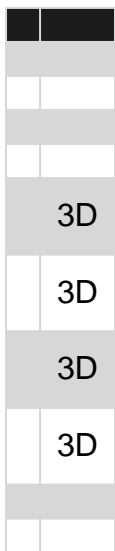




<https://riptutorial.com/zh-TW/css/topic/1746/>

# 40:

- `outline-color outline-style outline-width` ||;
- `outline-width` `medium` |||||;
- `outline-style` `none` ||||| |||||;



`outline` CSS3REC CSS2.1

---

Outline: `focus`

<http://outlinenone.com>

## outline

TABWeb“” ° ° ° .....

Stack Overflow

- 
- [BUTTONSFirefox](#)

## Examples

◦ `border` ◦ ◦

◦ `font-size` `span` `outline` ◦ ◦

`outline-color` `outline-style` `outline-width` ◦

◦ ◦ `border` ◦

```
outline: 1px solid black;
```

outline-style°

```
p {
  border: 1px solid black;
  outline-color:blue;
  line-height:30px;
}
.p1{
  outline-style: dotted;
}
.p2{
  outline-style: dashed;
}
.p3{
  outline-style: solid;
}
.p4{
  outline-style: double;
}
.p5{
  outline-style: groove;
}
.p6{
  outline-style: ridge;
}
.p7{
  outline-style: inset;
}
.p8{
  outline-style: outset;
}
```

## HTML

```
<p class="p1">A dotted outline</p>
<p class="p2">A dashed outline</p>
<p class="p3">A solid outline</p>
<p class="p4">A double outline</p>
<p class="p5">A groove outline</p>
<p class="p6">A ridge outline</p>
<p class="p7">An inset outline</p>
<p class="p8">An outset outline</p>
```

A dotted outline

A dashed outline

A solid outline

A double outline

A groove outline

A ridge outline

An inset outline

An outset outline

<https://riptutorial.com/zh-TW/css/topic/4258/>

# 41:

CSS。

。

- background-color color |||;
  - background-image url |||;
  - ;
  - background-size <bg-size> [<bg-size>]
  - <bg-size> auto ||||;
  - background-repeat | repeat-x | repeat-y |||;
  - background-origin padding-box ||||;
  - background-clip border-box ||||;
  - background-attachment ||||;
  - bg-color bg-image position / bg-size bg-repeat bg-origin bg-clip bg-attachment initial |;
- 
- CSS3 10 Internet Explorer。

## Examples

background-color transparent inherit initial。

- **transparent** 。
- 。
- **initial** 。

::first-letter / ::first-line 。

CSS。

---

## CSS

```
div {  
  background-color: red; /* red */  
}
```

## HTML

```
<div>This will have a red background</div>
```

- CSS。

16RGB。 ff0000256ff000。

RGBRGB。 #ff0000#f00 #ffffff#fff。

。

```
body {
  background-color: #de1205; /* red */
}

.main {
  background-color: #00f; /* blue */
}
```

---

## RGB / RGBa

RGBRGBa。

RGB0255。

RGBa0.01.0alpha。

```
header {
  background-color: rgb(0, 0, 0); /* black */
}

footer {
  background-color: rgba(0, 0, 0, 0.5); /* black with 50% opacity */
}
```

---

## HSL / HSLa

HSLHSLaRGBRGBa。

HSLHLS

- 0360。
- 0100。
- 0100。

HSLa0.01.0alpha。

```
li a {
  background-color: hsl(120, 100%, 50%); /* green */
}

#p1 {
  background-color: hsla(120, 100%, 50%, .3); /* green with 30% opacity */
}
```

```

body {
  background: red;
  background-image: url(partiallytransparentimage.png);
}

body {
  background-color: red;
  background-image: url(partiallytransparentimage.png);
}

body {
  background-image: url(partiallytransparentimage.png);
  background-color: red;
}

body {
  background: red url(partiallytransparentimage.png);
}

```

background-repeat°

```

body {
  background-image: url(partiallytransparentimage.png);
  background: red;
}

```

backgroundbackground-image °

background [Background Shorthand](#)

background-image° °

```

.myClass {
  background-image: url('/path/to/image.jpg');
}

```

background-image url()

```

.myClass {
  background-image: url('/path/to/image.jpg'),
                  url('/path/to/image2.jpg');
}

```

°

url('/path/to/image.jpg')	URI
none	
initial	
inherit	

## CSS

◦

```
background-size:    xpx ypx | x% y%;
background-repeat:  no-repeat | repeat | repeat-x | repeat-y;
background-position: left offset (px/%) right offset (px/%) | center center | left top | right bottom;
```

## CSS3◦ [background-image](#)background◦

◦

- `linear-gradient()`
- `repeating-linear-gradient()`
- `radial-gradient()`
- `repeating-radial-gradient()`

---

### linear-gradient

```
background: linear-gradient( <direction>?, <color-stop-1>, <color-stop-2>, ...);
```

<direction>	to top to bottom to rightto left;0deg 90deg .....◦ <a href="#">deg grad radturn</a> ◦
<color-stop-list>	◦ yellow 10% rgba(0,0,0,.5) 40px #fff 100% .....

```
.linear-gradient {
  background: linear-gradient(to left, red, blue); /* you can also use 270deg */
}
```

### diagonal◦

```
.diagonal-linear-gradient {
  background: linear-gradient(to left top, red, yellow 10%);
}
```

## ◦ 8

```
.linear-gradient-rainbow {
  background: linear-gradient(to left, red, orange, yellow, green, blue, indigo, violet)
}
```

---

```
.radial-gradient-simple {
  background: radial-gradient(red, blue);
}
```



```
.radial-gradient {
  background: radial-gradient(circle farthest-corner at top left, red, blue);
}
```

circle	◦ circleellipse ellipse ◦
farthest-corner	◦ closest-side farthest-side closest-corner farthest-corner
top left	background-position◦

◦

```
.bullseye {
  background: repeating-radial-gradient(red, red 10%, white 10%, white 20%);
}
.warning {
  background: repeating-linear-gradient(-45deg, yellow, yellow 10%, black 10%, black 20% );
}
```

-45deg	◦ ◦ <a href="#">deg grad radturn</a> ◦
to left	to bottom ◦ to [y-axis(top OR bottom)] [x-axis(left OR right)]to top right
yellow 10%	◦ ◦

HEXRGBRGBaHSLHSLa◦ ◦ ◦ [MDN](#)

background

		CSS Ver◦
background-image		1+
background-color		1+
background-position		1+
background-size		3+
background-repeat		1+
background-origin	fixed background-attachment	3+
background-clip	content-box border-boxpadding-box	3+
background-attachment		1+

		CSS Ver.
initial	valuedefault	3+
inherit		2+

```
background: [<background-image>] [<background-color>] [<background-position>]/[<background-size>] [<background-repeat>] [<background-origin>] [<background-clip>] [<background-attachment>] [<initial|inherit>];
```

```
background: red;
```

redbackground-color ◦

```
background: border-box red;
```

background-clipbackground-color ◦

```
background: no-repeat center url("somepng.jpg");
```

background-repeatbackground-originbackground-image ◦

```
background: url('pattern.png') green;
```

background-colorgreenpattern.png ◦ pattern.pnggreen ◦

```
background: #000000 url("picture.png") top left / 600px auto no-repeat;
```

'picture.png' ◦ /600px ◦ ◦

- longhand ◦

background-position

```
.myClass {
  background-image: url('path/to/image.jpg');
  background-position: 50% 50%;
}
```

XYCSS ◦

- ◦	
-	
background-sizebackground-size ◦	
px px	

## CSS ◦

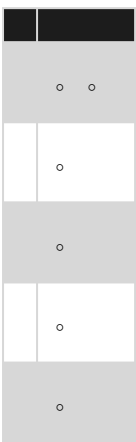
---

background-position-x background-position-y ◦ **xy** ◦

Firefox 31-48 [2](#) ◦ 20169 Firefox 49 ◦ [Stack Overflow](#) Firefox ◦

### background-attachment ◦

```
body {  
  background-image: url('img.jpg');  
  background-attachment: fixed;  
}
```



---

## ***background-attachment***

```
body {  
  background-image: url('image.jpg');  
  background-attachment: scroll;  
}
```

```
body {  
  background-image: url('image.jpg');  
  background-attachment: fixed;  
}
```

### divdiv ◦

```
div {  
  background-image: url('image.jpg');  
  background-attachment: local;  
}
```

### background-repeat/ ◦

o

```
div {  
  background-image: url("img.jpg");  
  background-repeat: repeat-y;  
}
```

background-repeat: repeat-y



opacity o **RGBA** o **0.6** o

```
/* Fallback for web browsers that don't support RGBA */  
background-color: rgb(0, 0, 0);  
  
/* RGBA with 0.6 opacity */  
background-color: rgba(0, 0, 0, 0.6);  
  
/* For IE 5.5 - 7*/  
filter: progid:DXImageTransform.Microsoft.gradient(startColorstr=#99000000,  
endColorstr=#99000000);  
  
/* For IE 8*/  
-ms-filter: "progid:DXImageTransform.Microsoft.gradient(startColorstr=#99000000,  
endColorstr=#99000000)";
```

### CSS3 o

```
#mydiv {
  background-image: url(img_1.png), /* top image */
                  url(img_2.png), /* middle image */
                  url(img_3.png); /* bottom image */
  background-position: right bottom,
                    left top,
                    right top;
  background-repeat: no-repeat,
                  repeat,
                  no-repeat;
}
```

◦ img\_1 img\_2img\_3◦

```
#mydiv {
  background: url(img_1.png) right bottom no-repeat,
            url(img_2.png) left top repeat,
            url(img_3.png) right top no-repeat;
}
```

```
#mydiv {
  background: url(image.png) right bottom no-repeat,
            linear-gradient(to bottom, #fff 0%, #000 100%);
}
```

•

## background-origin

background-origin◦

background-attachmentfixed◦

padding-box

- padding-box -
- border-box -
- content-box -
- initial
- inherit

## CSS

```
.example {
  width: 300px;
  border: 20px solid black;
  padding: 50px;
  background: url(https://static.pexels.com/photos/6440/magazines-desk-work-workspace-medium.jpg);
  background-repeat: no-repeat;
}

.example1 {}
```

```
.example2 { background-origin: border-box; }  
  
.example3 { background-origin: content-box; }
```

## HTML

```
<p>No background-origin (padding-box is default):</p>  
  
<div class="example example1">  
  <h2>Lorem Ipsum Dolor</h2>  
  <p>Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed diam nonummy nibh euismod  
tincidunt ut laoreet dolore magna aliquam erat volutpat.</p>  
  <p>Ut wisi enim ad minim veniam, quis nostrud exerci tation ullamcorper suscipit lobortis  
nisl ut aliquip ex ea commodo consequat.</p>  
</div>  
  
<p>background-origin: border-box:</p>  
<div class="example example2">  
  <h2>Lorem Ipsum Dolor</h2>  
  <p>Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed diam nonummy nibh euismod  
tincidunt ut laoreet dolore magna aliquam erat volutpat.</p>  
  <p>Ut wisi enim ad minim veniam, quis nostrud exerci tation ullamcorper suscipit lobortis  
nisl ut aliquip ex ea commodo consequat.</p>  
</div>  
  
<p>background-origin: content-box:</p>  
<div class="example example3">  
  <h2>Lorem Ipsum Dolor</h2>  
  <p>Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed diam nonummy nibh euismod  
tincidunt ut laoreet dolore magna aliquam erat volutpat.</p>  
  <p>Ut wisi enim ad minim veniam, quis nostrud exerci tation ullamcorper suscipit lobortis  
nisl ut aliquip ex ea commodo consequat.</p>  
</div>
```

No background-origin (padding-box is default):



background-origin: border-box:



background-origin: content-box:



- padding-box;
- content-box°
- inherit°

## CSS

```
.example {
  width: 300px;
  border: 20px solid black;
  padding: 50px;
  background: url(https://static.pexels.com/photos/6440/magazines-desk-work-workspace-medium.jpg);
  background-repeat: no-repeat;
}

.example1 {}

.example2 { background-origin: border-box; }

.example3 { background-origin: content-box; }
```

## HTML

```
<p>No background-origin (padding-box is default):</p>

<div class="example example1">
  <h2>Lorem Ipsum Dolor</h2>
  <p>Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed diam nonummy nibh euismod tincidunt ut laoreet dolore magna aliquam erat volutpat.</p>
  <p>Ut wisi enim ad minim veniam, quis nostrud exerci tation ullamcorper suscipit lobortis nisl ut aliquip ex ea commodo consequat.</p>
</div>

<p>background-origin: border-box:</p>
<div class="example example2">
  <h2>Lorem Ipsum Dolor</h2>
  <p>Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed diam nonummy nibh euismod tincidunt ut laoreet dolore magna aliquam erat volutpat.</p>
  <p>Ut wisi enim ad minim veniam, quis nostrud exerci tation ullamcorper suscipit lobortis nisl ut aliquip ex ea commodo consequat.</p>
</div>

<p>background-origin: content-box:</p>
<div class="example example3">
  <h2>Lorem Ipsum Dolor</h2>
  <p>Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed diam nonummy nibh euismod tincidunt ut laoreet dolore magna aliquam erat volutpat.</p>
  <p>Ut wisi enim ad minim veniam, quis nostrud exerci tation ullamcorper suscipit lobortis nisl ut aliquip ex ea commodo consequat.</p>
</div>
```

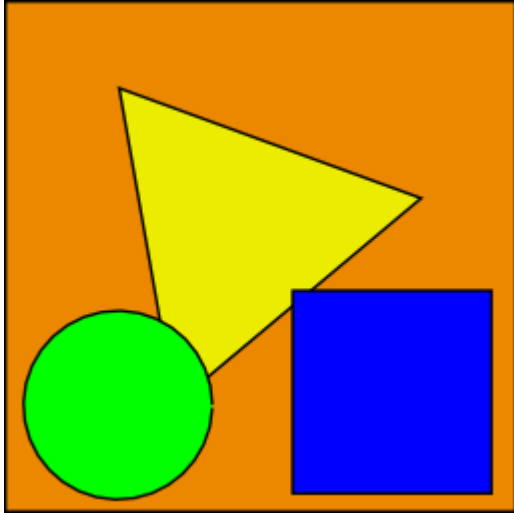
[background-size](#)background-image° /° widthheightauto°

auto° auto° **256x256**background-size**50**



```
background-size: 50px;  
background-size: 50px auto; /* same as above */  
background-size: auto 50px;  
background-size: 50px 50px;
```

256 ppx256 px

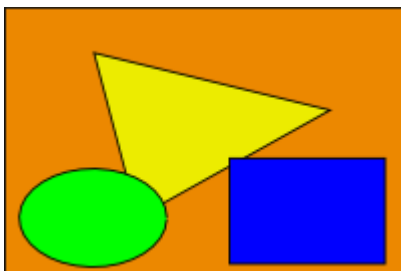


50x50



◦ 200 ppx133 px

```
#withbackground {  
  background-image: url(to/some/background.png);  
  
  background-size: 100% 66%;  
  
  width: 200px;  
  height: 200px;  
  
  padding: 0;  
  margin: 0;  
}
```



[background-origin](#) ◦

[previos](#) ◦ ◦

◦ auto ◦ containcover ◦

## Eggsplanation containcover

Biswarup Ganguly ◦ ◦ 16x9 ◦



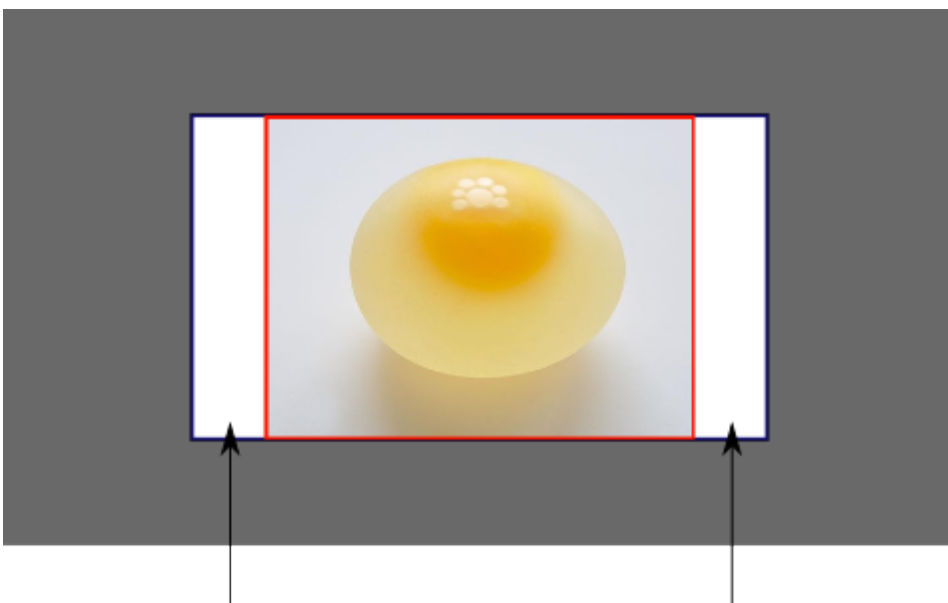
◦ 4x3 ◦ background-sizecontaincover ◦ body/◦

contain

```
contain
```

◦

background-color

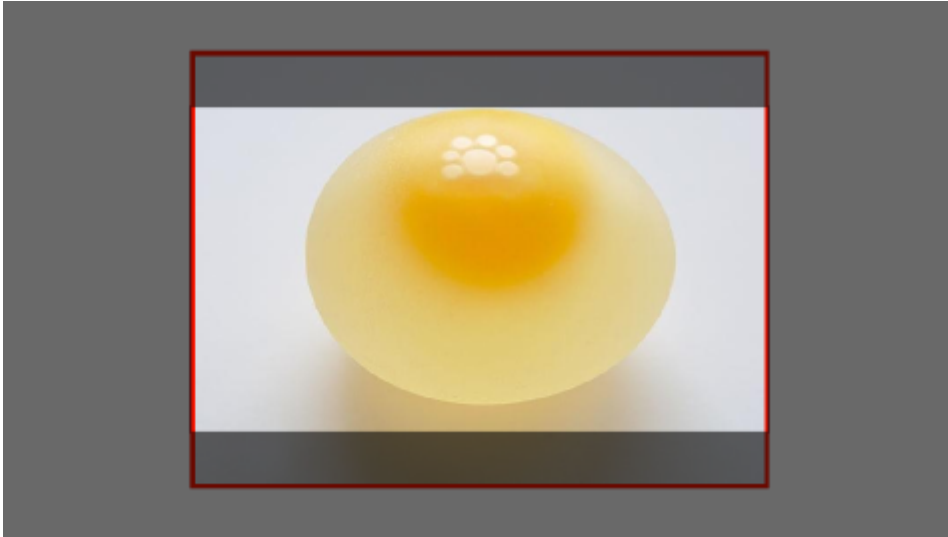


cover

cover

◦

◦ background-color



```
div > div {
  background-image: url(http://i.stack.imgur.com/r5CAq.jpg);
  background-repeat: no-repeat;
  background-position: center center;
  background-color: #ccc;
  border: 1px solid;
  width: 20em;
  height: 10em;
}
```

```
div.contain {
  background-size: contain;
}
```

```
div.cover {
  background-size: cover;
}
```

```
/******
Additional styles for the explanation boxes
******/
```

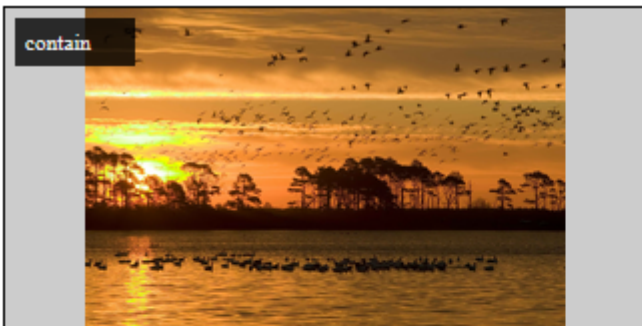
```
div > div {
  margin: 0 1ex 1ex 0;
  float: left;
}
```

```
div + div {
  clear: both;
  border-top: 1px dashed silver;
  padding-top: 1ex;
}
```

```
div > div::after {
  background-color: #000;
  color: #fefefe;
  margin: 1ex;
  padding: 1ex;
  opacity: 0.8;
  display: block;
}
```

```
width: 10ex;
font-size: 0.7em;
content: attr(class);
}
```

```
<div>
  <div class="contain"></div>
  <p>Note the grey background. The image does not cover the whole region, but it's fully
  <em>contained</em>.
  </p>
</div>
<div>
  <div class="cover"></div>
  <p>Note the ducks/geese at the bottom of the image. Most of the water is cut, as well as a
  part of the sky. You don't see the complete image anymore, but neither do you see any
  background color; the image <em>covers</em> all of the <code>&lt;div&gt;</code>.</p>
</div>
```



Note the grey background. The image does not cover the whole region, but it's fully *contained*.



Note the ducks/geese at the bottom of the image. Most of the water is cut, as well as a part of the sky. You don't see the complete image anymore, but neither do you see any background color; the image *covers* all of the `<div>`.

## background-blend-mode

```
.my-div {
  width: 300px;
  height: 200px;
  background-size: 100%;
  background-repeat: no-repeat;
  background-image: linear-gradient(to right, black 0%,white 100%),
  url('https://static.pexels.com/photos/54624/strawberry-fruit-red-sweet-54624-medium.jpeg');
  background-blend-mode:saturation;
}
```

```
<div class="my-div">Lorem ipsum</div>
```

<https://jsfiddle.net/MadalinaTn/y69d28Lb/>

CSSbackground-blend-modenormal |||||];

<https://riptutorial.com/zh-TW/css/topic/296/>

# 42:

CSSCSS。

CSS。 CSS。 CSS。 CSS。

- root {} / \*\* /
- --variable-name *value* ; / \*\* /
- var - / \*\* /

CSS。

---

/

Firefox31 +

Mozilla

Chrome49 + 。

“experimental Web PlatformChrome48。 Chromechrome://flags/ ”

IE。

Safari9.1+

## Examples

```
:root {
  --red: #b00;
  --blue: #4679bd;
  --grey: #ddd;
}
.Bx1 {
  color: var(--red);
  background: var(--grey);
  border: 1px solid var(--red);
}
```

```
:root {
  --W200: 200px;
  --W10: 10px;
}
.Bx2 {
  width: var(--W200);
  height: var(--W200);
  margin: var(--W10);
}
```

## CSS。

。

## HTML

```
<a class="button">Button Green</a>
<a class="button button_red">Button Red</a>
<a class="button">Button Hovered On</a>
```

## CSS

```
.button {
  --color: green;
  padding: .5rem;
  border: 1px solid var(--color);
  color: var(--color);
}

.button:hover {
  --color: blue;
}

.button_red {
  --color: red;
}
```



/

## CSSCSSline-height-moz-box-sizing -

```
//These are Invalids variable names
--123color: blue;
--#color: red;
--bg_color: yellow
--$width: 100px;

//Valid variable names
--color: red;
--bg-color: yellow
--width: 100px;
```

## CSS。

```
/* The variable names below are all different variables */
--pcolor: ;
--Pcolor: ;
--pColor: ;
```

## Vs

```
/* Invalid */
--color;;

/* Valid */
--color: ; /* space is assigned */
```

```
/* Invalid - CSS doesn't support concatenation*/
.logo{
  --logo-url: 'logo';
  background: url('assets/img/' var(--logo-url) '.png');
}

/* Invalid - CSS bug */
.logo{
  --logo-url: 'assets/img/logo.png';
  background: url(var(--logo-url));
}

/* Valid */
.logo{
  --logo-url: url('assets/img/logo.png');
  background: var(--logo-url);
}
```

```
/* Invalid */
--width: 10;
width: var(--width)px;

/* Valid */
--width: 10px;
width: var(--width);

/* Valid */
--width: 10;
width: calc(1px * var(--width)); /* multiply by 1 unit to convert */
width: calc(1em * var(--width));
```

o

## HTML

```
<div></div>
<div></div>
<div></div>
<div></div>
```

## CSS

```
:root{
  --width: 25%;
  --content: 'This is desktop';
}
@media only screen and (max-width: 767px){
```



```
:root{
  --width:50%;
  --content: 'This is mobile';
}
}
@media only screen and (max-width: 480px){
  :root{
    --width:100%;
  }
}
div{
  width: calc(var(--width) - 20px);
  height: 100px;
}
div:before{
  content: var(--content);
}

/* Other Styles */
body {
  padding: 10px;
}

div{
  display: flex;
  align-items: center;
  justify-content: center;
  font-weight:bold;
  float:left;
  margin: 10px;
  border: 4px solid black;
  background: red;
}
```

[CodePen](#)



This is desktop

This is desktop

This is desktop

This is desktop

<https://riptutorial.com/zh-TW/css/topic/1755/-->

---

# 43:

- |||||;
- floatleft |||||;

float[1]

[1] <https://developer.mozilla.org/en-US/docs/Web/CSS/float> MDN

## Examples

◦ ◦ ◦

### HTML

```
<p>Lorem ipsum dolor sit amet, consectetur adipiscing elit. Integer nec odio. Praesent libero. Sed cursus ante dapibus diam. Sed nisi. Nulla quis sem at nibh elementum imperdiet. Duis sagittis ipsum. Praesent mauris. Fusce nec tellus sed augue semper porta. Mauris massa. Vestibulum lacinia arcu eget nulla. </p>
```

```

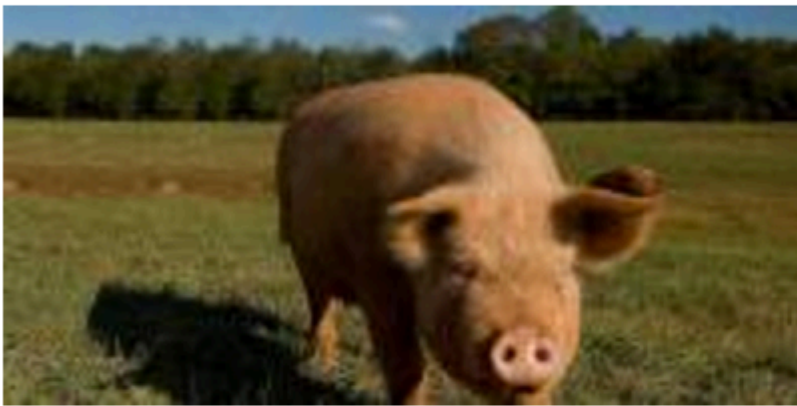
```

```
<p>Class aptent taciti sociosqu ad litora torquent per conubia nostra, per inceptos himenaeos. Curabitur sodales ligula in libero. Sed dignissim lacinia nunc. Curabitur tortor. Pellentesque nibh. Aenean quam. In scelerisque sem at dolor. Maecenas mattis. Sed convallis tristique sem. Proin ut ligula vel nunc egestas porttitor. Morbi lectus risus, iaculis vel, suscipit quis, luctus non, massa. Fusce ac turpis quis ligula lacinia aliquet. </p>
```

### CSS

```
img {  
  float:left;  
  margin-right:1rem;  
}
```

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Integer nec odio. Praesent libero. Sed cursus ante dapibus diam. Sed nisi. Nulla quis sem at nibh elementum imperdiet. Duis sagittis ipsum. Praesent mauris. Fusce nec tellus sed augue semper porta. Mauris massa. Vestibulum lacinia arcu eget nulla.



Class aptent taciti sociosqu ad litora torquent per conubia nostra, per inceptos himenaeos. Curabitur sodales ligula in libero.

Sed dignissim lacinia nunc. Curabitur tortor. Pellentesque nibh. Aenean quam. In scelerisque sem at dolor. Maecenas mattis. Sed convallis tristique sem. Proin ut ligula vel nunc egestas porttitor. Morbi lectus risus, iaculis vel, suscipit quis, luctus non, massa. Fusce ac turpis quis ligula lacinia aliquet.

[Codepen](#)

◦ ◦ ◦

HTML

```
<div class="wrapper">
<div class="sidebar">
  <h2>Sidebar</h2>
```

```

    <p>Lorem ipsum dolor sit amet, consectetur adipiscing elit. Integer nec odio.</p>
</div>

<div class="content">
    <h1>Content</h1>

    <p>Class aptent taciti sociosqu ad litora torquent per conubia nostra, per inceptos
himenaeos. Curabitur sodales ligula in libero. Sed dignissim lacinia nunc. Curabitur tortor.
Pellentesque nibh. Aenean quam. In scelerisque sem at dolor. Maecenas mattis. Sed convallis
tristique sem. Proin ut ligula vel nunc egestas porttitor. Morbi lectus risus, iaculis vel,
suscipit quis, luctus non, massa. Fusce ac turpis quis ligula lacinia aliquet. </p>
</div>

</div>

```

## CSS

```

.wrapper {
    width:600px;
    padding:20px;
    background-color:pink;

    /* Floated elements don't use any height. Adding "overflow:hidden;" forces the
    parent element to expand to contain its floated children. */
    overflow:hidden;
}

.sidebar {
    width:150px;
    float:left;
    background-color:blue;
}

.content {
    width:450px;
    float:right;
    background-color:yellow;
}

```

## HTML

```

<div class="wrapper">
    <div class="left-sidebar">
        <h1>Left Sidebar</h1>
        <p>Lorem ipsum dolor sit amet, consectetur adipiscing elit. </p>
    </div>
    <div class="content">
        <h1>Content</h1>
        <p>Class aptent taciti sociosqu ad litora torquent per conubia nostra, per inceptos
himenaeos. Curabitur sodales ligula in libero. Sed dignissim lacinia nunc. Curabitur tortor.
Pellentesque nibh. Aenean quam. In scelerisque sem at dolor. Maecenas mattis. Sed convallis
tristique sem. Proin ut ligula vel nunc egestas porttitor. Morbi lectus risus, iaculis vel,
suscipit quis, luctus non, massa. </p>
    </div>
    <div class="right-sidebar">
        <h1>Right Sidebar</h1>
        <p>Fusce ac turpis quis ligula lacinia aliquet.</p>
    </div>

```

```
</div>
```

## CSS

```
.wrapper {
  width:600px;
  background-color:pink;
  padding:20px;

  /* Floated elements don't use any height. Adding "overflow:hidden;" forces the
     parent element to expand to contain its floated children. */
  overflow:hidden;
}

.left-sidebar {
  width:150px;
  background-color:blue;
  float:left;
}

.content {
  width:300px;
  background-color:yellow;
  float:left;
}

.right-sidebar {
  width:150px;
  background-color:green;
  float:right;
}
```

/

。 “” 。 “” 。 “” 。

## HTML

```
<div class="sidebar">
<h1>Sidebar</h1>

</div>

<div class="content">
<h1>Content</h1>
<p>Lorem ipsum dolor sit amet, consectetur adipiscing elit. Integer nec odio. Praesent libero. Sed cursus ante dapibus diam. Sed nisi. Nulla quis sem at nibh elementum imperdiet. Duis sagittis ipsum. Praesent mauris. Fusce nec tellus sed augue semper porta. Mauris massa. Vestibulum lacinia arcu eget nulla. </p>
<p>Class aptent taciti sociosqu ad litora torquent per conubia nostra, per inceptos himenaeos. Curabitur sodales ligula in libero. Sed dignissim lacinia nunc. Curabitur tortor. Pellentesque nibh. Aenean quam. In scelerisque sem at dolor. Maecenas mattis. Sed convallis tristique sem. Proin ut ligula vel nunc egestas porttitor. Morbi lectus risus, iaculis vel, suscipit quis, luctus non, massa. Fusce ac turpis quis ligula lacinia aliquet. Mauris ipsum. Nulla metus metus, ullamcorper vel, tincidunt sed, euismod in, nibh. </p>
</div>
```

## CSS

```
.sidebar {
  /* `display:table;` shrink-wraps the column */
  display:table;
  float:left;
  background-color:blue;
}

.content {
  /* `overflow:hidden;` prevents `.content` from flowing under `.sidebar` */
  overflow:hidden;
  background-color:yellow;
}
```

### clear

- -
- left -
- -
- -
- initial -
- inherit -

```
<html>
<head>
<style>
img {
  float: left;
}

p.clear {
  clear: both;
}
</style>
</head>
<body>


<p>Lorem ipsum Lorem ipsum Lorem ipsum Lorem ipsum Lorem ipsum Lorem ipsum Lorem ipsum
Lorem ipsum Lorem ipsum Lorem ipsum Lorem ipsum Lorem ipsum </p>
<p class="clear">Lorem ipsum Lorem ipsum Lorem ipsum Lorem ipsum Lorem ipsum Lorem ipsum
Lorem ipsum Lorem ipsum Lorem ipsum Lorem ipsum Lorem ipsum Lorem ipsum </p>

</body>
</html>
```

## Clearfix

clearfix hackN. Gallagher aka @necolas

`clear` `clearfix` ◦ `.cf.clearfix` ◦

3 [N.Gallaghermicrofix](#) TJ Koblentz clearfix

# Clearfix

```
.cf:after {
  content: "";
  display: table;
}

.cf:after {
  clear: both;
}
```

---

# Clearfix

```
/**
 * For modern browsers
 * 1. The space content is one way to avoid an Opera bug when the
 *    contenteditable attribute is included anywhere else in the document.
 *    Otherwise it causes space to appear at the top and bottom of elements
 *    that are clearfixed.
 * 2. The use of `table` rather than `block` is only necessary if using
 *    `:before` to contain the top-margins of child elements.
 */
.cf:before,
.cf:after {
  content: " "; /* 1 */
  display: table; /* 2 */
}

.cf:after {
  clear: both;
}
```

---

# ClearfixIE6IE7

```
.cf:before,
.cf:after {
  content: " ";
  display: table;
}

.cf:after {
  clear: both;
}

/**
 * For IE 6/7 only
 * Include this rule to trigger hasLayout and contain floats.
 */
.cf {
  *zoom: 1;
}
```



clearfix clearfixBFC - hasLayoutIE67

## floatDIV

div

```
<div>
  <p>This is DIV 1</p>
</div>
<div>
  <p>This is DIV 2</p>
</div>
```

This is DIV 1

This is DIV 2

divfloat CSS

HTML

```
<div class="outer-div">
  <div class="inner-div1">
    <p>This is DIV 1</p>
  </div>
  <div class="inner-div2">
    <p>This is DIV 2</p>
  </div>
</div>
```

## CSS

```
.inner-div1 {
  width: 50%;
  margin-right:0px;
  float:left;
  background : #337ab7;
  padding:50px 0px;
}

.inner-div2 {
  width: 50%;
  margin-right:0px;
  float:left;
  background : #dd2c00;
  padding:50px 0px;
}

p {
  text-align:center;
}
```

This is DIV 1

## Codepen

overflowhidden autoscroll◦

overflow:scrolloverflow:scroll

<https://riptutorial.com/zh-TW/css/topic/405/>

# 44:

- `table-layout auto` |;
- `border-collapse` |;
- `border-spacing<length> | <length> <length>`;
- |;
- `top` |;

`display: table` `display: inline-table` `<table>` \*HTML

\* `<table>` UA / `display: table`

HTML。 。 CSS。

## Examples

`table-layout` `table-layout`

`width: 150px`

First name	Last name	Homeworld
Luke	Skywalker	Tatooine
Leia	Organa	Alderaan

First name	Last name	Homeworld
Luke	Skywalker	Tatooine
Leia	Organa	Alderaan

`table-layout: auto` `table-layout: fixed` `table-layout: fixed`。 210px 150px。 150px。

First name	Last name	Homeworld
Luke	Skywalker	Tatooine
Leia	Organa	Alderaan

`border-collapse`

`border-collapse`

First name	Last name	Homeworld
Luke	Skywalker	Tatooine
Leia	Organa	Alderaan

First name	Last name	Homeworld
Luke	Skywalker	Tatooine
Leia	Organa	Alderaan

`border-collapse: separate` `border-collapse: collapse`

First name	Last name	Homeworld
Luke	Skywalker	Tatooine
Leia	Organa	Alderaan

	o

border-spacing: border-collapse separate

border-spacing

First name	Last name	Homeworld
Luke	Skywalker	Tatooine
Leia	Organa	Alderaan

border-spacing: 2px border-spacing: 8px

<>	o
<length> <length>	o

empty-cells: border-collapse separate

empty-cells

First name	Last name	Homeworld
Luke		Tatooine
Leia	Organa	

empty-cells: showempty-cells: hide

	o o
	o

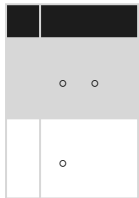
- <https://www.w3.org/TR/CSS21/tables.html#empty-cells>
- <https://developer.mozilla.org/en-US/docs/Web/CSS/empty-cells>
- <http://codepen.io/SitePoint/pen/yfhtq>
- <https://css-tricks.com/almanac/properties/e/empty-cells/>

caption-side<caption>

caption-side

Star Wars figures		
First name	Last name	Homeworld
Luke	Skywalker	Tatooine
Leia	Organa	Alderaan

caption-side: topcaption-side: bottom ◦



<https://riptutorial.com/zh-TW/css/topic/1074/>

# 45:

CSS。 HTML。 ◦

Meyer。 Web。 Normalize。 ◦

## Examples

### normalize.css

CSS。 ◦ ◦

◦

[normalize.css](#)。 ◦

- CSS。◦
- ◦
- ◦
- ◦
- ◦

normalize.css◦

### reset.css

reset.css ◦

normalize.cssreset.css◦ ◦

CSS。 Eric MeyerCSS。 ◦ v2.0 | 20110126CSS◦

```
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;
}
```

## Eric MeyerCSS

### CSS。 v4.2.0。

```
/**
 * 1. Change the default font family in all browsers (opinionated).
 * 2. Correct the line height in all browsers.
 * 3. Prevent adjustments of font size after orientation changes in IE and iOS.
 */

/* Document
   ===== */

html {
  font-family: sans-serif; /* 1 */
  line-height: 1.15; /* 2 */
  -ms-text-size-adjust: 100%; /* 3 */
  -webkit-text-size-adjust: 100%; /* 3 */
}

/* Sections
   ===== */

/**
 * Remove the margin in all browsers (opinionated).
 */

body {
  margin: 0;
}

/**
 * Add the correct display in IE 9-.
 */

article,
aside,
footer,
header,
nav,
section {
  display: block;
}

/**
 * Correct the font size and margin on `h1` elements within `section` and
 * `article` contexts in Chrome, Firefox, and Safari.
 */

h1 {
  font-size: 2em;
  margin: 0.67em 0;
}
```



CSS

<https://riptutorial.com/zh-TW/css/topic/1211/>

---

## 46:

- counter-set[<counter-name> <integer> ] + |
- counter-reset[<counter-name> <integer> ] + |
- [<counter-name> <integer> ] + |
- counter<counter-name> [<counter-style>]
- <counter-name><connector-string> [<counter-style>]

```
◦ ◦  
counter-set counter-resetcounter-increment ◦  
3counter-*◦ counter-increment ◦ ◦  
◦ list-style-type◦ none◦  
“2.1.1”“◦ ”◦
```

CSS◦ CSS Level 21◦

IE6IE7CSS◦

## Examples

---

## CSS

```
body {  
  counter-reset: item-counter;  
}  
  
.item {  
  counter-increment: item-counter;  
}  
  
.item:before {  
  content: counter(item-counter, upper-roman) ". "; /* by specifying the upper-roman as style  
the output would be in roman numbers */  
}
```

---

## HTML

```
<div class='item'>Item No: 1</div>
<div class='item'>Item No: 2</div>
<div class='item'>Item No: 3</div>
```

IIII1,2,3。

## CSS Counter

# CSS

```
body {
  counter-reset: item-counter; /* create the counter */
}
.item {
  counter-increment: item-counter; /* increment the counter every time an element with class
"item" is encountered */
}
.item-header:before {
  content: counter(item-counter) ". "; /* print the value of the counter before the header and
append a "." to it */
}

/* just for demo */

.item {
  border: 1px solid;
  height: 100px;
  margin-bottom: 10px;
}
.item-header {
  border-bottom: 1px solid;
  height: 40px;
  line-height: 40px;
  padding: 5px;
}
.item-content {
  padding: 8px;
}
```

# HTML

```
<div class='item'>
  <div class='item-header'>Item 1 Header</div>
  <div class='item-content'>Lorem Ipsum Dolor Sit Amet....</div>
</div>
<div class='item'>
  <div class='item-header'>Item 2 Header</div>
  <div class='item-content'>Lorem Ipsum Dolor Sit Amet....</div>
</div>
<div class='item'>
  <div class='item-header'>Item 3 Header</div>
  <div class='item-content'>Lorem Ipsum Dolor Sit Amet....</div>
</div>
```

“item”.item-headercontent:before pseudo ◦ ◦

## CSS

# CSS

```
ul {
  list-style: none;
  counter-reset: list-item-number; /* self nesting counter as name is same for all levels */
}
li {
  counter-increment: list-item-number;
}
li:before {
  content: counters(list-item-number, ".") " "; /* usage of counters() function means value of
counters at all higher levels are combined before printing */
}
```

## HTML

```
<ul>
  <li>Level 1
    <ul>
      <li>Level 1.1
        <ul>
          <li>Level 1.1.1</li>
        </ul>
      </li>
    </ul>
  </li>
  <li>Level 2
    <ul>
      <li>Level 2.1
        <ul>
          <li>Level 2.1.1</li>
          <li>Level 2.1.2</li>
        </ul>
      </li>
    </ul>
  </li>
  <li>Level 3</li>
</ul>
```

CSS ◦ ◦ ◦ ullist-item-numberlist-item-number li list-item-number[1] list-item-number[0] ◦ ◦

counters() counter() counters() ◦

<https://riptutorial.com/zh-TW/css/topic/2575/>

---

## 47:

- `/**/`
- `CSS/**/`
- 

## Examples

```
/* This is a CSS comment */  
div {  
  color: red; /* This is a CSS comment */  
}
```

```
/*  
  This  
  is  
  a  
  CSS  
  comment  
*/  
div {  
  color: red;  
}
```

<https://riptutorial.com/zh-TW/css/topic/1625/>

# 48:

- [transition-property] [transition-duration] [transition-timing-function] [transition-delay];

all CSS ◦	
s ms ◦	
◦ ease ease-in ease-out ease-in-out linear cubic-bezier() steps() ◦ <a href="#">W3C</a> ◦	
s ms	

transition

- -webkit Chrome 25-Safari 6-SafariChrome for iOS 6.1-Android 4.3-Blackberry7-UC9.9-Android ◦
- -moz Firefox 15-◦
- -o Opera 11.5-Opera Mobile 12-◦

```
-webkit-transition: all 1s;  
-moz-transition: all 1s;  
-o-transition: all 1s;  
transition: all 1s;
```

## Examples

### CSS

```
div{  
  width: 150px;  
  height:150px;  
  background-color: red;  
  transition: background-color 1s;  
}  
div:hover{  
  background-color: green;  
}
```

### HTML

```
<div></div>
```

div1 ◦

# CSS

```
div {
  height: 100px;
  width: 100px;
  border: 1px solid;
  transition-property: height, width;
  transition-duration: 1s, 500ms;
  transition-timing-function: linear;
  transition-delay: 0s, 1s;
}
div:hover {
  height: 200px;
  width: 200px;
}
```

## HTML

```
<div></div>
```

- **transition-property** CSS。 div。
- **transition-duration** 。 1500。
- **transition-timing-function** 。 。
- **transition-delay** 。 1。

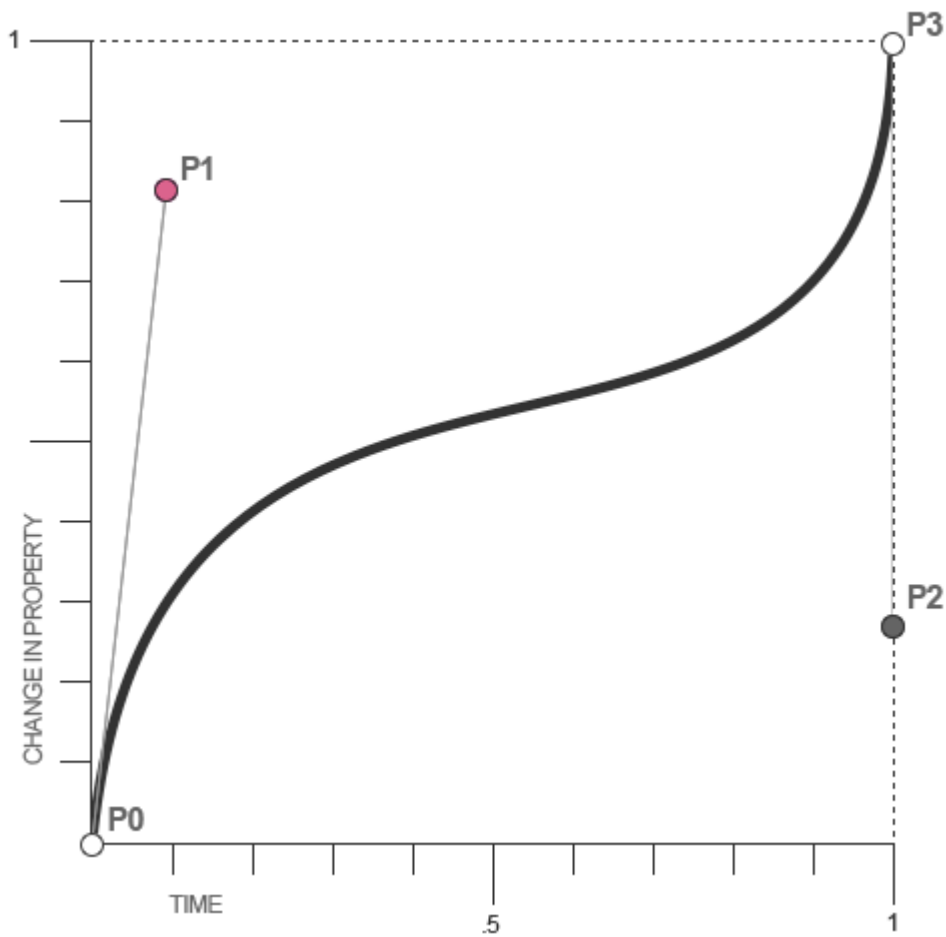
cubic-bezier。

```
transition-timing-function: cubic-bezier(0.1, 0.7, 1.0, 0.1);
```

cubic-bezier(P1\_x, P1\_y, P2\_x, P2\_y)

The diagram shows the text `cubic-bezier(x, y, x, y)` with annotations. A blue bracket above the first `x` and `y` is labeled  $P_1$ . A red bracket below the second `x` and `y` is labeled  $P_2$ .

Bézier



CSS Bézier Curves P0P3. P0,0P31,101.

linear

cubic-bezier CSS cubic-bezier

linear cubic-bezier(0,0,1,1)

ease-in cubic-bezier(0.42, 0.0, 1.0, 1.0)

ease-out cubic-bezier(0.0, 0.0, 0.58, 1.0)

ease-in-out cubic-bezier(0.42, 0.0, 0.58, 1.0)

<https://riptutorial.com/zh-TW/css/topic/751/>



# 49:

- filternone
- filterinitialnone;
- filterinherit;
- px
- |
- |
- filterdrop-shadowhorizontal-shadow-px vertical-shadow-px shadow-blur-px shadow- - spread color
- filtergreyscalenumber |
- hue-rotatedeg
- filterinvertnumber |
- |
- |
- filtersepianumber |

x	x°
x	1.0100° °
x	1.0100° °
hvxzy	° hv° xzy°
x	1.0100°
x	°
x	1.0100°
x	/1.0100°
x	1.0100° °
x	1.0100°

1. -webkit° °
2. ° °
3. box-shadowfilter: drop-shadow() ° opacityfilter: opacity() °
4. Javascript / jQuery° Javascriptobject.style.WebkitFilter °
- 5.

6. W3Schools .

## Examples

### HTML

```
<p>My shadow always follows me.</p>
```

### CSS

```
p {  
  -webkit-filter: drop-shadow(10px 10px 1px green);  
  filter: drop-shadow(10px 10px 1px green);  
}
```

My shadow always follows me.  
*My shadow always follows me.*

.

### HTML

```
<img src='donald-duck.png' alt='Donald Duck' title='Donald Duck' />
```

### CSS

```
img {  
  -webkit-filter: brightness(200%) grayscale(100%) sepia(100%) invert(100%);  
  filter: brightness(200%) grayscale(100%) sepia(100%) invert(100%);  
}
```



### Hue

## HTML

```
<img src='donald-duck.png' alt='Donald Duck' title='Donald Duck' />
```

## CSS

```
img {  
  -webkit-filter: hue-rotate(120deg);  
  filter: hue-rotate(120deg);  
}
```

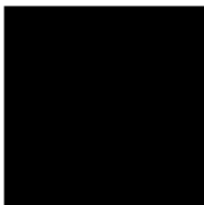


## HTML

```
<div></div>
```

## CSS

```
div {  
  width: 100px;  
  height: 100px;  
  background-color: white;  
  -webkit-filter: invert(100%);  
  filter: invert(100%);  
}
```



o

## HTML

```
<img src='donald-duck.png' alt='Donald Duck' title='Donald Duck' />
```

## CSS

```
img {  
  -webkit-filter: blur(1px);  
  filter: blur(1px);  
}
```



o

<https://riptutorial.com/zh-TW/css/topic/1567/>

# 50:

CSSHTMLCSS。 CSSHTML。 CSS50ID。

- #id
- ◦
- ◦
- :: pseudo-elementname
- [ attr ] / \*attr。 \* /
- [ attr=" value " ] / \*attr" value "。 \* /
- [ attr ~ =" value " ] / \*attr" value "。 \* /
- [ attr | =" value " ] / \*attr" value " " value - "。 \* /
- [ attr ^ =" value " ] / \*attr" value "。 \* /
- [ attr \$ =" value " ] / \*attr" value "。 \* /
- [ attr \* =" value " ] / \*attr" value "。 \* /
- ◦
- \*
- :: :◦ ◦
- Internet Explorer 8 :◦
- [W3C](#) ◦

## Examples

◦ ◦

1		.....	CSS
[attr]	<div attr>	attr	2
[attr='val']	<div attr="val">	attrval	2
[attr~='val']	<div attr="val val2 val3">	val attr	2
[attr^='val']	<div attr="val1 val2">	attrval	3
[attr\$='val']	<div attr="sth aval">	attrval	3
[attr*='val']	<div attr="somevalhere">	attrval	3
[attr ='val']	<div attr="val-sth etc">	attrval val - U + 002D	2

1		.....	CSS
[attr='val' i]	<div attr="val">	attrval val°	4 2

1. ° CSS°

2. CSS4° “4”° °

#### [attribute]

°

```
div[data-color] {
  color: red;
}
```

```
<div data-color="red">This will be red</div>
<div data-color="green">This will be red</div>
<div data-background="red">This will NOT be red</div>
```

#### JSBin

#### [attribute="value"]

°

```
div[data-color="red"] {
  color: red;
}
```

```
<div data-color="red">This will be red</div>
<div data-color="green">This will NOT be red</div>
<div data-color="blue">This will NOT be red</div>
```

#### JSBin

#### [attribute\*="value"]

°

```
[class*="foo"] {
  color: red;
}
```

```
<div class="foo-123">This will be red</div>
<div class="foo123">This will be red</div>
<div class="bar123foo">This will be red</div>
<div class="barfoo123">This will be red</div>
```

```
<div class="barfo0">This will NOT be red</div>
```

## JSBin

**[attribute~="value"]**

◦

```
[class~="color-red"] {  
  color: red;  
}
```

```
<div class="color-red foo-bar the-div">This will be red</div>  
<div class="color-blue foo-bar the-div">This will NOT be red</div>
```

## JSBin

**[attribute^="value"]**

◦

```
[class^="foo-"] {  
  color: red;  
}
```

```
<div class="foo-123">This will be red</div>  
<div class="foo-234">This will be red</div>  
<div class="bar-123">This will NOT be red</div>
```

## JSBin

**[attribute\$="value"]**

◦

```
[class$="file"] {  
  color: red;  
}
```

```
<div class="foobar-file">This will be red</div>  
<div class="foobar-file">This will be red</div>  
<div class="foobar-input">This will NOT be red</div>
```

## JSBin

**[attribute|="value"]**

- U + 002D

```
[lang|="EN"] {
```

```
color: red;
}
```

```
<div lang="EN-us">This will be red</div>
<div lang="EN-gb">This will be red</div>
<div lang="PT-pt">This will NOT be red</div>
```

## JSBin

[attribute="value" i]

Value VALUE vAlUe°

```
[lang="EN" i] {
  color: red;
}
```

```
<div lang="EN">This will be red</div>
<div lang="en">This will be red</div>
<div lang="PT">This will NOT be red</div>
```

## JSBin

0-1-0

°

```
*[type=checkbox] // 0-1-0
```

IDID [id="my-ID"]#my-ID° #my-ID°

°

div span	<span> S<div>
div > span	<span> S<div>
a ~ span	<b>General Sibling</b> <span> S<a>
a + span	<span> S<a>

° CSS° order °

**selector selector**



◦ ◦

```
div p {  
  color:red;  
}
```

```
<div>  
  <p>My text is red</p>  
  <section>  
    <p>My text is red</p>  
  </section>  
</div>  
  
<p>My text is not red</p>
```

## JSBin

<p><div>◦

---

**selector > selector selector > selector**

> ◦

```
div > p {  
  color:red;  
}
```

```
<div>  
  <p>My text is red</p>  
  <section>  
    <p>My text is not red</p>  
  </section>  
</div>
```

## JSBin

**CSS**<p><div>◦

<p><div>◦

---

**selector + selector**

+ ◦

```
p + p {  
  color:red;  
}
```

```
<p>My text is not red</p>
<p>My text is red</p>
<p>My text is red</p>
<hr>
<p>My text is not red</p>
```

## JSBin

<p> <p>◦

---

# General Sibling Combinator selector ~ selector

~ ◦

```
p ~ p {
  color:red;
}
```

```
<p>My text is not red</p>
<p>My text is red</p>
<hr>
<h1>And now a title</h1>
<p>My text is red</p>
```

## JSBin

<p><p>◦

◦ .warning<div>

```
<div class="warning">
  <p>This would be some warning copy.</p>
</div>
```

◦ ◦

## CSS

```
.important {
  color: orange;
}
.warning {
  color: blue;
}
.warning.important {
  color: red;
}
```

## HTML

```

<div class="warning">
  <p>This would be some warning copy.</p>
</div>

<div class="important warning">
  <p class="important">This is some really important warning copy.</p>
</div>

```

.warning.important.important.warning°

CSS .warning.important° classwarningimportant° °

CSS.warning.important°

## ID

IDIDDOM° CSSID#°

HTML div.....

```

<div id="exampleID">
  <p>Example</p>
</div>

```

..CSS#exampleID

```

#exampleID {
  width: 20px;
}

```

## HTMLID

° [lang](#)° :visited :hover :hover :checked°

```

selector:pseudo-class {
  property: value;
}

```

<a href="#">:active</a>	°
<a href="#">:any</a>	° °
<a href="#">:target</a>	#newsURL
<a href="#">:checked</a>	“”°
<a href="#">:default</a>	

	◦
<code>:disabled</code>	UI◦
<code>:empty</code>	◦
<code>:enabled</code>	UI◦
<code>:first</code>	@page <b>a</b> ◦
<code>:first-child</code>	◦
<code>:first-of-type</code>	◦ ◦
<code>:focus</code>	◦ ◦
<code>:focus-within</code>	◦ <b>focus</b> ◦
<code>:full-screen</code>	◦ ◦
<code>:hover</code>	◦
<code>:indeterminate</code>	UI ◦ DOM◦
<code>:in-range</code>	:in-range <b>CSS</b> value◦ ◦
<code>:invalid</code>	<input> type=type= ◦
<code>:lang</code>	<body> lang=◦ ◦
<code>:last-child</code>	◦
<code>:last-of-type</code>	◦ ◦

<code>:left</code>	@page ◦
<code>:link</code>	◦
<code>:not()</code>	:not(p) :not(.class-name) ◦ ◦ :not ◦
<code>:nth-child</code>	nn n+3 oddeven ◦
<code>:nth-of-type</code>	n n n+3 oddeven ◦
<code>:only-child</code>	:only-child <b>CSS</b> ◦ :first-child:last-child:nth-child(1):nth-last-child(1) ◦
<code>:optional</code>	:optional <b>CSS</b> ◦ ◦
<code>:out-of-range</code>	:out-of-range :out-of-range <b>CSS</b> <b>value</b> ◦ ◦ ◦
<code>:placeholder-shown</code>	◦ ◦
<code>:read-only</code>	◦
<code>:read-write</code>	<input> ◦
<code>:right</code>	@page <b>a</b> ◦
<code>:root</code>	◦
<code>:scope</code>	<b>CSS</b> ◦
<code>:target</code>	#newsURL

```
:visited
```

:visited

*	
div	<div>
.blue	blue
.blue.red	blue red
#headline	ID"ID"headline
:pseudo-class	
::pseudo-element	
:lang(en)	lang<span lang="en">
div > p	

ID. IDHTML

### CSS3

### HTML

```
<input type="range"></input>
```

### CSS

input[type=range]:-webkit-slider-thumb, input[type=range]:-moz-range-thumb, input[type=range]:-ms-thumb
input[type=range]:-webkit-slider-runnable-track, input[type=range]:-moz-range-track, input[type=range]:-ms-track
input[type=range]:focus
input[type=range]:-moz-range-progress, input[type=range]:-ms-fill-lower WebKit - JS

### JavaScript



idhidden

```
<input type="checkbox" id="sidebarShown" hidden />
<input type="checkbox" id="darkThemeUsed" hidden />
```

```
<!-- here begins actual content, for example: -->
<div id="container">
  <div id="sidebar">
    <!-- Menu, Search, ... -->
  </div>

  <!-- Some more content ... -->
</div>

<div id="footer">
  <!-- ... -->
</div>
```

---

forlabel

```
<label for="sidebarShown">Show/Hide the sidebar!</label>
```

---

## CSS

.color-red ◦ true / false

```
/* true: */
<checkbox>:checked ~ [sibling of checkbox & parent of target] <target>

/* false: */
<checkbox>:not(:checked) ~ [sibling of checkbox & parent of target] <target>
```

<checkbox> [sibling ...]<target>◦ [sibling ...]\*◦

## HTML

```
#sidebarShown:checked ~ #container #sidebar {
  margin-left: 300px;
}

#darkThemeUsed:checked ~ #container,
#darkThemeUsed:checked ~ #footer {
  background: #333;
}
```

---

◦

## CSS3

```
<style>
input:in-range {
  border: 1px solid blue;
}
```

```
</style>
```

```
<input type="number" min="10" max="20" value="15">  
<p>The border for this value will be blue</p>
```

value :in-range CSS。 ◦ [1]

“nth-child + bCSS+ b-1n” - MDNnth-child

	1	2	3	4	5	6	7	8	9	10
:first-child	✓									
:nth-child(3)			✓							
:nth-child(n+3)			✓	✓	✓	✓	✓	✓	✓	✓
:nth-child(3n)			✓			✓			✓	
:nth-child(3n+1)	✓			✓			✓			✓
:nth-child(-n+3)	✓	✓	✓							
:nth-child(odd)	✓		✓		✓		✓		✓	
:nth-child(even)		✓		✓		✓		✓		✓
:last-child										✓
:nth-last-child(3)								✓		

## IDID

IDID。

## HTML

```
<div id="element">...</div>
```

## CSS

```
#element { ... } /* High specificity will override many selectors */
```

```
[id="element"] { ... } /* Low specificity, can be overridden easily */
```

## B. - CSS



A.◦

HTML.example<input>

HTML

```
<form>
  Phone: <input type="tel" class="example">
  E-mail: <input type="email" disabled="disabled">
  Password: <input type="password">
</form>
```

CSS

```
input:not([disabled]):not(.example){
  background-color: #ccc;
}
```

:not()4

CSS

```
input:not([disabled], .example){
  background-color: #ccc;
}
```

JSBin

B. - CSS

HTML

```
<h3>Background is blue if the input is focused .</p>
<div>
  <input type="text">
</div>
```

CSS

```
div {
  height: 80px;
}
input{
  margin:30px;
}
div:focus-within {
  background-color: #1565C0;
}
```

```
div {
  height: 80px;
}
input{
  margin:30px;
}
div:focus-within {
  background-color: #1565C0;
}
```

Background is blue if the input is focused .



## # :focus-within CSS pseudo-class 📄 - UNOFF

The **:focus-within** pseudo-class matches elements that either themselves match **:focus** or that have descendants which match **:focus**.

Current aligned Usage relative Date relative Show all

IE	Edge *	Firefox	Chrome	Safari	Op
		52	49		
	14	53	58		4
11	15	54	59 <sup>1</sup>	10.1	4 <sup>1</sup>
	16	55	60	11	4 <sup>1</sup>
		56	61	TP	4 <sup>1</sup>
		57	62		

Notes Known issues (0) Resources (11) Feedback

<sup>1</sup> Can be enabled via the "Experimental Web Platform Features" flag

## only-child

:only-child CSS

## HTML

```
<div>
  <p>This paragraph is the only child of the div, it will have the color blue</p>
```

```
</div>

<div>
  <p>This paragraph is one of the two children of the div</p>
  <p>This paragraph is one of the two children of its parent</p>
</div>
```

## CSS

```
p:only-child {
  color: blue;
}
```

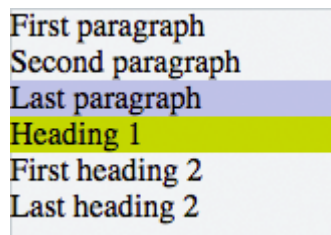
<p><div> ◦

## JSBin

:last-of-type ◦ **CSS**h1 ◦

```
p:last-of-type {
  background: #C5CAE9;
}
h1:last-of-type {
  background: #CDDC39;
}
```

```
<div class="container">
  <p>First paragraph</p>
  <p>Second paragraph</p>
  <p>Last paragraph</p>
  <h1>Heading 1</h1>
  <h2>First heading 2</h2>
  <h2>Last heading 2</h2>
</div>
```



First paragraph  
Second paragraph  
Last paragraph  
Heading 1  
First heading 2  
Last heading 2

[jsfiddle](#)

<https://riptutorial.com/zh-TW/css/topic/611/>

# 51:

- ;

## Examples

CSS ◦ ◦

font color text-align line-height ◦

```
#myContainer {  
  color: red;  
  padding: 5px;  
}
```

color: red<div><h3><p>◦ padding◦

```
<div id="myContainer">  
  <h3>Some header</h3>  
  <p>Some paragraph</p>  
</div>
```

- ◦ margin padding background display◦
- inherit◦ inherit **CSS HTML**◦

```
#myContainer {  
  color: red;  
  padding: 5px;  
}  
#myContainer p {  
  padding: inherit;  
}
```

color<h3><p>color: red ◦ <p>padding◦

```
<div id="myContainer">  
  <h3>Some header</h3>  
  <p>Some paragraph</p>  
</div>
```

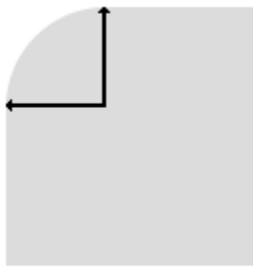
<https://riptutorial.com/zh-TW/css/topic/3586/>

---

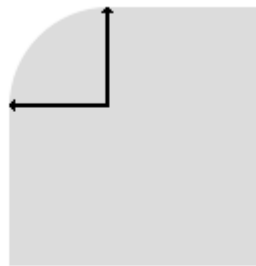
## 52:

- 
- borderborder-width border-style border-color ||;
- border-topborder-width border-style border-color ||;
- border-bottomborder-width border-style border-color ||;
- border-leftborder-width border-style border-color ||;
- border-rightborder-width border-style border-color ||;
- 
- border-style1-4 none ||| ||| ||| |||;
- 
- border-radius1-4| / 1-4| ||;
- border-top-left-radiuslength | [ ] ||;
- border-top-right-radiuslength | [ ] ||;
- border-bottom-left-radiuslength | [ ] ||;
- border-bottom-right-radiuslength | [ ] ||;
- 
- border-imageborder-image-source border-image-slice [border-image-width [border-image-outset]] border-image-repeat
- border-image-sourcenone |;
- border-image-slice1-4 number [[fill]]
- border-image-repeat1-2 stretch |||
- 
- border-collapse|||
- 
- 
- 
- 
-

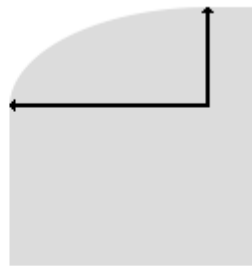




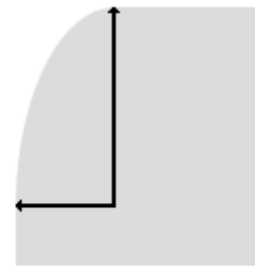
`border-top-left-radius: 50px;`



`border-top-left-radius: 50px 50px;`



`border-top-left-radius: 100px 50px;`



`border-top-left-radius: 50px 100px;`

。 “/” 。 。

```
border-radius: 10px 5% / 20px 25em 30px 35em;
```

10px。 5%。 '/'。

CSSshorthands。 18。

HTML

```
<div class='box'></div>
```

CSS

```
.box {  
  width: 250px;  
  height: 250px;  
  background-color: black;  
  border-radius: 10px;  
}
```

Border-radiusbox。 border-radius

```
.circle {  
  width: 200px;  
  height: 200px;  
  border-radius: 100px;  
}
```

border-radius50border-radius

```
.circle {  
  width: 150px;  
  height: 150px;  
  border-radius: 50%;  
}
```

widthheight。

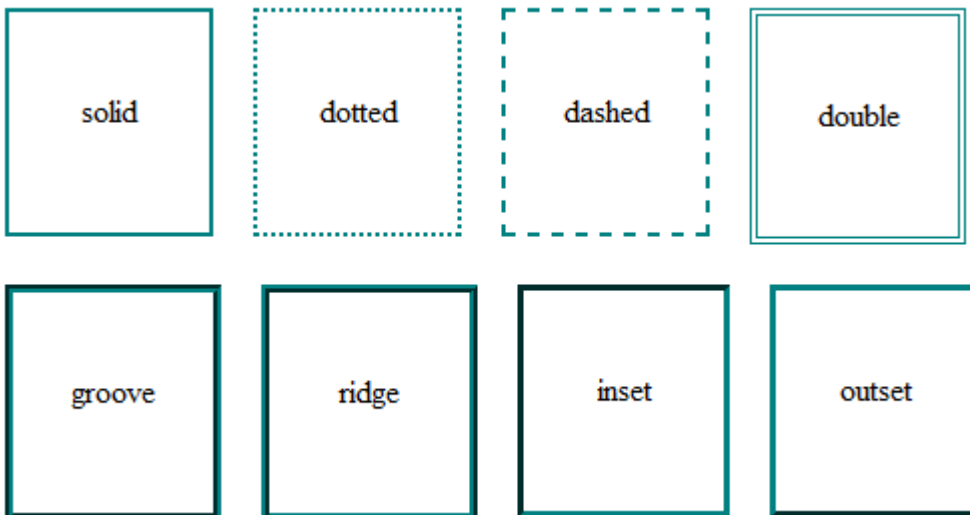
border-radius

```
-webkit-border-top-right-radius: 4px;
-webkit-border-bottom-right-radius: 4px;
-webkit-border-bottom-left-radius: 0;
-webkit-border-top-left-radius: 0;
-moz-border-radius-topright: 4px;
-moz-border-radius-bottomright: 4px;
-moz-border-radius-bottomleft: 0;
-moz-border-radius-topleft: 0;
border-top-right-radius: 4px;
border-bottom-right-radius: 4px;
border-bottom-left-radius: 0;
border-top-left-radius: 0;
```

border-style °

```
border-style: dotted;
```

```
border-style: dotted solid double dashed;
```



border-stylenonehidden ° <table>hidden ° <table> nonehidden °

border-width border-styleborder-color °

```
border-width: 1px;
border-style: solid;
border-color: #000;
```

```
border: 1px solid #000;
```

border-top border-left border-rightborder-bottom °

```
border-top: 2px double #aaaaaa;
```

border-image °



## border-image

- border-image-source
- border-image-slice
- border-image-repeat

## whereas border.png 90x90

```
border-image: url("border.png") 30 stretch;
```

930x30。 。 /30px。 。

## border- [||||]

border-[left|right|top|bottom]。

```
#element {
  border-left: 1px solid black;
}
```

border-collapse table **S**display: table inline-table HTML。

```
table {
  border-collapse: separate; /* default */
  border-spacing: 2px; /* Only works if border-collapse is separate */
}
```

## - border-collapse

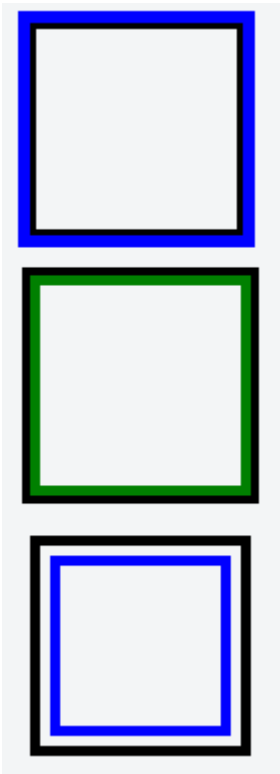
```
.div1{
  border: 3px solid black;
  outline: 6px solid blue;
  width: 100px;
  height: 100px;
  margin: 20px;
}
```

## box-shadow

```
.div2{
  border: 5px solid green;
  box-shadow: 0px 0px 0px 4px #000;
  width: 100px;
  height: 100px;
  margin: 20px;
}
```

```
.div3 {
  position: relative;
  border: 5px solid #000;
  width: 100px;
  height: 100px;
}
```

```
margin: 20px;
}
.div3:before {
  content: " ";
  position: absolute;
  border: 5px solid blue;
  z-index: -1;
  top: 5px;
  left: 5px;
  right: 5px;
  bottom: 5px;
}
```



<http://jsfiddle.net/MadalinaTn/bvqpcohm/2/>

## border-image

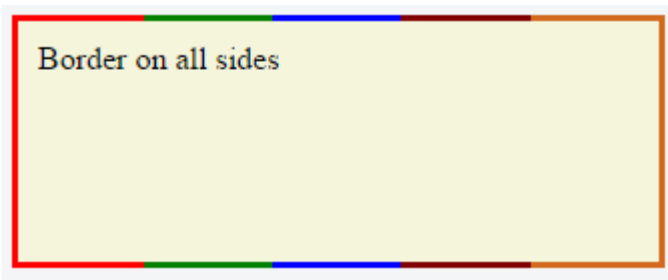
### CSS

```
.bordered {
  border-image: linear-gradient(to right, red 20%, green 20%, green 40%, blue 40%, blue 60%,
  maroon 60%, maroon 80%, chocolate 80%); /* gradient with required colors */
  border-image-slice: 1;
}
```

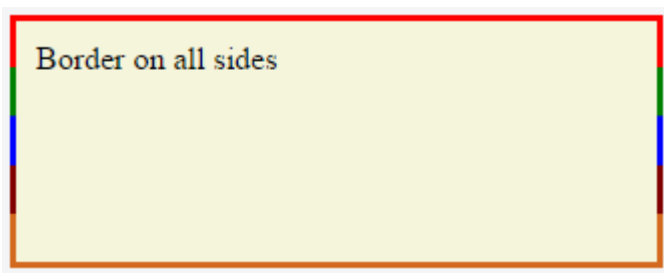
### HTML

```
<div class='bordered'>Border on all sides</div>
```

5. linear-gradient. border-image border-image-slice

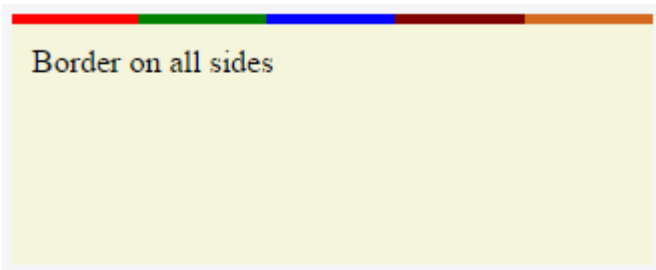


- 
- ◦ ◦
- to right ◦ to bottom ◦ to bottom 5



border-width border-width ◦

```
border-width: 5px 0px 0px 0px;
```



border-image border-radius ◦

'background-clip'.

<https://riptutorial.com/zh-TW/css/topic/2160/>

---

## 53:

- `<>` ;
- `<top> <leftright> <bottom>` ;
- `<> <>` ;
- `margin <top> <right> <bottom> <left>` ;
- `margin-top <top>` ;
- `margin-right <right>` ;
- `margin-bottom <bottom>` ;
- `margin-left <left>` ;



“”。

---

## Examples

CSS。

- `margin-left`
- `margin-right`
- `margin-top`
- `margin-bottom`

div30。

HTML

```
<div id="myDiv"></div>
```

CSS

```
#myDiv {  
  margin-left: 30px;  
  height: 40px;  
  width: 40px;  
  background-color: red;  
}
```





margin°

```
margin: <top> <right> <bottom> <left>;
```

div10px50px100px°

## HTML

```
<div id="myDiv"></div>
```

## CSS

```
#myDiv {
  margin: 0 10px 50px 100px;
  height: 40px;
  width: 40px;
  background-color: red;
}
```

° °

```
div{
  margin: 10px;
}
```

```
<div>
  some content
</div>
<div>
  some more content
</div>
```

10px° °

```
span{
  margin: 10px;
}
```

```
<span>some</span><span>content</span>
```

20px° °

```
.top{
  margin: 10px;
```

```

}
.bottom{
    margin: 15px;
}

```

```

<div class="top">
    some content
</div>
<div class="bottom">
    some more content
</div>

```

15px ◦ ◦

```

.outer-top{
    margin: 10px;
}
.inner-top{
    margin: 15px;
}
.outer-bottom{
    margin: 20px;
}
.inner-bottom{
    margin: 25px;
}

```

```

<div class="outer-top">
    <div class="inner-top">
        some content
    </div>
</div>
<div class="outer-bottom">
    <div class="inner-bottom">
        some more content
    </div>
</div>

```

25px ◦ ◦

```

div{
    border: 1px solid red;
}

```

59px.outer-top.outer-bottom ◦ ◦ 1px + 10px + 1px + 15px + 20px + 1px + 25px + 1px ◦  
1px.....

HTML

```

<h1>Title</h1>
<div>
    <p>Paragraph</p>
</div>

```

## CSS

```
h1 {
  margin: 0;
  background: #cff;
}
div {
  margin: 50px 0 0 0;
  background: #cfc;
}
p {
  margin: 25px 0 0 0;
  background: #cf9;
}
```

◦ h1 60px div 40px p 20px ◦ ◦

◦

## margin auto

```
#myDiv {
  width: 80%;
  margin: 0 auto;
}
```

margin 0 auto ◦

myDiv 80 20 ◦

$$100 - 80 / 2 = 10$$

```
p {
  margin: 1px; /* 1px margin in all directions */

  /* equals to: */

  margin: 1px 1px;

  /* equals to: */

  margin: 1px 1px 1px;

  /* equals to: */

  margin: 1px 1px 1px 1px;
}
```

```
p {
  margin: 10px 15px; /* 10px margin-top & bottom And 15px margin-right & left */

  /* equals to: */

  margin: 10px 15px 10px 15px;
}
```

```
/*equals to:*/  
  
margin:10px 15px 10px;  
/* margin left will be calculated from the margin right value (=15px) */  
}
```

## CSS。。

```
div{  
  display: inline;  
}  
  
#over{  
  margin-left: -20px;  
}  
  
<div>Base div</div>  
<div id="over">Overlapping div</div>
```

## 1

margin-leftmargin-right。

```
.parent {  
  width : 500px;  
  height: 300px;  
}  
  
.child {  
  width : 100px;  
  height: 100px;  
  margin-left: 10%; /* (parentWidth * 10/100) => 50px */  
}
```

margin-topmargin-bottom。。

```
.parent {  
  width : 500px;  
  height: 300px;  
}  
  
.child {  
  width : 100px;  
  height: 100px;  
  margin-left: 10%; /* (parentWidth * 10/100) => 50px */  
  margin-top: 20%; /* (parentWidth * 20/100) => 100px */  
}
```

<https://riptutorial.com/zh-TW/css/topic/305/>



# 54:

CSSpxempcin...

CSS. ◦

- 
- 1EM

EM	2em2
REM	font-size
VW	1*
VH	1*
VMIN	*1
VMAX	1*
	1= 96= 2.54
PX	1px = 1 / 96th of 1in
PT	1pt = 1/721in
	picas1pc = 12 pt
	x
CH	0
FR	CSS

- ◦ 0◦
- CSS◦

## Examples

rem

## CSS3 rem “root em”

em

- **em**
- **rem** root<html>

rem 16px

- 10px = 0.625rem
- 12px = 0.75rem
- 14px = 0.875rem
- 16px = 1rem
- 18px = 1.125rem
- 20px = 1.25rem
- 24px = 1.5rem
- 30px = 1.875rem
- 32px = 2rem

### 3

```
html {
  font-size: 16px;
}

h1 {
  font-size: 2rem;      /* 32px */
}

p {
  font-size: 1rem;     /* 16px */
}

li {
  font-size: 1.5em;    /* 24px */
}
```

## remsems

### 3

htmlfont-sizefont-sizefont-size

## HTML

```
<input type="button" value="Button">
<input type="range">
<input type="text" value="Text">
```

## CSS

```

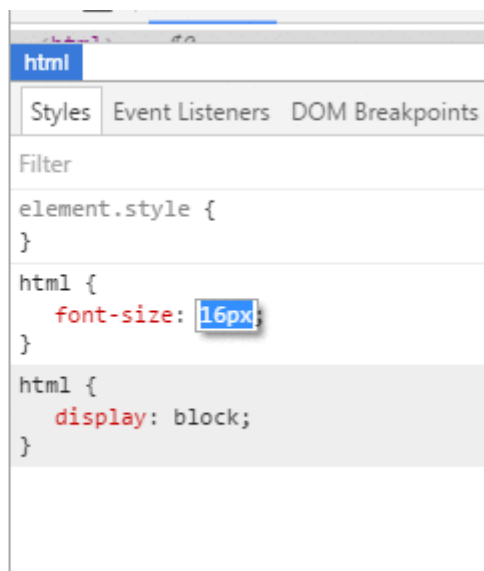
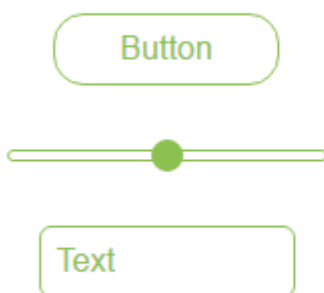
html {
  font-size: 16px;
}

input[type="button"] {
  font-size: 1rem;
  padding: 0.5em 2em;
}

input[type="range"] {
  font-size: 1rem;
  width: 10em;
}

input[type="text"] {
  font-size: 1rem;
  padding: 0.5em;
}

```



## vhvw

### CSS3

- vh viewport heightviewport height 1
- vw viewport widthviewport width 1

### 3

```

div {
  width: 20vw;
  height: 20vh;
}

```

### div20

### vminvmax

- vmin 1

- **vmax 1**

1 vmin 1 vh1 vw

1 vmax 1 vh1 vw

vmax

- Internet Explorer
- 6.1 Safari

◦

◦

\*=

**100px Child 50** ◦

**Child Parent 50 50px** ◦

## HTML

```
<div class="parent">
  PARENT
  <div class="child">
    CHILD
  </div>
</div>
```

## CSS

```
<style>

*{
  color: #CCC;
}

.parent{
  background-color: blue;
  width: 100px;
}

.child{
  background-color: green;
  width: 50%;
}

</style>
```

## OUTPUT



<https://riptutorial.com/zh-TW/css/topic/864/>

---

# 55: Flexbox

Flexible Box“flexbox”。 Flex。

- flex;
- flex-directionrow | row-reverse ||;
- flex-wrapnowrap ||;
- flex-flow<'flex-direction'> || <'>
- justify-contentflex-start | flex-end |||;
- align-itemsflex-start | flex-end |||;
- align-contentflex-start | flex-end |||;
- <>;
- flex-grow<number>; /\*0 \*/
- flex-shrink<number>; /\*1 \*/
- flex-basis<length> |; /\* \*/
- flexnone | [<'flex-grow'> <'flex-shrink'> || <'flex-basis'>]
- align-selfauto | flex-start | flex-end |||;

- 
- display-webkit-box; /\* Chrome <20 \*/
  - display-webkit-flex; /\* Chrome 20+ \*/
  - -moz-box; /\* Firefox \*/
  - display-ms-flexbox; /\* IE \*/
  - flex; /\* \*\* \*/

- 
- [Flexbox](#)
  - [Flexbox](#)
  - [Flexbox](#)
  - [Flexbox5](#)
  - [Flexbugs](#)

## Examples

◦ ◦ ◦

### HTML

```
<div class="header">
  <h2>Header</h2>
</div>

<div class="content">
  <h1>Content</h1>
  <p>Lorem ipsum dolor sit amet, consectetur adipiscing elit. Integer nec odio. Praesent libero. Sed cursus ante dapibus diam. Sed nisi. Nulla quis sem at nibh elementum imperdiet. Duis sagittis ipsum. Praesent mauris. Fusce nec tellus sed augue semper porta. Mauris massa.
```

```
Vestibulum lacinia arcu eget nulla. Class aptent taciti sociosqu ad litora torquent per  
conubia nostra, per inceptos himenaeos. Curabitur sodales ligula in libero. </p>  
</div>  
  
<div class="footer">  
  <h4>Footer</h4>  
</div>
```

## CSS

```
html, body {  
  height: 100%;  
}  
  
body {  
  display: flex;  
  flex-direction: column;  
}  
  
.content {  
  /* Include `0 auto` for best browser compatibility. */  
  flex: 1 0 auto;  
}  
  
.header, .footer {  
  background-color: grey;  
  color: white;  
  flex: none;  
}
```

## Flexbox

[Holy Grail3](#)。 [3sidenav](#)。 [CSS Flexbox](#)

## HTML

```
<div class="container">  
  <header class="header">Header</header>  
  <div class="content-body">  
    <main class="content">Content</main>  
    <nav class="sidenav">Nav</nav>  
    <aside class="ads">Ads</aside>  
  </div>  
  <footer class="footer">Footer</footer>  
</div>
```

## CSS

```
body {  
  margin: 0;  
  padding: 0;  
}  
  
.container {  
  display: flex;  
  flex-direction: column;
```

```

height: 100vh;
}

.header {
flex: 0 0 50px;
}

.content-body {
flex: 1 1 auto;

display: flex;
flex-direction: row;
}

.content-body .content {
flex: 1 1 auto;
overflow: auto;
}

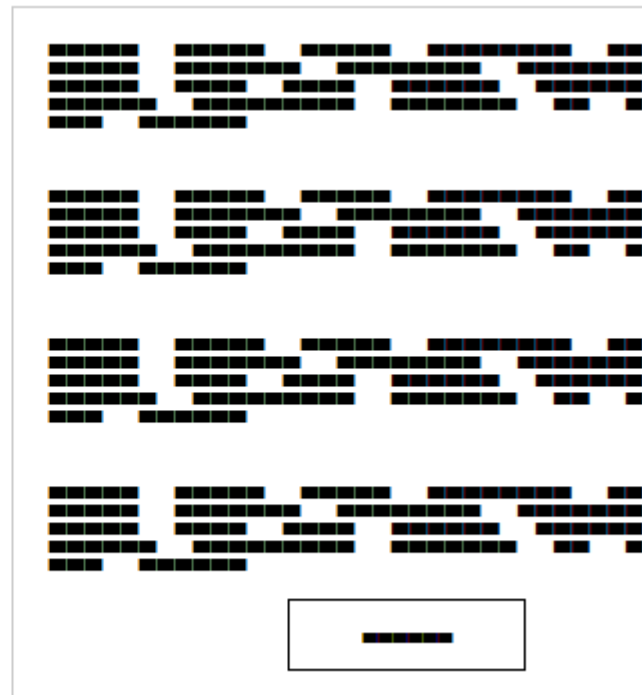
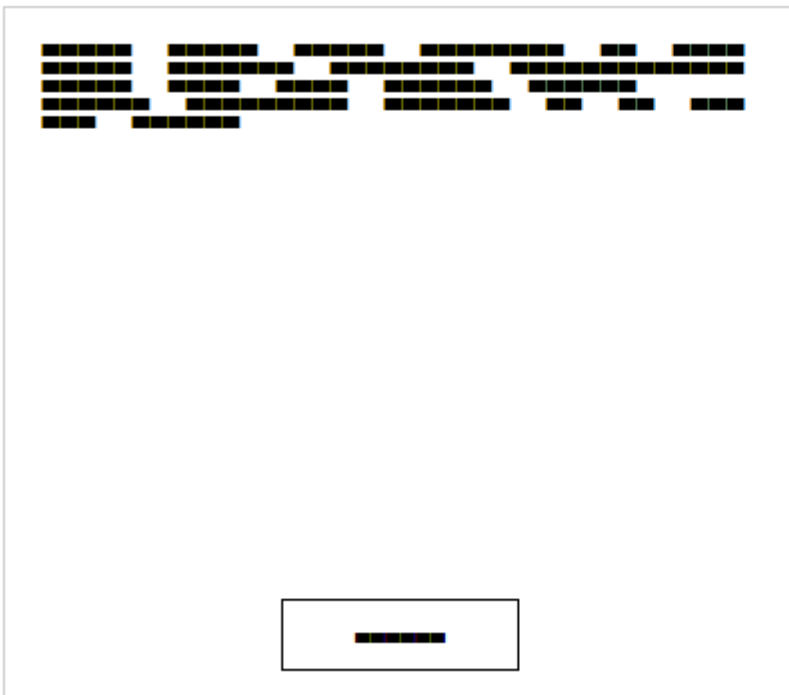
.content-body .sidenav {
order: -1;
flex: 0 0 100px;
overflow: auto;
}

.content-body .ads {
flex: 0 0 100px;
overflow: auto;
}

.footer {
flex: 0 0 50px;
}

```

## flexbox





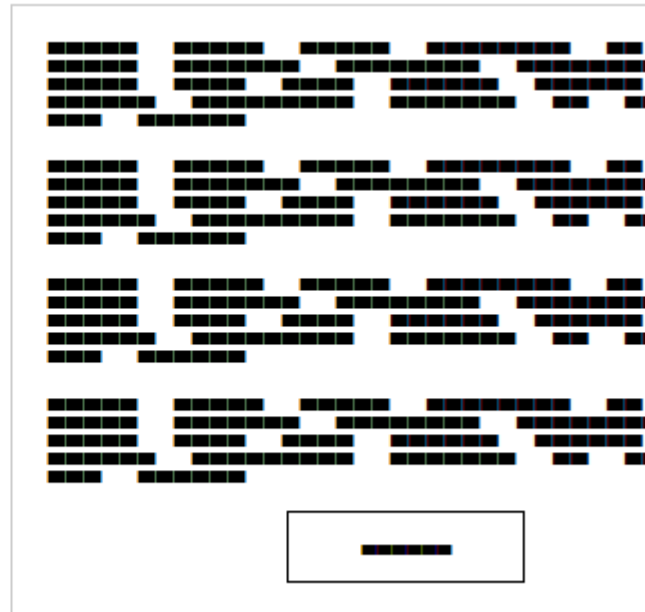
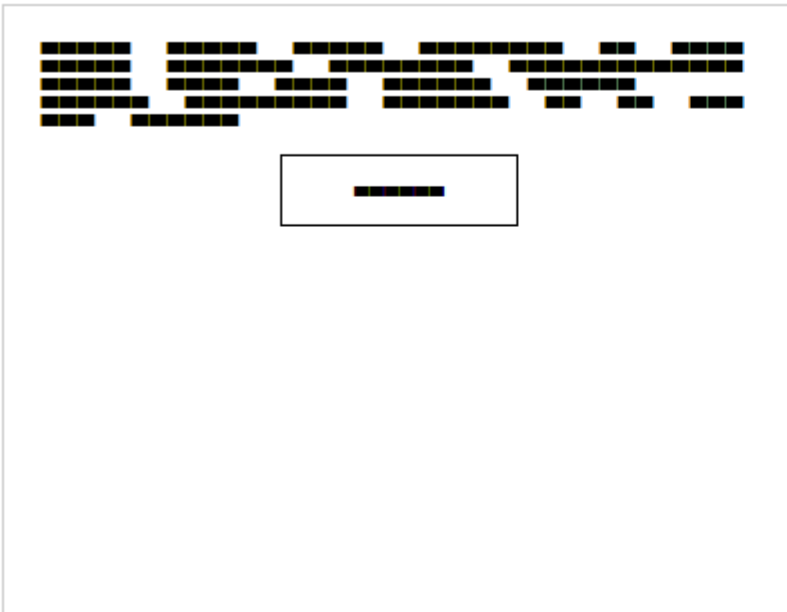
## HTML

```
<div class="cards">
  <div class="card">
    <p>Lorem ipsum Magna proident ex anim dolor ullamco pariatur reprehenderit culpa esse enim
mollit labore dolore voluptate ullamco et ut sed qui minim.</p>
    <p><button>Action</button></p>
  </div>
  <div class="card">
    <p>Lorem ipsum Magna proident ex anim dolor ullamco pariatur reprehenderit culpa esse enim
mollit labore dolore voluptate ullamco et ut sed qui minim.</p>
    <p>Lorem ipsum Magna proident ex anim dolor ullamco pariatur reprehenderit culpa esse enim
mollit labore dolore voluptate ullamco et ut sed qui minim.</p>
    <p>Lorem ipsum Magna proident ex anim dolor ullamco pariatur reprehenderit culpa esse enim
mollit labore dolore voluptate ullamco et ut sed qui minim.</p>
    <p>Lorem ipsum Magna proident ex anim dolor ullamco pariatur reprehenderit culpa esse enim
mollit labore dolore voluptate ullamco et ut sed qui minim.</p>
    <p><button>Action</button></p>
  </div>
</div>
```

**CSS** display: flex; ◦ 2

## CSS

```
.cards {
  display: flex;
}
.card {
  border: 1px solid #ccc;
  margin: 10px 10px;
  padding: 0 20px;
}
button {
  height: 40px;
  background: #fff;
  padding: 0 40px;
  border: 1px solid #000;
}
p:last-child {
  text-align: center;
}
```



display: flex; column-align: center; margin-top: auto; margin-bottom: auto; width: 100%;

## CSS

```
.cards {
  display: flex;
}
.card {
  border: 1px solid #ccc;
  margin: 10px 10px;
  padding: 0 20px;
  display: flex;
  flex-direction: column;
}
button {
  height: 40px;
  background: #fff;
  padding: 0 40px;
  border: 1px solid #000;
}
p:last-child {
  text-align: center;
  margin-top: auto;
}
```

## HTML

```
<div class="aligner">
  <div class="aligner-item">...</div>
</div>
```

## CSS

```

.aligner {
  display: flex;
  align-items: center;
  justify-content: center;
}

.aligner-item {
  max-width: 50%; /*for demo. Use actual width instead.*/
}

```

◦

align-items	center	flex-direction◦
justify-content	center	flex-direction◦ flex-direction: row <b>flexbox</b> flex-direction: column <b>flexbox</b>

```

<div id="container">
  <div></div>
  <div></div>
  <div></div>
</div>

```

#containerflex-box ◦

**justify-content: center flexbox**

## CSS

```

div#container {
  display: flex;
  flex-direction: row;
  justify-content: center;
}

```



◦

`justify-content: center` **flexbox**

## CSS

```
div#container {  
  display: flex;  
  flex-direction: column;  
  justify-content: center;  
}
```

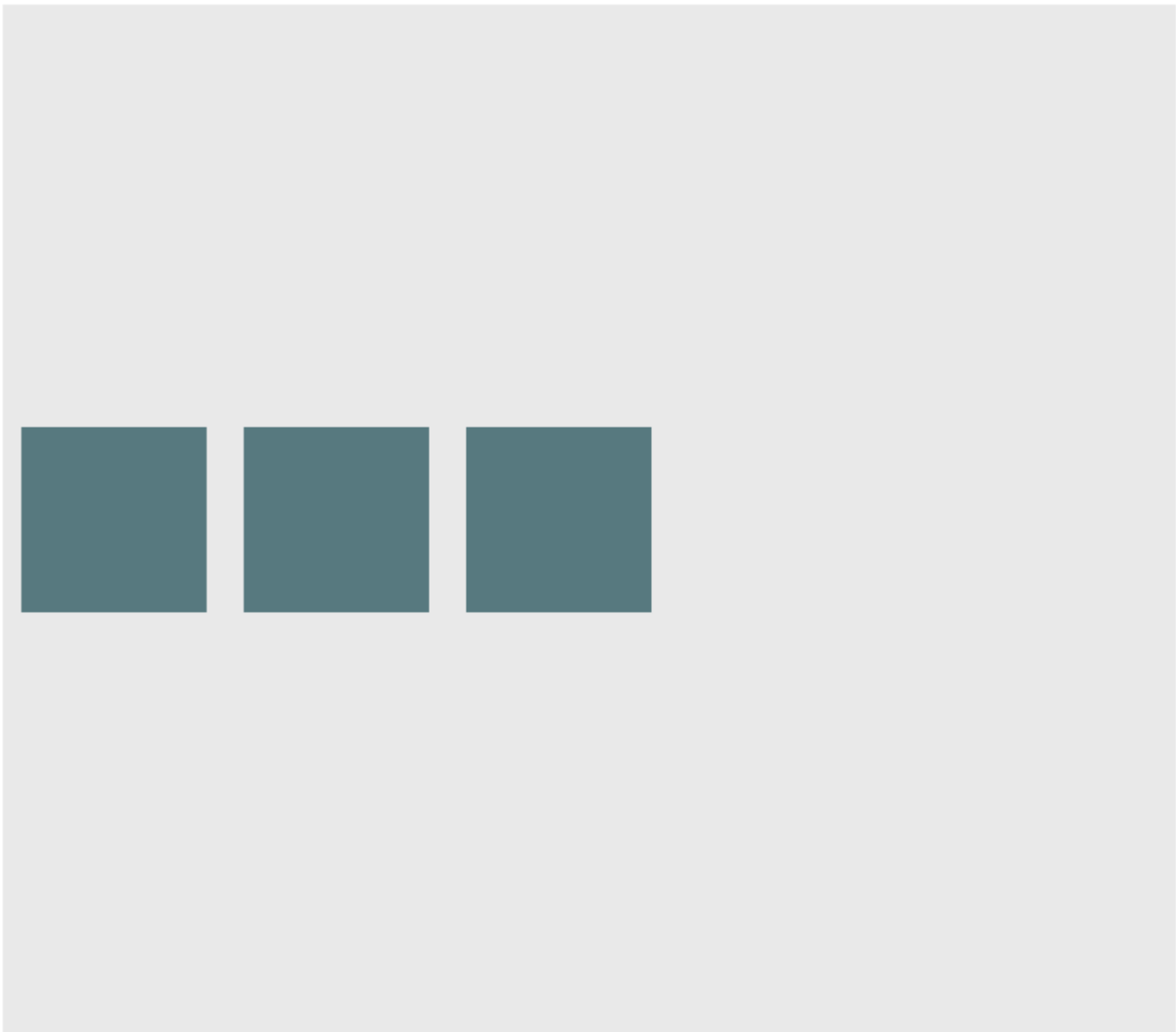


◦

`align-content: center` **flexbox**

## CSS

```
div#container {  
  display: flex;  
  flex-direction: row;  
  align-items: center;  
}
```



◦

`align-content: center` **flexbox**

## CSS

```
div#container {  
  display: flex;  
  flex-direction: column;  
  align-items: center;  
}
```



◦

## Flexbox

```
div#container {  
  display: flex;  
  flex-direction: row;  
  justify-content: center;  
  align-items: center;  
}
```



◦

## Flexbox

```
div#container {  
  display: flex;  
  flex-direction: column;  
  justify-content: center;  
  align-items: center;  
}
```





- 
- parent div ◦ <https://jsfiddle.net/3wwh7ewp/>

align-itemsstretch ◦

## HTML

```
<div class="container">
  <div style="background-color: red">
    Some <br />
    data <br />
    to make<br />
    a height <br />
  </div>
  <div style="background-color: blue">
    Fewer <br />
    lines <br />
  </div>
</div>
```

## CSS

```
.container {  
  display: flex;  
  align-items: stretch; // Default value  
}
```

## 10IE

### flexbox。

。

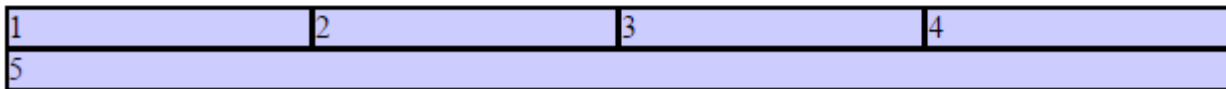
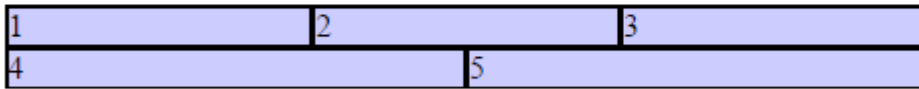
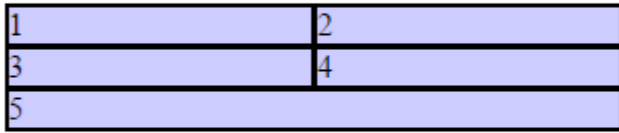
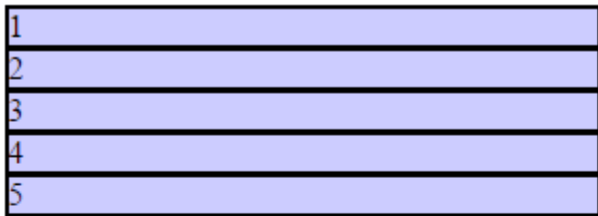
## HTML

```
<div class="flex-container">  
  <div class="flex-item">1</div>  
  <div class="flex-item">2</div>  
  <div class="flex-item">3</div>  
  <div class="flex-item">4</div>  
  <div class="flex-item">5</div>  
</div>
```

## CSS

```
.flex-container {  
  background-color: #000;  
  height: 100%;  
  display: flex;  
  flex-direction: row;  
  flex-wrap: wrap;  
  justify-content: flex-start;  
  align-content: stretch;  
  align-items: stretch;  
}  
  
.flex-item {  
  background-color: #ccf;  
  margin: 0.1em;  
  flex-grow: 1;  
  flex-shrink: 0;  
  flex-basis: 200px; /* or % could be used to ensure a specific layout */  
}
```

。



Flexbox <https://riptutorial.com/zh-TW/css/topic/445/-flexbox->

# 56:












- #rgb
- #rrggbb
- rgb [a]<><><> [<alpha>]
- colorhsl [a]<hue><><> [<alpha>]
- [colorkeyword](#) / \*.\* /






















## Examples






















◦ colorblue






















```
.some-class {  
  color: blue;  
}
```






















CSS - blue BlueBLUE#0000FF ◦

		RGB	
	F0F8FF	RGB240248255	
	FAEBD7	RGB250235215	
	00FFFF	RGB0,255,255	
	7FFFD4	RGB127255212	
	F0FFFF	RGB240255255	
	F5F5DC	RGB245245220	
	FFE4C4	RGB255228196	
	000000	RGB0,0,0	
	#FFEBCD	RGB255235205	
	0000FF	RGB0,0,255	
	8A2BE2	RGB138,43,226	






















		RGB	
	A52A2A	RGB165,42,42	
	DEB887	RGB222184135	
	5F9EA0	RGB95158160	
	7FFF00	RGB127,255,0	
	D2691E	RGB210,105,30	
	FF7F50	RGB255,127,80	
	6495ED	RGB100149237	
	FFF8DC	RGB255248220	
	DC143C	RGB220,20,60	
	00FFFF	RGB0,255,255	
	00008B	RGB0,0,139	
	008B8B	RGB0139139	
	B8860B	RGB184,134,11	
	A9A9A9	RGB169169169	
	A9A9A9	RGB169169169	
	006400	RGB0,100,0	
	BDB76B	RGB189183107	
	8B008B	RGB139,0,139	
	556B2F	RGB85,107,47	
	FF8C00	RGB255,140,0	
	9932CC	RGB153,50,204	






















		RGB	
	8B0000	RGB139,0,0	
	E9967A	RGB233150122	
	8FBC8F	RGB143188143	
	483D8B	RGB72,61,139	
	2F4F4F	RGB47,79,79	
DarkSlateGrey	2F4F4F	RGB47,79,79	
	00CED1	RGB0206209	
	9400D3	RGB148,0,211	
	FF1493	RGB255,20,147	
	00BFFF	RGB0191255	
	696969	RGB105105105	
DimGrey	696969	RGB105105105	
	1E90FF	RGB30144255	
	B22222	RGB178,34,34	
	FFFAF0	RGB255250240	
	228B22	RGB34,139,34	
	FF00FF	RGB255,0,255	
	#DCDCDC	RGB220220220	
GhostWhite	F8F8FF	RGB248248255	
	FFD700	RGB255,215,0	
	DAA520	RGB218,165,32	












		RGB	
	808080	RGB128,128,128	
	808080	RGB128,128,128	
	008000	RGB0,128,0	
	AFFF2F	RGB173,255,47	
	F0FFF0	RGB240255240	
	FF69B4	RGB255105180	
	CD5C5C	RGB205,92,92	
	4B0082	RGB75,0,130	
	FFFFF0	RGB255255240	
	F0E68C	RGB240230140	
	E6E6FA	RGB230230250	
	FFF0F5	RGB255240245	
	7CFC00	RGB124,252,0	
	#FFFACD	RGB255250205	
	ADD8E6	RGB173216230	
	F08080	RGB240128128	
	E0FFFF	RGB224255255	
	FAFAD2	RGB250250210	
	D3D3D3	RGB211211211	
	D3D3D3	RGB211211211	
	90EE90	RGB144238144	

		RGB	
	FFB6C1	RGB255182193	
	FFA07A	RGB255160122	
	20B2AA	RGB32178170	
	87CEFA	RGB135206250	
	778899	RGB119136153	
LightSlateGrey	778899	RGB119136153	
	B0C4DE	RGB176196222	
	FFFFE0	RGB255255224	
	00FF00	RGB0,255,0	
	32CD32	RGB50,205,50	
	FAF0E6	RGB250240230	
	FF00FF	RGB255,0,255	
	800000	RGB128,0,0	
	66CDAA	RGB102205170	
	0000CD	RGB0,0,205	
	BA55D3	RGB186,85,211	
	9370DB	RGB147112219	
	3CB371	RGB60179113	
	7B68EE	RGB123104238	
	00FA9A	RGB0250154	
	48D1CC	RGB72209204	



		RGB	
	C71585	RGB199,21,133	
	191970	RGB25,25,112	
	F5FFFA	RGB245255250	
	FFE4E1	RGB255228225	
	FFE4B5	RGB255228181	
	#FFDEAD	RGB255222173	
	000080	RGB0,0,128	
	FDF5E6	RGB253245230	
	808000	RGB128,128,0	
	6B8E23	RGB107,142,35	
	FFA500	RGB255,165,0	
	FF4500	RGB255,69,0	
	DA70D6	RGB218112214	
	EEE8AA	RGB238232170	
	98FB98	RGB152251152	
	#AFEEEE	RGB175238238	
	DB7093	RGB219112147	
	FFEFD5	RGB255239213	
	FFDAB9	RGB255218185	
	CD853F	RGB205,133,63	
	FFC0CB	RGB255192203	

		RGB	
	DDA0DD	RGB221160221	
	B0E0E6	RGB176224230	
	800080	RGB128,0,128	
RebeccaPurple	663399	RGB102,51,153	
	FF0000	RGB255,0,0	
	BC8F8F	RGB188143143	
	4169E1	RGB65105225	
SaddleBrown	8B4513	RGB139,69,19	
	FA8072	RGB250128114	
	F4A460	RGB244,164,96	
	2E8B57	RGB46,139,87	
	FFF5EE	RGB255245238	
	A0522D	RGB160,82,45	
	C0C0C0	RGB192,192,192	
	87CEEB	RGB135206235	
	6A5ACD	RGB106,90,205	
	708090	RGB112128144	
SlateGrey	708090	RGB112128144	
	#FFFAFA	RGB255250250	
	00FF7F	RGB0255127	
	4682B4	RGB70130180	

		RGB	
	D2B48C	RGB210180140	
	008080	RGB0,128,128	
	D8BFD8	RGB216191216	
	FF6347	RGB255,99,71	
	40E0D0	RGB64224208	
	EE82EE	RGB238130238	
	F5DEB3	RGB245222179	
	#FFFFFF	RGB255,255,255	
	F5F5F5	RGB245245245	
	FFFF00	RGB255,255,0	
	9ACD32	RGB154,205,50	

transparent rgba(0,0,0,0)

CSS: 00FF0255 / #3fc = #3FC = #33ffCC ◦ #369#336699 ◦ #306090 ◦

256 ^ 316,777,216 ◦

```
color: #rrggb;
color: #rgb
```

rr	00 - FF
gg	00 - FF
bb	00 - FF

```
.some-class {
  /* This is equivalent to using the color keyword 'blue' */
  color: #0000FF;
}
```

```
.also-blue {
  /* If you want to specify each range value with a single number, you can!
     This is equivalent to '#0000FF' (and 'blue') */
  color: #00F;
}
```

## W3C RGB

Internet

“ ”

“ ” #FFC125#ffc125

## rgb

RGB. RGB. 00-FF0-2550-100.

```
.some-class {
  /* Scalar RGB, equivalent to 'blue'*/
  color: rgb(0, 0, 255);
}

.also-blue {
  /* Percentile RGB values*/
  color: rgb(0%, 0%, 100%);
}
```

rgb(<red>, <green>, <blue>)

<red>	02550100
<green>	02550100
<blue>	02550100

## hsl

HSL “ ” “ ”

0°360°

```
p {
  color: hsl(240, 100%, 50%); /* Blue */
}
```

```
color: hsl(<hue>, <saturation>%, <lightness>%);
```

<hue>	0°60°120°180°240°300°360°
<saturation>	0100
<lightness>	0100

- 0;
- 0100;

## currentColor

currentColor

color:red currentColor:red

```
div {
  color: red;
  border: 5px solid currentColor;
  box-shadow: 0 0 5px currentColor;
}
```

currentColor border:currentColor

```
div {
  color: blue;
  border: 3px solid currentColor;
  color: green;
}
```

currentColor

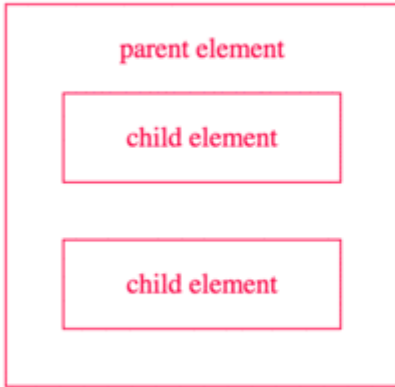
```
.parent-class {
  color: blue;
}

.parent-class .child-class {
  border-color: currentColor;
}
```

currentColor:background-color

```
.parent-class {
  color: blue;
}
```

```
.parent-class .child-class {
  background-color: currentColor;
}
```



## rgba

### rgba

```
.red {
  /* Opaque red */
  color: rgba(255, 0, 0, 1);
}

.red-50p {
  /* Half-translucent red. */
  color: rgba(255, 0, 0, .5);
}
```

rgba(<red>, <green>, <blue>, <alpha>);

<red>	02550100
<green>	02550100
<blue>	02550100
<alpha>	010.01.0

## hsla

### hsla

```
hsla(240, 100%, 50%, 0)    /* transparent */
hsla(240, 100%, 50%, 0.5) /* half-translucent blue */
hsla(240, 100%, 50%, 1)   /* fully opaque blue */
```

```
hsla(<hue>, <saturation>%, <lightness>%, <alpha>);
```

<hue>	0°60°120°180°240°300°360°
<saturation>	0100
<lightness>	0100
<alpha>	0101

<https://riptutorial.com/zh-TW/css/topic/644/>

S. No		Contributors
1	CSS	<a href="#">adamboro</a> , <a href="#">animuson</a> , <a href="#">Ashwin Ramaswami</a> , <a href="#">awe</a> , <a href="#">Boysenb3rry</a> , <a href="#">Chris</a> , <a href="#">Community</a> , <a href="#">csx.cc</a> , <a href="#">darrylyeo</a> , <a href="#">FelipeAls</a> , <a href="#">Gabriel R.</a> , <a href="#">Garconis</a> , <a href="#">Gerardas</a> , <a href="#">GoatsWearHats</a> , <a href="#">G-Wiz</a> , <a href="#">Harish Gyanani</a> , <a href="#">Heri Hehe Setiawan</a> , <a href="#">J Atkin</a> , <a href="#">Jmh2013</a> , <a href="#">joe_young</a> , <a href="#">Jose Gomez</a> , <a href="#">Just a student</a> , <a href="#">Lambda Ninja</a> , <a href="#">Marjorie Pickard</a> , <a href="#">Nathan Arthur</a> , <a href="#">patelarpan</a> , <a href="#">RamenChef</a> , <a href="#">Rocket Risa</a> , <a href="#">Saroj Sasmal</a> , <a href="#">ScientiaEtVeritas</a> , <a href="#">selvassn</a> , <a href="#">Sverri M. Olsen</a> , <a href="#">Teo Dragovic</a> , <a href="#">Todd</a> , <a href="#">TylerH</a> , <a href="#">Vivek Ghaisas</a> , <a href="#">Xinyang Li</a> , <a href="#">ZaneDickens</a>
2	2D	<a href="#">Charlie H</a> , <a href="#">Christiaan Maks</a> , <a href="#">Harry</a> , <a href="#">Hors Sujet</a> , <a href="#">John Slegers</a> , <a href="#">Luke Taylor</a> , <a href="#">Madalina Taina</a> , <a href="#">mnoronha</a> , <a href="#">PaMaDo</a> , <a href="#">Praveen Kumar</a> , <a href="#">RamenChef</a> , <a href="#">web-tiki</a> , <a href="#">zer00ne</a>
3	3D	<a href="#">Harry</a> , <a href="#">Luka Kerr</a> , <a href="#">Madalina Taina</a> , <a href="#">mnoronha</a> , <a href="#">Mr. Meeseeks</a> , <a href="#">Nhan</a> , <a href="#">RamenChef</a> , <a href="#">web-tiki</a>
4	CSS Image Sprites	<a href="#">Elegant.Scripting</a> , <a href="#">Jmh2013</a> , <a href="#">RamenChef</a> , <a href="#">Ted Goas</a> , <a href="#">Ulrich Schwarz</a>
5	CSSCSSOM	<a href="#">Alohci</a> , <a href="#">animuson</a> , <a href="#">feeela</a> , <a href="#">Paul Sweatte</a> , <a href="#">RamenChef</a> , <a href="#">rishabh dev</a>
6	CSS	<a href="#">Alon Eitan</a> , <a href="#">darrylyeo</a> , <a href="#">Marjorie Pickard</a>
7	CSS	<a href="#">John Slegers</a>
8	Internet Explorer	<a href="#">Aeolingamenfel</a> , <a href="#">animuson</a> , <a href="#">Elizaveta Revyakina</a> , <a href="#">feeela</a> , <a href="#">John Slegers</a> , <a href="#">LiLacTac</a> , <a href="#">Praveen Kumar</a> , <a href="#">RamenChef</a> , <a href="#">ScientiaEtVeritas</a> , <a href="#">Timothy Miller</a> , <a href="#">TylerH</a>
9		<a href="#">Andrew</a> , <a href="#">animuson</a> , <a href="#">Hillel Tech</a> , <a href="#">Madalina Taina</a> , <a href="#">RamenChef</a>
10		<a href="#">Arjun Iv</a> , <a href="#">Chathuranga Jayanath</a> , <a href="#">Chris</a> , <a href="#">Jmh2013</a> , <a href="#">Kevin Katzke</a> , <a href="#">Kurtis Beavers</a> , <a href="#">Madalina Taina</a> , <a href="#">mnoronha</a> , <a href="#">Niek Brouwer</a> , <a href="#">RamenChef</a> , <a href="#">Sander Koedood</a> , <a href="#">ScientiaEtVeritas</a> , <a href="#">SeinopSys</a>
11		<a href="#">4dgaurav</a> , <a href="#">ankit</a> , <a href="#">Chris</a> , <a href="#">Community</a> , <a href="#">dippas</a> , <a href="#">dmnsgn</a> , <a href="#">geek1011</a> , <a href="#">geeksal</a> , <a href="#">Gofilord</a> , <a href="#">kevin vd</a> , <a href="#">Marcatectura</a> , <a href="#">Milche Patern</a> , <a href="#">Nathan</a> , <a href="#">Pat</a> , <a href="#">Praveen Kumar</a> , <a href="#">RamenChef</a> , <a href="#">ScientiaEtVeritas</a> , <a href="#">Shaggy</a> , <a href="#">Stewartside</a> , <a href="#">Sunnyok</a>
12		<a href="#">cone56</a> , <a href="#">Madalina Taina</a> , <a href="#">ScientiaEtVeritas</a> , <a href="#">Squazz</a>
13		<a href="#">Marten Koetsier</a> , <a href="#">RamenChef</a>



14	Brett DeWoody, Madalina Taina, RamenChef
15	animuson, Madalina Taina, Marten Koetsier, RamenChef, Ted Goas
16	Andre Lopes, Harry, RamenChef, ScientiaEtVeritas, web-tiki
17	animuson, Brett DeWoody, cone56, dodopok, H. Pauwelyn, haim770, Jaredsk, khawarPK, Kobi, RamenChef, SeinopSys, TheGenie OfTruth, TylerH
18	Andrew Myers, RamenChef
19	Aeolingamenfel, apaul, Dex Star, Jasmin Solanki, Nathan Arthur, RamenChef, Richard Hamilton, TylerH
20	andreas, animuson, Brett DeWoody, Chiller, J F, Nick, RamenChef, ScientiaEtVeritas, TylerH
21	animuson, AVAVT, bocanegra, Chiller, Chris, Jaredsk, leo_ap, mmativ, patelarpan, Phil, Praveen Kumar, RamenChef
22	Nemanja Trifunovic, RamenChef
23	Madalina Taina, Milan Laslop, RamenChef
24	Andy G, CalvT, Felix A J, Madalina Taina, Mehdi Dehghani, Nathan, Paul Sweatte, pixelbandito, RamenChef, StefanBob, Will DiFruscio
25	bipon, Sebastian Zartner
26	amflare, Chathuranga Jayanath, darrylyeo, Demeter Dimitri, dodopok, James Donnelly, Jmh2013, joe_young, joejoe31b, John Slegers, Matas Vaitkevicius, Mattia Astorino, Maximillian Laumeister, Nathan Arthur, Praveen Kumar, RamenChef, ScientiaEtVeritas, srikarg, Teo Dragovic, Viktor
27	Abhishek Singh, Alohci, animuson, Blunderfest, CalvT, Cassidy Williams, Chetan Joshi, GingerPlusPlus, Jacob Gray, Lambda Ninja, Madalina Taina, Matthew Beckman, Mattia Astorino, Rahul Nanwani, RamenChef, Sourav Ghosh, Stephen Leppik, Theodore K., TylerH
28	abaracedo, Alex Morales, Alohci, andreas, animuson, apaul, Christiaan Maks, Daniel Käfer, Devid Farinelli, Diego V, dippas, Eliran Malka, Emanuele Parisio, Euan Williams, F. Müller, Farzad YZ, Felix A J, geek1011, insertusernamehere, JedaiCoder, jehna1, JHS, John Slegers, Jonathan Argentiero, Kilian Stinson, Kyle Ratliff, Lambda Ninja, Lucia Bentivoglio,

		<a href="#">Luke Taylor</a> , <a href="#">Madalina Taina</a> , <a href="#">maho</a> , <a href="#">Maxouhell</a> , <a href="#">Michael_B</a> , <a href="#">Mifeet</a> , <a href="#">Mod Proxy</a> , <a href="#">Mohammad Usman</a> , <a href="#">Nathan Arthur</a> , <a href="#">Nhan</a> , <a href="#">o.v.</a> , <a href="#">Ortomala Lokni</a> , <a href="#">paaacman</a> , <a href="#">Paul Kozlovitch</a> , <a href="#">Praveen Kumar</a> , <a href="#">Sandeep Tuniki</a> , <a href="#">ScientiaEtVeritas</a> , <a href="#">Sergej</a> , <a href="#">Siavas</a> , <a href="#">smonff</a> , <a href="#">Someone</a> , <a href="#">Stewartside</a> , <a href="#">Sunnyok</a> , <a href="#">Taylor</a> , <a href="#">TylerH</a> , <a href="#">web-tiki</a> , <a href="#">Ze Rubeus</a> , <a href="#">zeel</a>
29		<a href="#">4444</a> , <a href="#">Miles</a> , <a href="#">RamenChef</a>
30		<a href="#">amflare</a> , <a href="#">Arjan Einbu</a> , <a href="#">brandaemon</a> , <a href="#">DarkAjax</a> , <a href="#">dippas</a> , <a href="#">dmkerr</a> , <a href="#">geeksal</a> , <a href="#">Grant Palin</a> , <a href="#">G-Wiz</a> , <a href="#">James Donnelly</a> , <a href="#">jehna1</a> , <a href="#">John Slegers</a> , <a href="#">kingcobra1986</a> , <a href="#">Matas Vaitkevicius</a> , <a href="#">Nathan Arthur</a> , <a href="#">Nhan</a> , <a href="#">Ortomala Lokni</a> , <a href="#">RamenChef</a> , <a href="#">ScientiaEtVeritas</a> , <a href="#">Sunnyok</a> , <a href="#">Ze Rubeus</a>
31		<a href="#">mnoronha</a> , <a href="#">RamenChef</a> , <a href="#">TrungDQ</a>
32		<a href="#">Chris Spittles</a> , <a href="#">FelipeAls</a> , <a href="#">Jonathan Zúñiga</a> , <a href="#">Mike McCaughan</a> , <a href="#">Nhan</a> , <a href="#">Praveen Kumar</a> , <a href="#">RamenChef</a> , <a href="#">Sebastian Zartner</a>
33		<a href="#">Alex Morales</a> , <a href="#">Alohci</a> , <a href="#">andreas</a> , <a href="#">Arjan Einbu</a> , <a href="#">ChaoticTwist</a> , <a href="#">Evgeny</a> , <a href="#">Felix A J</a> , <a href="#">Goulven</a> , <a href="#">Hynes</a> , <a href="#">insertusernamehere</a> , <a href="#">James Donnelly</a> , <a href="#">joe_young</a> , <a href="#">Jon Chan</a> , <a href="#">Madalina Taina</a> , <a href="#">Michael Moriarty</a> , <a href="#">Nathan Arthur</a> , <a href="#">Nhan</a> , <a href="#">Praveen Kumar</a> , <a href="#">RamenChef</a> , <a href="#">Richard Hamilton</a> , <a href="#">rmondesilva</a> , <a href="#">Ryan</a> , <a href="#">Sourav Ghosh</a> , <a href="#">Suhaib Janjua</a> , <a href="#">Ted Goas</a> , <a href="#">Toby</a> , <a href="#">ToniB</a> , <a href="#">Trevor Clarke</a> , <a href="#">user2622348</a> , <a href="#">Vlusion</a> , <a href="#">Volker E.</a>
34		<a href="#">animuson</a> , <a href="#">Harry</a> , <a href="#">RamenChef</a> , <a href="#">ScientiaEtVeritas</a>
35		<a href="#">Andrew</a> , <a href="#">bdkopen</a> , <a href="#">jgh</a> , <a href="#">Madalina Taina</a> , <a href="#">Miles</a> , <a href="#">Qaz</a> , <a href="#">RamenChef</a> , <a href="#">ScientiaEtVeritas</a> , <a href="#">Ted Goas</a> , <a href="#">Zac</a>
36		<a href="#">Andrew</a> , <a href="#">animuson</a> , <a href="#">Braiam</a> , <a href="#">Nhan</a> , <a href="#">Obsidian</a> , <a href="#">RamenChef</a> , <a href="#">ScientiaEtVeritas</a> , <a href="#">Shaggy</a> , <a href="#">TylerH</a>
37		<a href="#">Arjan Einbu</a> , <a href="#">Ben Rhys-Lewis</a> , <a href="#">Benolot</a> , <a href="#">BiscuitBaker</a> , <a href="#">FelipeAls</a> , <a href="#">James Donnelly</a> , <a href="#">Lambda Ninja</a> , <a href="#">Nathan Arthur</a> , <a href="#">Ortomala Lokni</a> , <a href="#">RamenChef</a> , <a href="#">ScientiaEtVeritas</a> , <a href="#">Sergej</a> , <a href="#">V-Kopio</a>
38		<a href="#">animuson</a> , <a href="#">dodopok</a> , <a href="#">Madalina Taina</a> , <a href="#">Milan Laslop</a> , <a href="#">RamenChef</a>
39		<a href="#">Hristo</a> , <a href="#">Madalina Taina</a> , <a href="#">RamenChef</a>
40		<a href="#">Arif</a> , <a href="#">Casey</a> , <a href="#">Chathuranga Jayanath</a> , <a href="#">Daniel Nugent</a> , <a href="#">FelipeAls</a> , <a href="#">Madalina Taina</a> , <a href="#">RamenChef</a> , <a href="#">ScientiaEtVeritas</a>
41		<a href="#">4444</a> , <a href="#">Ahmad Alfy</a> , <a href="#">animuson</a> , <a href="#">Asim K T</a> , <a href="#">Ben Rhys-Lewis</a> , <a href="#">Boris</a> , <a href="#">CalvT</a> , <a href="#">cdm</a> , <a href="#">Charlie H</a> , <a href="#">CocoaBean</a> , <a href="#">Dan Devine</a> , <a href="#">Dan Eastwell</a> , <a href="#">Daniel G. Blázquez</a> , <a href="#">Daniel Stradowski</a> , <a href="#">Darthstroke</a> , <a href="#">designcise</a> ,

	Devid Farinelli, dippas, fcalderan, FelipeAls, Goose, Horst Jahns, Hynes, Jack, Jacob Gray, James Taylor, John Slegers, Jon Chan, Jonathan Zúñiga, Kevin Montrose, Louis St-Amour, Madalina Taina, Maximillian Laumeister, Michael Moriarty, Mr. Alien, mtb, Nate, Nathan Arthur, Nhan, Persijn, Praveen Kumar, RamenChef, Richard Hamilton, ScientiaEtVeritas, Sergey Denisov, Shaggy, Sourav Ghosh, Stewartside, Stratboy, think123, Timothy, Trevor Clarke, TylerH, Zac, Zeta, Zze
42	animuson, Brett DeWoody, Community, Daniel Käfer, Muthu Kumaran, Obsidian, RamenChef, RedRiderX, TylerH
43	demonofthemist, FelipeAls, Madalina Taina, Nathan Arthur, RamenChef, vishak
44	Casper Spruit, Chris, FelipeAls, JHS, Madalina Taina
45	andre mcgruder, Confused One, Grant Palin, MMachinegun, mnoronha, RamenChef, SeinopSys
46	Harry, RamenChef
47	animuson, bdkopen, coderfin, Madalina Taina, Nick
48	Christiaan Maks, dippas, Harry, Praveen Kumar, RamenChef, Richard Hamilton, ScientiaEtVeritas, Sergey Denisov, web-tiki
49	Jeffery Tang, Nathan, RamenChef
50	75th Trombone, A.J, Aaron, abaracedo, Ahmad Alfy, Alex Filatov, amflare, Anil, animuson, Araknid, Arjan Einbu, Ashwin Ramaswami, BoltClock, Cerbrus, Charlie H, Chris, Chris Nager, Clinton Yeboah, Community, CPHPython, darrylyeo, Dave Everitt, David Fullerton, Demeter Dimitri, designcise, Devid Farinelli, Devon Bernard, Dinidu, dippas, Erenor Paz, Felix Edelmann, Felix Schütz, flyingfisch, Forty, fracz, Frits, gandreadis, geeksal, George Bailey, George Grigorita, H. Pauwelyn, HansCz, henry, Hugo Buff, Hynes, J Atkin, J F, Jacob Gray, James Donnelly, James Taylor, Jasha, jehna1, Jmh2013, joejoe31b, Joël Bonet Rodríguez, John Slegers, Kurtis Beavers, Madalina Taina, Marc, Mark Perera, Matas Vaitkevicius, Matsemann, Michael_B, Milan Laslop, Naeem Shaikh, Nathan Arthur, Nick, Ortomala Lokni, Persijn, Praveen Kumar, RamenChef, rdans, Richard Hamilton, Rion Williams, Robert Koritnik, RockPaperLizard, RoToRa, Sbats, ScientiaEtVeritas, Shaggy, Siavas, Stewartside, sudo bangbang, Sumner Evans, Sunnyok, ThatWeirdo, theB, Thomas Gerot, TylerH, xpy, Yury Fedorov, Zac, Zaffy, Zaz, Ze Rubeus, Zze

51		Chris, mnoronha, RamenChef
52		andreas, Cassidy Williams, doctorsherlock, FelipeAls, Gnietschow, Harry, jaredsk, Madalina Taina, Nobal Mohan, RamenChef, ScientiaEtVeritas, Trevor Clarke
53		Arjan Einbu, cdm, Chris Spittles, Community, J F, Madalina Taina, Mr_Green, Nathan Arthur, RamenChef, rejnev, Sun Qingyao, Sunnyok, Tot Zam, Trevor Clarke
54		4dgaaurav, A B, animuson, Epodax, geeksal, J F, Marc, Milche Patern, Ortomala Lokni, RamenChef, Richard Hamilton, rmondesilva, Robert Koritnik, Robotnicka, ScientiaEtVeritas, StefanBob, Stewartside, Thomas Altmann, Toby, user2622348, vladdobra, Zakaria Acharki, zer00ne
55	Flexbox	Ahmad Alfy, Asim K T, FelipeAls, fzylogic, James Donnelly, Jef , Lambda Ninja, Marc-Antoine Leclerc, Nathan Arthur, Nhan, Ori Marash, RamenChef, Randy, Squazz, takeradi, Ted Goas, Timothy Morris, TylerH
56		andreas, animuson, Arjan Einbu, Brett DeWoody, Community, cuervoo, darrylyeo, designcise, H. Pauwelyn, Jasmin Solanki, John Slegers, Kuhan, Marc, Michael Moriarty, Miro, Nathan Arthur, niyasc, RamenChef, Richard Hamilton, ScientiaEtVeritas , SeinopSys, Stewartside, user007, Wolfgang, X-27