

آموزش CSS

مفاهیم اولیه



What is CSS?



- CSS stands for Cascading Style Sheets
- CSS describes how HTML elements are to be displayed on screen, paper, or in other media
- CSS saves a lot of work. It can control the layout of multiple web pages all at once

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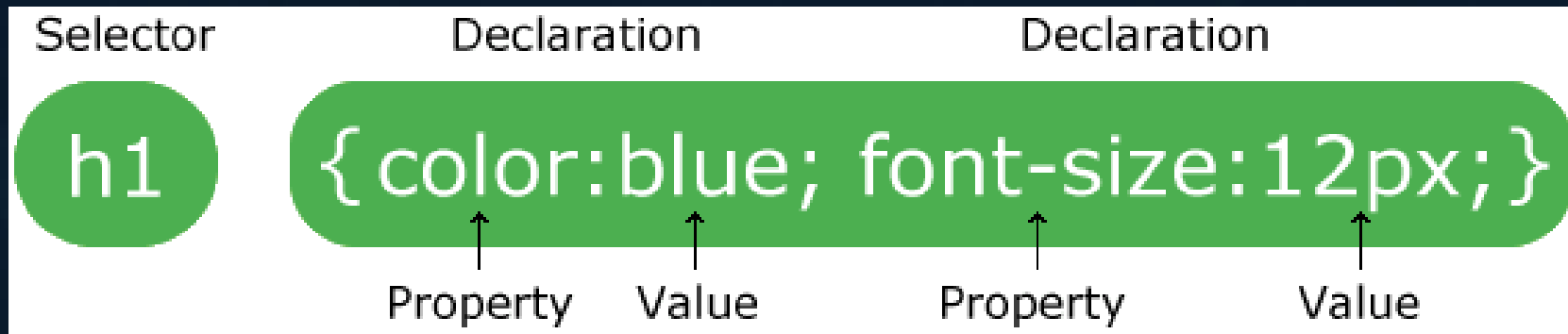
CSS Syntax



CSS Syntax



- The selector points to the HTML element you want to style.
- Each declaration includes a CSS property name and a value, separated by a colon.



Example



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

- **p** is a selector in CSS (it points to the HTML element you want to style: `<p>`).
- **color** is a property, and **red** is the property value
- **text-align** is a property, and **center** is the property value

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روش های کدنویسی CSS



3 Ways to write CSS



1. Inline => `style="color:red;"`
2. Internal => `<style> p{color:red;} </style>`
3. External => `<link href="style.css" rel="stylesheet" type="text/css">`

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CSS Selectors



Main Selectors



Here, all <p> elements on the page will be center-aligned, with a red text color:

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

The CSS rule below will be applied to the HTML element with id="para1":

```
#para1 {  
  text-align: center;  
  color: red;  
}
```

In this example all HTML elements with class="center" will be red and center-aligned:

```
.center {  
  text-align: center;  
  color: red;  
}
```

Advanced Selectors



The CSS rule below will affect every HTML element on the page:

```
* {  
  text-align: center;  
  color: blue;  
}
```

In this example we have grouped the selectors from the code above:

```
h1, h2, p {  
  text-align: center;  
  color: red;  
}
```

In this example only `<p>` elements with `class="center"` will be center-aligned:

```
p.center {  
  text-align: center;  
  color: red;  
}
```

Multi Class for one element



In this example the `<p>` element will be styled according to `class="center"` and to `class="large"`:

```
<p class="center large">This paragraph refers to two classes.</p>
```

CSS Comments



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

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Width & Height



Width & Height Properties



- Width
- Height
- Max-width
- Max-height
- Min-width
- Min-height

Examples:

Width: 100%; width:200px;
Max-width:50%; max-width:500px;

Height:100%; height:200px;
Max-height:50%; min-height:500px;

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Background



Background Properties



- Background-color
- Background-image
- Background-repeat
- Background-size
- Background-position
- Background-attachment

Examples:

Background-color:#000000; background-color:rgba(0,0,0,0.5);

Background-image:url('../images/bg.jpg'); background-image:url('https://www.w3schools.com/cssref/w3css.gif');

Background-repeat:no-repeat; background-repeat:repeat-x;

Background size:100% 50%; background-size:500px 100px; background-size:auto; background-size:100px auto;

Background-position:top left; background-position: center; background-color:center bottom; background-color:center right;

Background-attachment:fixed;

We can use the Background shorthand :

Background: url('websila.ir/logo.png') top left no-repeat fixed 50px 50px;

<https://websila.ir>

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Color Formats



CSS Color Formats



1-RGB -> rgb(red,green,blue)



CSS Color Formats



2-HEX (hexadecimal) -> #RRGGBB

#000000	#3c3c3c
#787878	#b4b4b4
#f0f0f0	#ffffff
#ff0000	#0000ff
#3cb371	#ee82ee
#ffa500	#6a5acd

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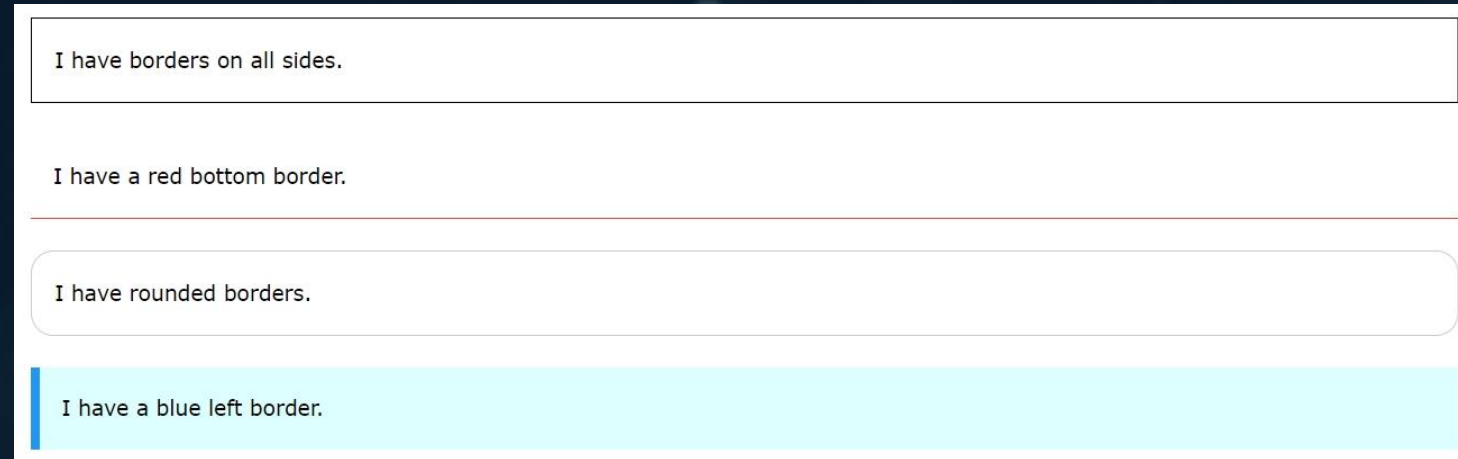
Borders



Border Properties



- **Border-width**
- **Border-style**
- **Border-color**
- **Border-radius**



Examples:

```
Border-width:2px; border-bottom-width:3px; border-left-width:2px;border-right-width:5px;  
Border-style:solid; border-right-style:dotted; border-bottom-style:dashed;  
Border-color:green; border-right-color:#AAAF23;  
Border-radius:10px; border-top-right-radius:10px; border-top-left-radius:10px; border-bottom-right-radius:10px; border-bottom-left:10px;
```

We can use the Border shorthand :

Border: 1px solid red;

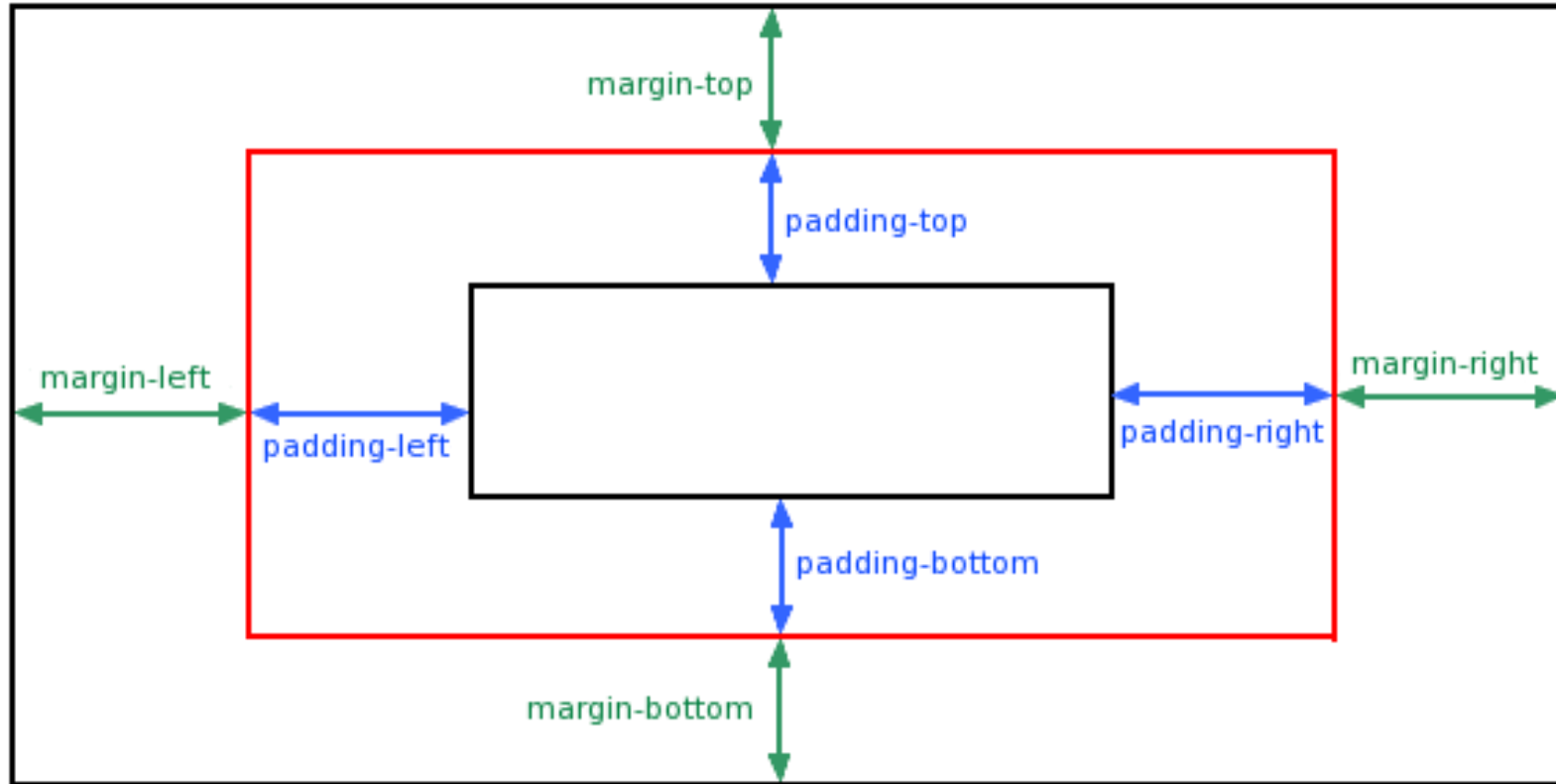
Border-bottom: 1px solid red;

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Margin & Padding



Margin & Padding Properties



Margin & Padding Properties



- margin
- padding

Examples:

Margin-top:5px; margin-right:10px; margin-bottom:15px; margin-left:20px;

Margin:5px 10px 15px 20px;

Margin: 0px auto;

Margin: 50px;

Padding-top:5px; padding-right:10px; padding-bottom:15px; padding-left:20px;

Padding:5px 10px 15px 20px;

Padding:40px;





Inline vs Block Element Margin & Padding

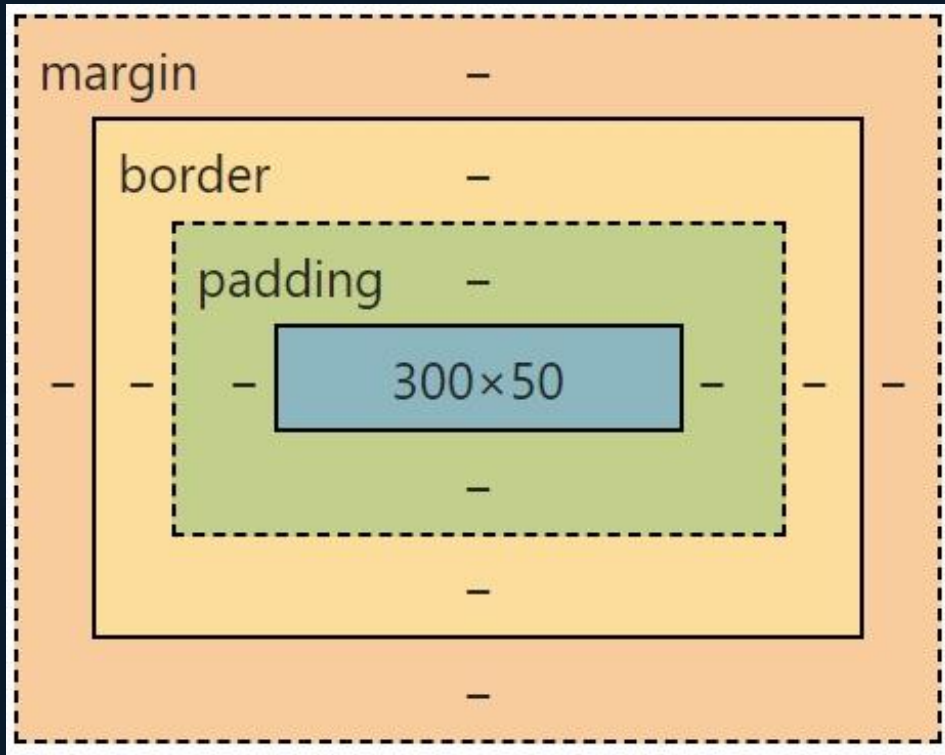
<i>Behavior</i>	inline	inline-block	block
Respects left/right padding	✓	✓	✓
Respects left/right margin	✓	✓	✓
Respects top/bottom padding	✓	✓	✓
Respects top/bottom margin	✗	✓	✓
Default width is width of its container (not width of its contents)	✗	✗	✓
Forces a line break (does not allow elements to sit beside it)	✗	✗	✓
Respects height/width when specified	✗	✓	✓

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Box Model



CSS Box Model



```
.box {  
  width: 700px;  
  border: 20px solid green;  
  padding: 20px;  
  margin: 20px;  
}
```

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Text Style

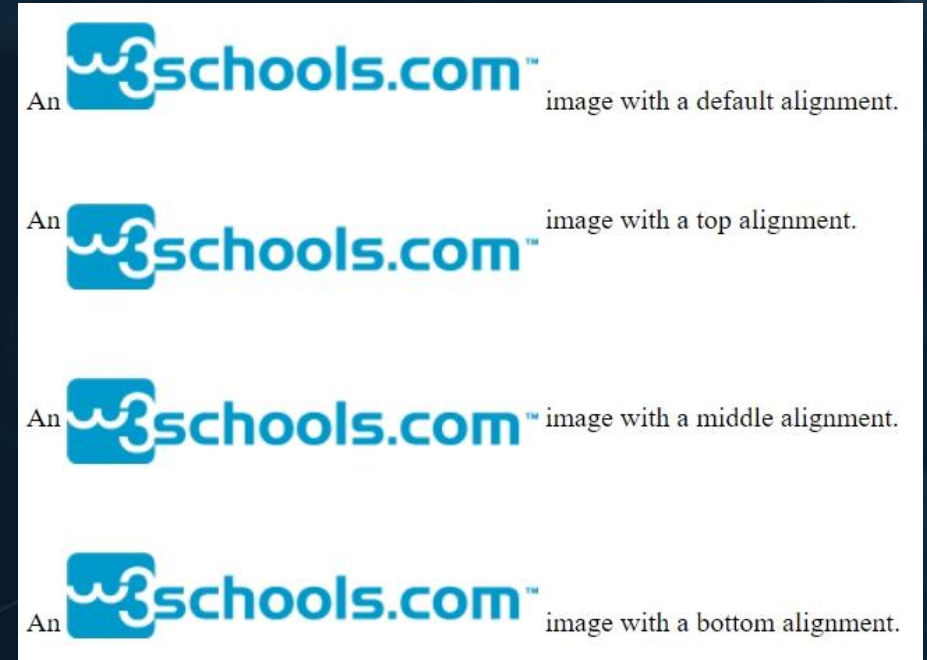


Styling Texts



- Color
- Direction
- Text-align
- Vertical-align : top | middle | bottom | baseline
- Text-transform : uppercase | lowercase | capitalize
- Font-family
- Font-size
- Font-weight : bold
- Font-style : italic
- Text-decoration : underline | line-through | overline
- letter-spacing
- Line-height
- Text-shadow

Vertical-align Example :



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Link Style



Styling Links



```
/* unvisited link */  
a:link {  
    color: red;  
}
```

```
/* mouse over link */  
a:hover {  
    color: hotpink;  
}
```

```
/* visited link */  
a:visited {  
    color: green;  
}
```

```
/* selected link */  
a:active {  
    color: blue;  
}
```


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List Style



Styling Lists



list-style-type & list-style-image :

```
ul{  
  list-style-type: circle;  
}
```

- Coffee
- Tea
- Coca Cola

```
ul{  
  list-style-type: upper-roman;  
}
```

- I. Coffee
- II. Tea
- III. Coca Cola

```
ul{  
  list-style-image: url('sqpurple.jpg');  
}
```

- Coffee
- Tea
- Coca Cola

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

- Coffee
- Tea
- Coca Cola

```
ul{  
  list-style-type: lower-alpha;  
}
```

- a. Coffee
- b. Tea
- c. Coca Cola

Styling Lists



list-style-position :

```
ul {  
  list-style-position: outside;  
}  
  
ul {  
  list-style-position: inside;  
}
```

outside

- Coffee - A brewed drink prepared from roasted coffee beans...
- Tea
- Coca-cola

inside

- Coffee - A brewed drink prepared from roasted coffee beans...
- Tea
- Coca-cola

Styling Lists



Remove Default Settings

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

Default list:

- Coffee
- Tea
- Coca Cola

Remove bullets, margin and padding:

Coffee
Tea
Coca Cola

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Table Style



Styling Tables



```
#customers{
  border-collapse: collapse;
  width: 100%;
}
#customers td, #customers th{
  border: 1px solid #ddd;
  padding: 8px;
}
#customers tr:nth-child(even){
  background-color: #f2f2f2;
}
#customers tr:hover{
  background-color: #ddd;
}
#customers th{
  padding-top: 12px;
  padding-bottom: 12px;
  text-align: left;
  background-color: #4CAF50;
  color: white;
}
```

Company	Contact	Country
Alfreds Futterkiste	Maria Anders	Germany
Berglunds snabbköp	Christina Berglund	Sweden
Centro comercial Moctezuma	Francisco Chang	Mexico
Ernst Handel	Roland Mendel	Austria
Island Trading	Helen Bennett	UK
Königlich Essen	Philip Cramer	Germany
Laughing Bacchus Winecellars	Yoshi Tannamuri	Canada
Magazzini Alimentari Riuniti	Giovanni Rovelli	Italy
North/South	Simon Crowther	UK
Paris spécialités	Marie Bertrand	France
Paris spécialités	Marie Bertrand	France
North/South	Simon Crowther	UK
Magazzini Alimentari Riuniti	Giovanni Rovelli	Italy
Laughing Bacchus Winecellars	Yoshi Tannamuri	Canada

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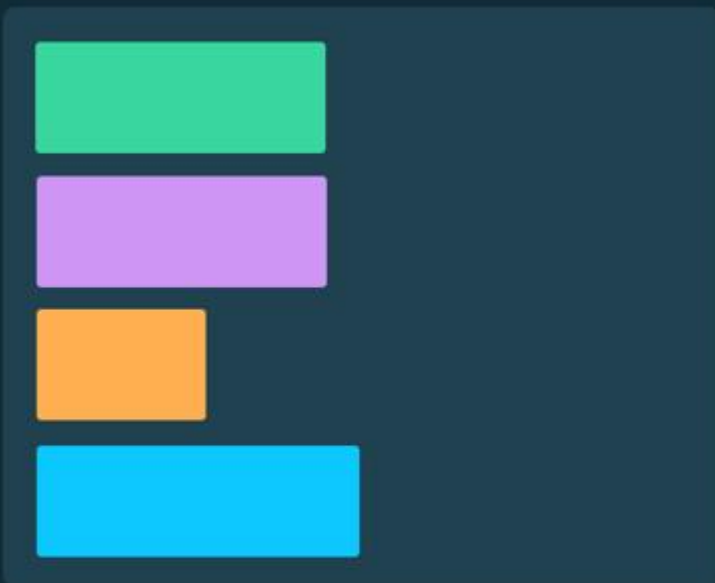
Display



Display



BLOCK VS INLINE



`display: block;`



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

Display



Examples of each

Block Elements

`<div>`

`<p>`

`<h1>`

`/`

Inline Elements

``

`<a>`

``

``

With CSS, you can switch these!
(e.g. you can make divs inline or spans block)

Display



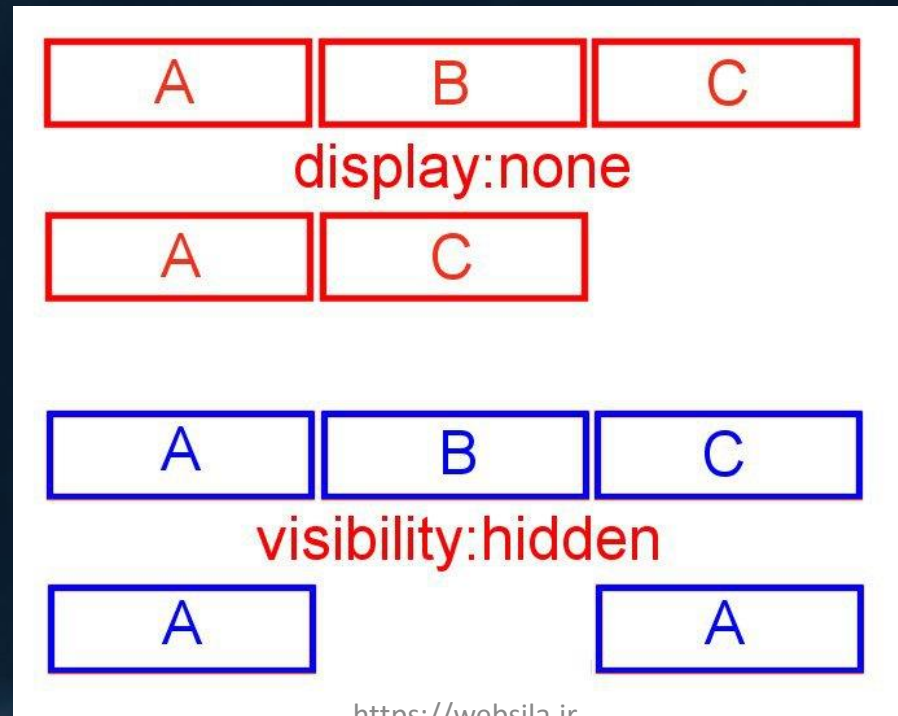
<i>Behavior</i>	inline	inline-block	block
Respects left/right padding	✓	✓	✓
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Respects top/bottom margin	✗	✓	✓
Default width is width of its container (not width of its contents)	✗	✗	✓
Forces a line break (does not allow elements to sit beside it)	✗	✗	✓
Respects height/width when specified	✗	✓	✓

Display



Hiding an element can be done by setting the `display: none;`. The element will be hidden, and the page will be displayed as if the element is not there

`visibility: hidden;` also hides an element. However, the element will still take up the same space as before. The element will be hidden, but still affect the layout



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Position



Position



There are five different position values :

- static (Default Position of HTML elements)
- relative
- absolute
- fixed
- sticky

We can use the **top**, **right**, **bottom**, **left** property for non-static elements.

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Overflow



overflow , overflow-x , overflow-y :



- **visible** : Default. The overflow is not clipped. The content renders outside the element's box
- **hidden** : The overflow is clipped, and the rest of the content will be invisible
- **scroll** : The overflow is clipped, and a scrollbar is added to see the rest of the content
- **auto** : Similar to scroll, but it adds scrollbars only when necessary



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Float



Float



Property : float

Values :

- **None (default)**
- **Left**
- **Right**

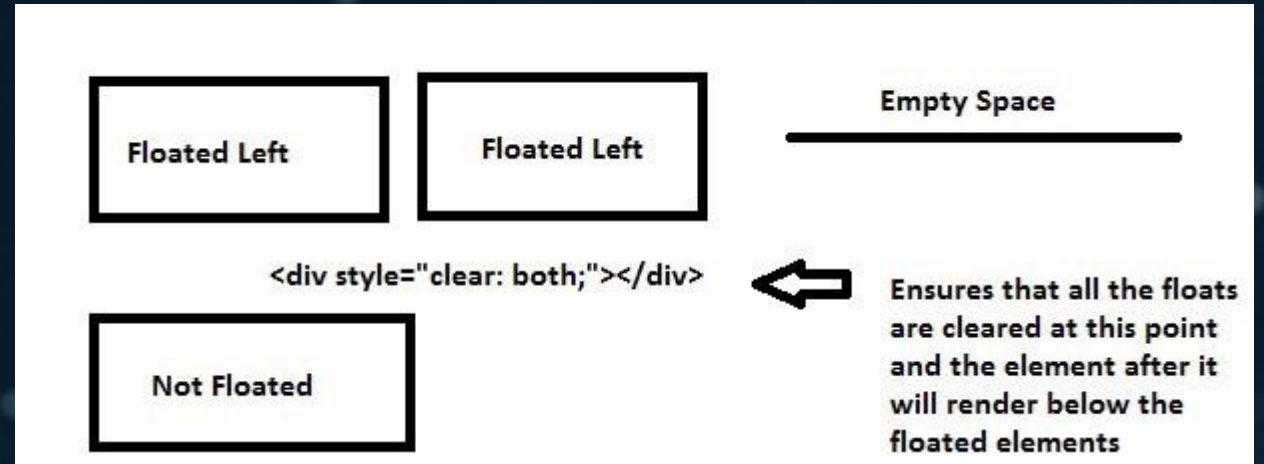
Clear



Property : clear

Values :

- None (default)
- Left
- Right
- Both



- ✓ The most common way to use the **clear** property is after you have used a **float** property on an element.

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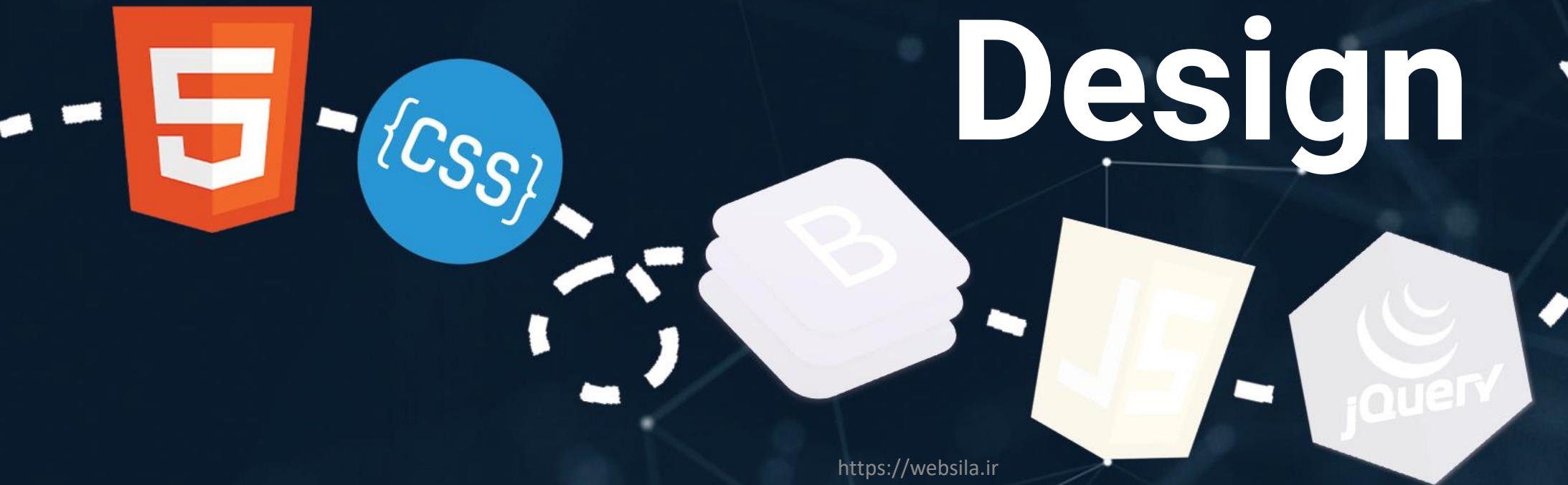
Dropdown

#مینی-پروژه



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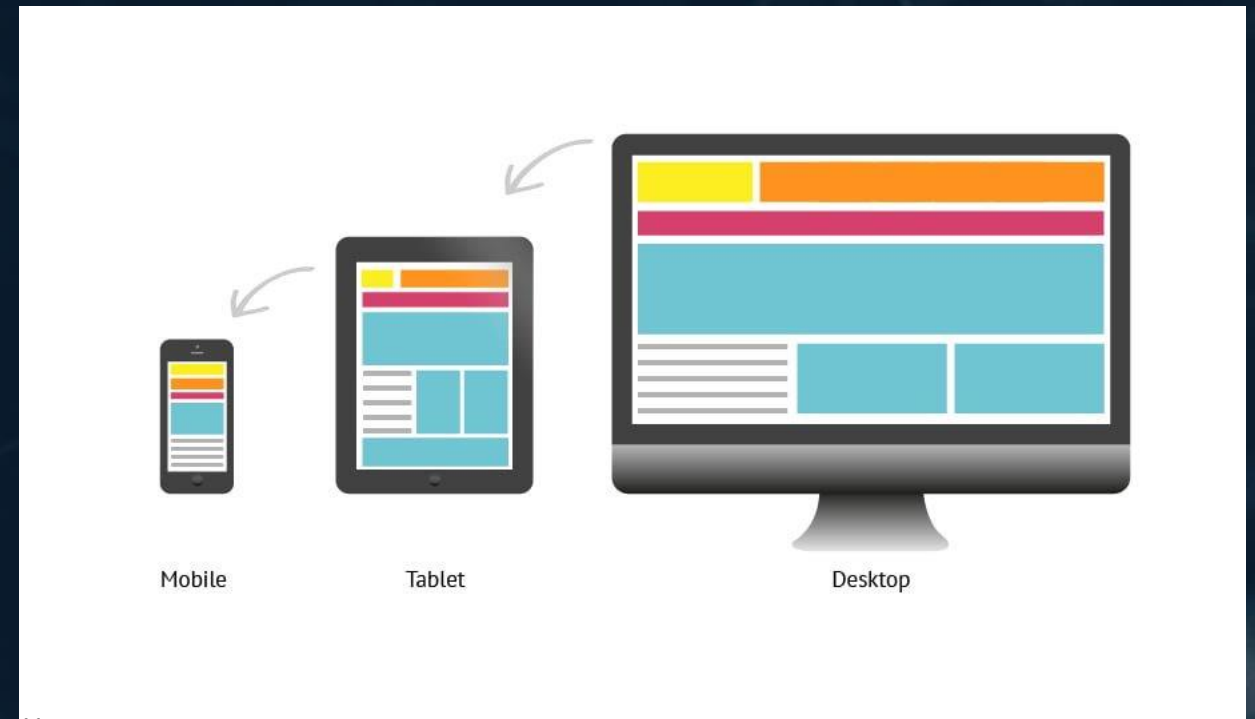
Responsive Design





What is Responsive Web Design?

- Responsive web design makes your web page look good on all devices.
- Responsive web design uses only HTML and CSS.
- Responsive web design is not a program or a JavaScript.





Horizontal Scroll

1. **Do NOT use large fixed width elements** - For example, if an image is displayed at a width wider than the viewport it can cause the viewport to scroll horizontally. Remember to adjust this content to fit within the width of the viewport.
2. **Do NOT let the content rely on a particular viewport width to render well** - Since screen dimensions and width in CSS pixels vary widely between devices, content should not rely on a particular viewport width to render well.
3. **Use CSS media queries to apply different styling for small and large screens** - Setting large absolute CSS widths for page elements will cause the element to be too wide for the viewport on a smaller device. Instead, consider using relative width values, such as width: 100%. Also, be careful of using large absolute positioning values. It may cause the element to fall outside the viewport on small devices.

Viewport vs Resolution



Setting The Viewport



```
<meta name="viewport" content="width=device-width, initial-scale=1.0">
```





CSS Media Query Rules examples

@media all and (min-width: 1200px) { ... }

@ media screen and (min-width: 900px) and (max-width: 1199px) { ... }

@ media print and (max-width: 992px) { ... }

@media screen and (orientation: portrait) { ... }

@media screen and (orientation: landscape) , (max-width: 992px) { ... }

or





Responsive Standard Breakpoints

// Small devices (landscape phones, 576px and up)
@media all and (min-width: 576px) { ... }

// Medium devices (tablets, 768px and up)
@ media all and (min-width: 768px) { ... }

// Large devices (desktops, 992px and up)
@ media all and (min-width: 992px) { ... }

// Extra large devices (large desktops, 1200px and up)
@ media all and (min-width: 1200px) { ... }

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Advanced Selectors





CSS Selectors

CSS Combinators

Space | > | + | ~

CSS Pseudo Classes

:active | :checked | :disabled | :valid | ...

CSS Pseudo Elements

::after | ::before | ::first-letter | ::marker | ...