

CSS(Cascading Style Sheets)

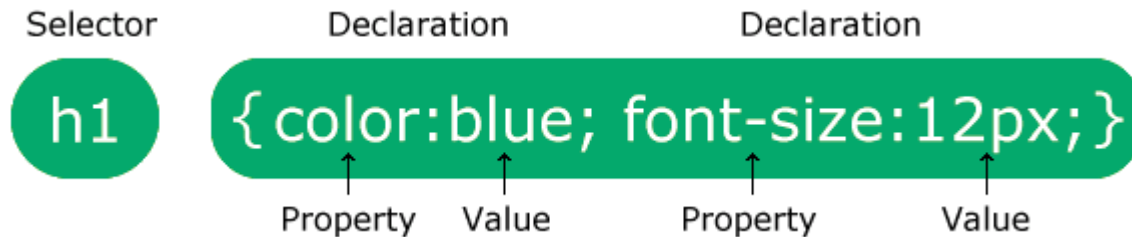
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Css introduction

- CSS is the language we use to style a Web page.
- 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
- External stylesheets are stored in CSS files
- Why Use CSS?
- CSS is used to define styles for your web pages, including the design, layout and variations in display for different devices and screen sizes.

CSS SYNTAX

- A CSS rule consists of a selector and a declaration block.



- The selector points to the HTML element you want to style.
- The declaration block contains one or more declarations separated by semicolons.
- Each declaration includes a CSS property name and a value, separated by a colon.
- Multiple CSS declarations are separated with semicolons, and declaration blocks are surrounded by curly braces.

example

- `<html>`
- `<head>`
- `<style>`
- `p {`
- `color: red;`
- `text-align: center;`
- `}`
- `</style>`
- `</head>`
- `<body>`
- `<p>Hello World!</p>`
- `<p>These paragraphs are styled with CSS.</p>`
- `</body>`
- `</html>`

- 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

The CSS element Selector

- The element selector selects HTML elements based on the element name.
- Example
- Here, all <p> elements on the page will be center-aligned, with a red text color:
- ```
p {
 text-align: center;
 color: red;
}
```

# The CSS id Selector

- The id selector uses the id attribute of an HTML element to select a specific element.
- The id of an element is unique within a page, so the id selector is used to select one unique element!
- To select an element with a specific id, write a hash (#) character, followed by the id of the element.

`<html>`

- `<head>`
- `<style>`
- `#para1 {`
- `text-align: center;`
- `color: red; }`
- `</style>`
- `</head>`
- `<body>`
- `<p id="para1">Hello World!</p>`
- `<p>This paragraph is not affected by the style.</p></body> </html>`

# The CSS class Selector

- The class selector selects HTML elements with a specific class attribute.
- To select elements with a specific class, write a period (.) character, followed by the class name.
- `<html>`
- `<head>`
- `<style>`
- `.center {`
- `text-align: center;`
- `color: red;}`
- `</style>`
- `</head>`
- `<body>`
- `<h1 class="center">Red and center-aligned heading</h1>`
- `<p class="center">Red and center-aligned paragraph.</p>`
- `</body>`
- `</html>`



# The CSS Universal Selector

- The universal selector (\*) selects all HTML elements on the page.
- <html>
- <head>
- <style>
- \* {
- text-align: center;
- color: blue;
- }
- </style>
- </head>
- <body>
- <h1>Hello world!</h1>
- <p>Every element on the page will be affected by the style.</p>
- <p>Me too!</p>
- <p>And me!</p>
- </body>
- </html>

# The CSS Grouping Selector

- The grouping selector selects all the HTML elements with the same style definitions.
- `<!DOCTYPE html>`
- `<html>`
- `<head>`
- `<style>`
- `h1, h2, p {`
- `text-align: center;`
- `color: red;`
- `}`
- `</style>`
- `</head>`
- `<body>`
- `<h1>Hello World!</h1>`
- `<h2>Smaller heading!</h2>`
- `<p>This is a paragraph.</p>`
- `</body>`
- `</html>`

- The basic difference between ID and Class is that the ID selector is applied only to one element in a page, whereas the class selector can be applied to several elements on a single page.

# Types of css

- Cascading Style Sheet ([CSS](#)) is used to set the style in web pages that contain [HTML](#) elements. It sets the background color, font-size, font-family, color, ... etc. properties of elements on a web page.
- There are three ways of inserting a style sheet:
- External CSS
- Internal CSS
- Inline CSS

# External CSS

- With an external style sheet, you can change the look of an entire website by changing just one file!
- Each HTML page must include a reference to the external style sheet file inside the <link> element, inside the head section.
- External styles are defined within the <link> element, inside the <head> section of an HTML page:
- ```
<!DOCTYPE html>
<html>
<head>
<link rel="stylesheet" href="mystyle.css">
</head>
<body>
<h1>This is a heading</h1>
<p>This is a paragraph.</p>
</body>
</html>
```

- An external style sheet can be written in any text editor, and must be saved with a .css extension.
- The external .css file should not contain any HTML tags.
- Here is how the "mystyle.css" file looks:
- "mystyle.css"
- ```
body {
 background-color: lightblue;
}

h1 {
 color: navy;
 margin-left: 20px;
}
```

# Internal CSS

- An internal style sheet may be used if one single HTML page has a unique style.
- The internal style is defined inside the `<style>` element, inside the head section.
- Example
- Internal styles are defined within the `<style>` element, inside the `<head>` section of an HTML page:
- `<head>`
- `<style>`
- `body {`
- `background-color: linen;`
- `}`
- `h1 {`
- `color: maroon;`
- `margin-left: 40px;`
- `}`
- `</style>`
- `</head>`

# Inline CSS

- An inline style may be used to apply a unique style for a single element.
- To use inline styles, add the style attribute to the relevant element. The style attribute can contain any CSS property.
- Inline styles are defined within the "style" attribute of the relevant element:
  - `<html>`
  - `<body>`
  - `<h1 style="color:blue;text-align:center;">This is a heading</h1>`
  - `<p style="color:red;">This is a paragraph.</p>`
  - `</body>`
  - `</html>`



# CSS Backgrounds

- The CSS background properties are used to add background effects for elements.
- In these chapters, you will learn about the following CSS background properties:
  - background-color
  - background-image
  - background-repeat
  - background-attachment
  - background-position
  - background (shorthand property)

- CSS background-color
- The background-color property specifies the background color of an element.
- ```
body {  
  background-color: lightblue;  
}
```
- With CSS, a color is most often specified by:
- a valid color name - like "red"
- a HEX value - like "#ff0000"
- an RGB value - like "rgb(255,0,0)"

Opacity / Transparency

- The opacity property specifies the opacity/transparency of an element. It can take a value from 0.0 - 1.0. The lower value, the more transparent:
- `<!DOCTYPE html>`
- `<html>`
- `<head>`
- `<style>`
- `div {`
- `background-color: green;`
- `}`
- `div.first {`
- `opacity: 0.1;`
- `}`

- div.second {
- opacity: 0.3;
- }
- div.third {
- opacity: 0.6;
- }
- </style>
- </head>

Transparent Boxes

When using the opacity property to add transparency to the background of an element, all of its child elements become transparent as well. This can make the text inside a fully transparent element hard to read:

opacity 0.1

opacity 0.3

opacity 0.6

opacity 1 (default)

CSS background-image

- The background-image property specifies an image to use as the background of an element.
- By default, the image is repeated so it covers the entire element.
- Sets the background image for an element
- `<style>`
- `body {`
- `background-image: url("paper.gif");`
- `}`
- `</style>`

CSS Background Image Repeat

- By default, the background-image property repeats an image both horizontally and vertically.

Property	Description
• background-position background image	Sets the starting position of a
• background-repeat repeated	Sets how a background image will be

- If the image above is repeated only horizontally (background-repeat: repeat-x;), the background will look better:
- <style>
- body {
- background-image: url("gradient_bg.png");
- background-repeat: repeat-x;
- }
- </style>

CSS background-repeat: no-repeat

- <style>
- body {
- background-image: url("img_tree.png");
- background-repeat: no-repeat;
- }
- </style>

CSS background-position

- The background-position property is used to specify the position of the background image.

```
<style>
body {
  background-image: url("img_tree.png");
  background-repeat: no-repeat;
  background-position: right top;
  margin-right: 200px;
}
</style>
</head>
<body>
```

CSS background-attachment

- The background-attachment property specifies whether the background image should scroll or be fixed (will not scroll with the rest of the page):
- Specify that the background image should be fixed:
- Example:

```
<style>
body {
  background-image: url("img_tree.png");
  background-repeat: no-repeat;
  background-position: right top;
  margin-right: 200px;
  background-attachment: fixed;
}
</style>
</head>
```

- Specify that the background image should scroll with the rest of the page:
- body {
- background-image: url("img_tree.png");
- background-repeat: no-repeat;
- background-position: right top;
- margin-right: 200px;
- background-attachment: scroll;
- }

- Property
- background-attachment
fixed or scrolls

Description

Sets whether a background image is
with the rest of the page

CSS Borders

- The CSS border properties allow you to specify the style, width, and color of an element's border.
- CSS Border Style
- The border-style property specifies what kind of border to display.
- The following values are allowed:
 - dotted - Defines a dotted border
 - dashed - Defines a dashed border
 - solid - Defines a solid border

- double - Defines a double border
- Groove - Defines a 3D grooved border. The effect depends on the border-color value.
- Ridge - Defines a 3D ridged border. The effect depends on the border-color value
- Inset - Defines a 3D inset border. The effect depends on the border-color value
- Outset - Defines a 3D outset border. The effect depends on the border-color value
- None - Defines no border
- Hidden - Defines a hidden border

Example

- p.dotted {border-style: dotted;}
p.dashed {border-style: dashed;}
p.solid {border-style: solid;}
p.double {border-style: double;}
p.groove {border-style: groove;}
p.ridge {border-style: ridge;}
p.inset {border-style: inset;}
p.outset {border-style: outset;}
p.none {border-style: none;}
p.hidden {border-style: hidden;}
p.mix {border-style: dotted dashed solid double;}

A dotted border.
A dashed border.
A solid border.
A double border.
A groove border. The effect depends on the border-color value.
A ridge border. The effect depends on the border-color value.
An inset border. The effect depends on the border-color value.
An outset border. The effect depends on the border-color value.
No border.
A hidden border.
A mixed border.

