CSS3 Fundamentals

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Agenda

- Introduction to CSS
- CSS3 Selectors
- Pseudo Elements and Pseudo Classes
- Types of CSS
- CSS Fonts and CSS Text
- CSS Box Model
- Margin, Padding and Border
- Position and Colors
- CSS Background and Gradients

Introduction to CSS

- CSS stands for Cascading Style Sheets.

- CSS is used for describing the presentation of the web pages.

- CSS is a text file with **.css** extension.

- Used to define styles and layouts of Web pages written in HTML and Extensible Hypertext Markup Language (XHTML).
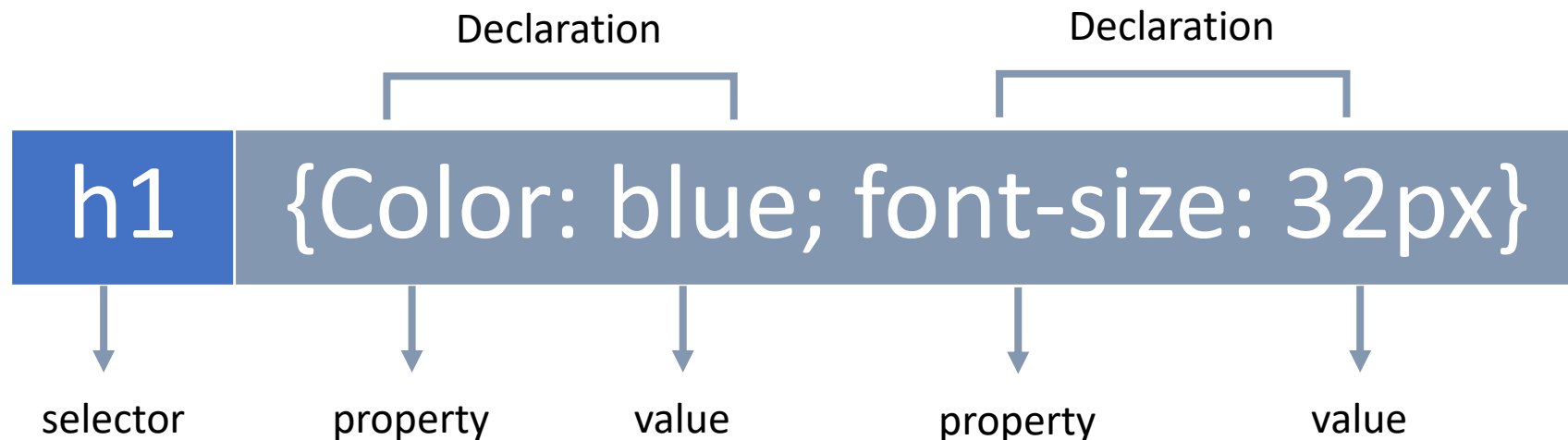
What You Can Do with CSS?

- Easily apply same style rules on multiple elements.

- Control the presentation of multiple pages of a website using a single style sheet.

- Change the position of an element on a web page without changing the markup.

- Alter the display of existing HTML elements.

- Transform elements like scale, rotate etc. in 2D or 3D space.

- Create animations & transitions effects without using JavaScript.

Getting Started with CSS3

- Any Text editor such as Notepad++, Edit plus, Dream weaver, Visual Studio, Brackets, Eclipse etc.

- Modern browsers such as Firefox 3.5+, Chrome 10+, IE 9+, Microsoft Edge, Safari 4+, Opera 10.5+

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Understanding CSS3 Syntax

- A CSS rule has two main parts: a selector and one or more declarations:

Declaration   Declaration

h1 {Color: blue; font-size: 32px}

selector   property   value   property   value

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CSS3 Selectors

- A pattern to match the elements on a web page.

- The style rules associated with that selector will be applied to the elements that match the selector pattern.

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CSS3 Selectors Contd..

The universal selector - *

The element selector - h1, p, div, input

The class selector - .red

The id selector - #id, #name

The child selector - div > p

The descendant selector - div p

The adjacent sibling selector - div + p

The attribute selector - [target], [target=_blank], a[href^="https"], a[href$=".pdf"]

Pseudo Elements

- Used to style sub-parts of an element, for example :
    - Style the first element or first para of a web page.
    - Insert content before, or after, the content of an element.

Pseudo Elements Syntax

```
selector::pseudo-element {
        property: value;
    }
```

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Pseudo Elements Example

Selector	Example	Example description
::after	p::after	Insert content after every <p> element
::before	p::before	Insert content before every <p> element
::first-letter	p::first-letter	Selects the first letter of every <p> element
::first-line	p::first-line	Selects the first line of every <p> element
::selection	p::selection	Selects the portion of an element that is selected by a user

Pseudo Classes

- Used to define a special state of an element, for example :
    - Style an element when a user mouse over it
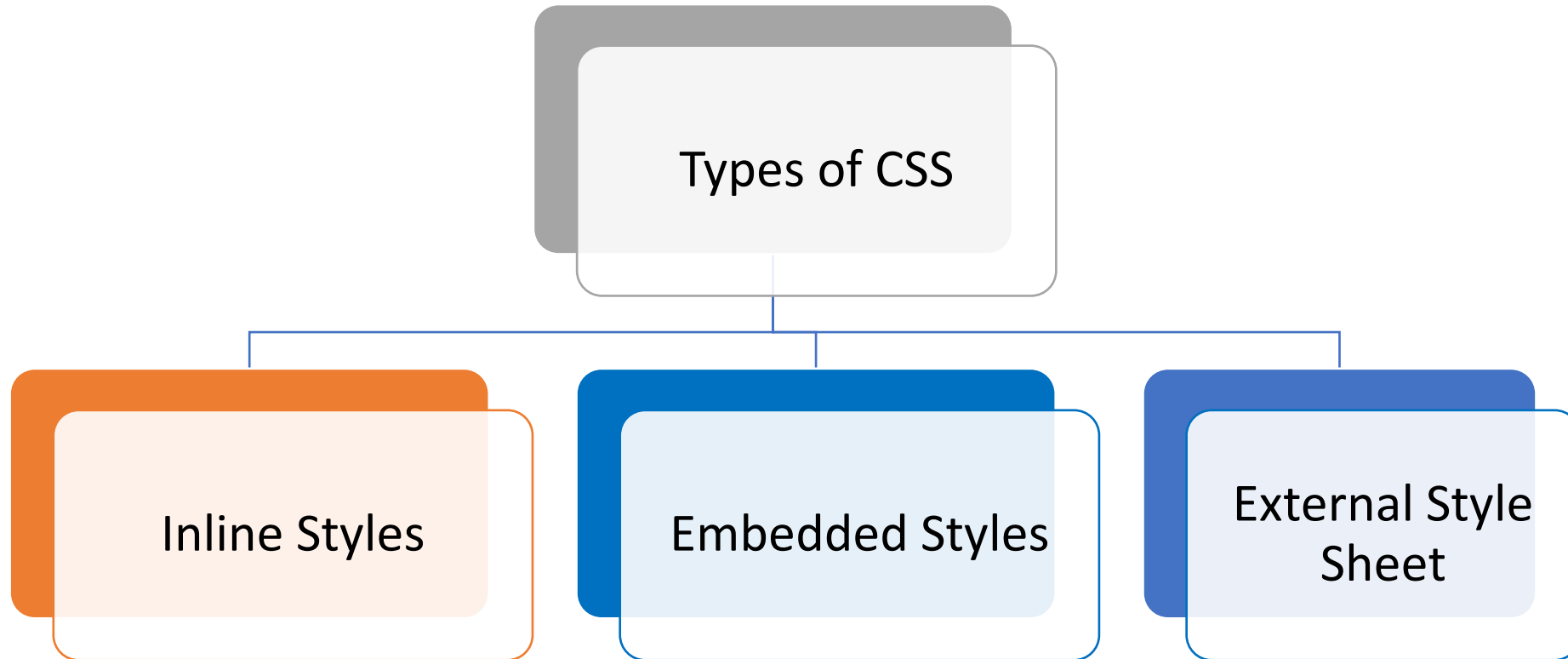   - Style an element when it gets focus

Pseudo Elements Syntax

```
selector::pseudo-class {
        property: value;
    }
```

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Pseudo Classes Example

Selector	Example	Example description
:active	a:active	Selects the active link
:checked	input:checked	Selects every checked <input> element
:disabled	input:disabled	Selects every disabled <input> element
:first-child	p:first-child	Selects every <p> elements that is the first child of its parent
:focus	input:focus	Selects the <input> element that has focus
:hover	a:hover	Selects links on mouse over
:last-child	p:last-child	Selects every <p> elements that is the last child of its parent
:link	a:link	Selects all unvisited links
:nth-child(n)	p:nth-child(2)	Selects every <p> element that is the second child of its parent
:read-only	input:read-only	Selects <input> elements with a "readonly" attribute specified
:required	input:required	Selects <input> elements with a "required" attribute specified
:valid	input:valid	Selects all <input> elements with a valid value

Types of CSS (Cascading Style Sheet)

Types of CSS

Inline Styles

Embedded Styles

External Style Sheet

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Inline Styles

- Apply the unique style rules to an element.

- Applied by putting the CSS rules directly into the start tag.

- Attached to an element using the style attribute.

```html
<h1 style="color:red; font-size:30px;">This is a heading.</h1>
<p style="color:green; font-size:22px;">This is a paragraph.</p>
```

Internal/Embedded Styles

- Usually written the HEAD element of the document.

- This style is applied only to the documents in which it is defined and not referenced by any other Web document.

```
<style type="text/css">
    h1 { color: blue; font-size: 32px; }
</style>
```

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External Stylesheet

- Useful to style many web pages in a website.

- Holds all the style rules and link to any HTML file in a website.

- A external style sheet can be attach by *linking* and *importing*.

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

```
@import url("css/style.css");
```

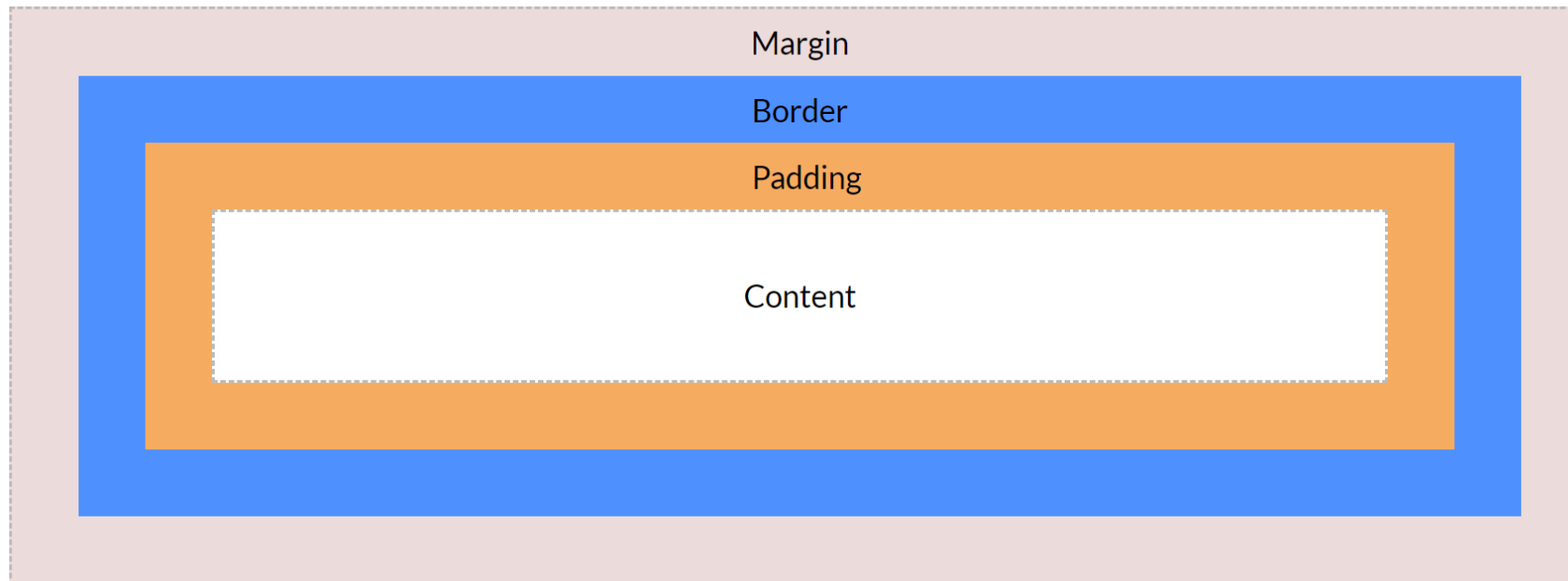DotNetTricks

CSS Fonts

- The CSS font properties are used to set the fonts of content.

- The CSS font properties define:

  - font-family

  - font-style

  - font-weight

  - font-variant

  - font-size

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CSS Text

- CSS text properties are used to format text and style text.
- CSS text include following properties:
  - Text-color
  - Text-alignment
  - Text-decoration
  - Text-transformation
  - Text-indentation
  - Letter-spacing
  - Line-height
  - Text-direction
  - Text-shadow
  - Word-spacing

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CSS Box Model

- In CSS box model, each HTML element can be considered as a box.

- CSS box model includes margin, border, padding, and the content.

Margin

Border

Padding

Content

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CSS Margins

- CSS margins are used to create space around the element.

- The margins are set for individual sides :
  - top
  - right
  - bottom
  - left

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CSS Paddings

- CSS margins are used to create space inside the element.

- The padding are set for individual sides :
  - top
  - right
  - bottom
  - left

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CSS Borders

- CSS *border* properties is used to specify the style, width, and color of an element's border.

- There are following types of borders :
  - dotted
  - dashed
  - solid
  - double
  - groove
  - ridge
  - inset
  - outset
  - none

- Borders can be set for sides: top, bottom, left, and right.

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CSS Positions

- CSS *position* property is used to set the position of an element.

- There are following positions values :

  - fixed

  - static

  - relative

  - absolute

  - staticky

- Html elements are positioned using the top, bottom, left, and right properties.

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CSS Colors

- CSS color properties are used to set color of text or border of an element.

- Color of an element can be defined in the following ways:
  - Built-In Color
  - RGB Format
  - RGBA Format
  - Hexadecimal Notation
  - HSL
  - HSLA

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CSS Background

- The CSS background properties are used to define the background of an element.

- CSS background properties are as follows :

  - Background-color

  - Background-image

  - Background-repeat

  - Background-attachment

  - Background-position

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CSS Gradients

- CSS gradients are used to display smooth transitions between two or more colors.

- CSS defines two types of gradients:

  - Linear Gradients (goes down/up/left/right/diagonally)

  - Radial Gradients (defined by their center)

Let's Get Started..

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