

# Introduction to Style Sheet



# What will be covered

OBJECT

- Need of style sheets
- What are style sheets
- Types of style sheets
  - External style sheet
  - Internal style sheet
  - Inline style sheet
- Cascading effect
- Advantages of style sheets
- CSS Syntax

# Need of style sheets

## OBJECT

- HTML was NEVER intended to contain tags for formatting a web page!
- HTML was created to describe the content of a web page, like:  
`<h1>This is a heading</h1>`  
`<p>This is a paragraph.</p>`
- When tags like `<font>`, and color attributes were added to the HTML 3.2 specification, development of large websites, where fonts and color information were added to every single page, became a long and expensive process.
- To solve this problem, the World Wide Web Consortium (W3C) created CSS.
- CSS removed the style formatting from the HTML page!

# What are style sheets

OBJECT  
TECHNOLOGY

- CSS is the acronym for "Cascading Style Sheet".
- CSS describes how HTML elements should be displayed.
- CSS is used to control the style of a web document in a simple and easy way.
- CSS, is a simple design language intended to simplify the process of making web pages presentable.
- Most commonly, CSS is combined with the markup languages HTML, XML



# Types of style sheet

There are three ways of inserting a style sheet:

- External style sheet
- Internal style sheet
- Inline style



# External Style Sheet

- With an external style sheet, you can change the look of an entire website by changing just one file!
- Each page must include a reference to the external style sheet file inside the <link> element. The <link> element goes inside the <head> section
- An external style sheet can be written in any text editor. The file should not contain any html tags. The style sheet file must be saved with a .css extension.

# External Style Sheet

OBJECT  
TECHNOLOGY

## mystyle.css

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

Linking with html file in the head section :

```
<head>  
<link rel="stylesheet" type="text/css" href="mystyle.css">  
</head>
```

# Internal Style Sheet

OBJECT  
Manipulation

- An internal style sheet may be used if one single page has a unique style.
- Internal styles are defined within the `<style>` element, inside the `<head>` section of an HTML page:

Example

```
<head>
<style>
body {
    background-color: linen;
}

h1 {
    color: maroon;
    margin-left: 40px;
}
</style>
</head>
```

# Inline Styles

OBJECT  
TECHNOLOGIES

- 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.

Example :

```
<h1 style="color:blue; margin-left:30px;">This is a heading.</h1>
```

# Cascading effect

## OBJECT

- Generally speaking we can say that all the styles will "cascade" into a new "virtual" style sheet by the following rules, where number one has the highest priority:

1. Inline style (inside an HTML element)
  2. External and internal style sheets (in the head section)
  3. Browser default
- So, an inline style (inside a specific HTML element) has the highest priority, which means that it will override a style defined inside the <head> tag, or in an external style sheet, or a browser default value.



# Cascading effect

OBJECT

Remember :

If some properties have been defined for the same selector (element) in different style sheets, the value from the last read style sheet will be used.

External style sheet:

```
h1 {  
    color: navy;  
}
```

Internal style sheet:

```
h1 {  
    color: orange;  
}
```

If the internal style is defined after the link to the external style sheet, the <h1> elements will be "orange".

# Cascading effect

OBJECT

```
<head>
<link rel="stylesheet" type="text/css" href="mystyle.css">
<style>
h1 {
    color: orange;
}
</style>
</head>
```

- However, if the internal style is defined before the link to the external style sheet, the <h1> elements will be "navy"

```
<head>
<style>
h1 {
    color: orange;
}
</style>
<link rel="stylesheet" type="text/css" href="mystyle.css">
</head>
```



# Advantage of style sheet

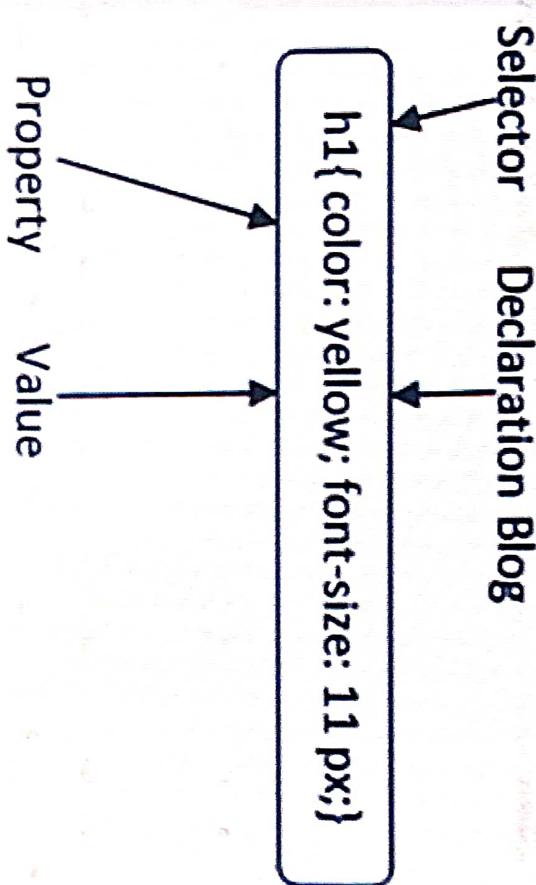
## OBJECT

- **CSS saves time** – You can write CSS once and then reuse same sheet in multiple HTML pages. You can define a style for each HTML element and apply it to as many Web pages as you want.
- **Pages load faster** – If you are using CSS, you do not need to write HTML tag attributes every time. Just write one CSS rule of a tag and apply it to all the occurrences of that tag. So less code means faster download times.
- **Easy maintenance** – To make a global change, simply change the style and all elements in all the web pages will be updated automatically.
- **Superior styles to HTML** – CSS has a much wider array of attributes than HTML, so you can give a far better look to your HTML page in comparison to HTML attributes.
- **Multiple Device Compatibility** – Style sheets allow content to be optimized for more than one type of device. By using the same HTML document, different versions of a website can be presented for handheld devices such as PDAs and cell phones or for printing.
- **Global web standards** – Now HTML attributes are being deprecated and it is being recommended to use CSS. So its a good idea to start using CSS in all the HTML pages to make them compatible to future browsers.

# CSS Syntax

## OBJECT

- A CSS rule set contains a **selector** and a **declaration block**.



- **Selector:** Selector indicates the HTML element you want to style. It could be any tag like <h1>, <title> etc.
- **Declaration Block:** The declaration block can contain one or more declarations separated by a semicolon. For the above example, there are two declarations:
  - color: yellow;
  - font-size: 11 px;

# CSS Syntax

OBJECT

- Each declaration contains a property name and value, separated by a colon.
- **Property:** A Property is a type of attribute of HTML element. It could be color, border etc.
- **Value:** Values are assigned to CSS properties. In the above example, value "yellow" is assigned to color property.
- In general syntax is as follows :

```
Selector{Property1: value1; Property2: value2; .....;}
```

## Introduction to Styles Sheets

Understanding of HTML is really incomplete unless we learn fundamentals of CSS. CSS learning is very important because it gives nice and consistent look and feel to web pages in the web application. Styling information can be written in various ways. We will understand all these different ways of style sheets in this chapter.

### Need of Style sheets

CSS stands for Cascading Style Sheets and almost all webpage's and user interfaces written with HTML use it. CSS is a style sheet language that adds styling and formatting to documents written in a markup language. The purpose of CSS is to provide Web developers with a standard way to define, apply, and manage sets of style characteristics. CSS provides these capabilities through a technical model based on a hierarchical scope of effect, the separation of style from content, and a well-defined set of published standards.

The "cascading" in Cascading Style Sheets refers to how property values are applied in the context of the parent/child hierarchy of the Web document. Child elements either inherit or override property values bound to their parent elements.

Following points can highlight the need of CSS :

1. **Easy maintenance** : To make a global change, simply change the style, and all elements in all the web pages will be updated automatically.
2. **Superior styles to HTML** : CSS has a much wider array of attributes than HTML, so you can give a far better look to your HTML page in comparison to HTML attributes.
3. **Multiple Device Compatibility** : Style sheets allow content to be optimized for more than one type of device. By using the same HTML document, different versions of a website can be presented for handheld devices such as PDAs and cell phones or for printing.
4. **Global web standards** : Now HTML attributes are being deprecated and it is being recommended to use CSS. So its a good idea to start using CSS in all the HTML pages to make them compatible to future browsers.
5. **CSS saves time** : You can write CSS once and then reuse same sheet in multiple HTML pages. You can define a style for each HTML element and apply it to as many Web pages as you want.
6. **Pages load faster** : If you are using CSS, you do not need to write HTML tag attributes every time. Just write one CSS rule of a tag and apply it to all the occurrences of that tag. So less code means faster download times.

## Types of Style Sheets

There are three ways of inserting a style sheet:

1. External style sheet
2. Internal style sheet
3. Inline style

### External CSS

With an external style sheet, you can change the look of an entire website by changing just one file! Each page must include a reference to the external style sheet file inside the `<link>` element. The `<link>` element goes inside the `<head>` section. An external style sheet can be written in any text editor. The file should not contain any html tags. The style sheet file must be saved with a `.css` extension. This css file will consist of one or more style rules.

#### Stylesheet defined as separate `.css` file

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

#### Linking external css in head section of HTML using link tag:

```
<head>  
<link rel="stylesheet" type="text/css" href="mystyle.css">  
</head>
```

Main advantage of external style sheet is we can write styles which are common to all web pages of web site in the form of external sheet. So that the same style sheet can be used across multiple pages and in future if any change needs to be incorporated, it can be done at one place.

In internal CSS the style of CSS is specified in the `<head>` section. This internal CSS, affects all the elements in the body section. Internal CSS is used in the condition when we want a style to be used in the complete HTML body i.e. nothing but page specific styling. Styling information will be written as in the form style rules.

```
<head>  
<style>  
body {
```

`background-color: linen;`

h1 {

```
color: maroon;  
margin-left: 40px;
```

1

```
</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. Example :

```
<h1 style="color:blue; margin-left:30px;">This is a heading.</h1>
```

Style rule must be defined as :

property; value;  
property1; value1

卷之三

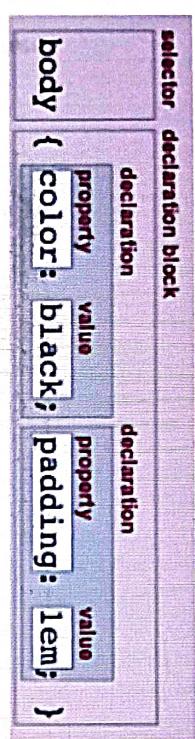
卷之三

**Style rule must be defined as :**

selector

{

```
property: value;  
property1: value1
```



Selector could be simple tag name or can use any combination of different types of selectors. All attributes are predefined and for few attributes, some set of values are predefined

e.g. border-style : solid/dashed/dotted etc.

### Cascading Effect

If some properties have been defined for the same selector (element) in different style sheets, the value from the last read style sheet will be used.

External style sheet	.	Internal style sheet
<pre>h1 {     color: navy; }</pre>	.	<pre>h1 {     color: orange; }</pre>



Please note :

- If the internal style is defined after the link to the external style sheet, the <h1> elements will be "orange".
  - However, if the internal style is defined before the link to the external style sheet, the <h1> elements will be "navy".
- Cascading effect is really in the hands of the programmer because we should use different properties for the selected elements in different types of style sheet so that we will get combined effect of all the properties for the selected element.

Cascading Effect

If some properties have been defined for the same selector (element) in different style sheets, the value from the last read style sheet will be used.

External style sheet	Internal style sheet
<pre data-bbox="1118 840 1163 1188">h1 {   color: navy; }</pre>	<pre data-bbox="1163 840 1206 1188">h1 {   color: orange; }</pre>

Please note:

- If the internal style is defined after the link to the external style sheet, the `<h1>` elements will be "orange".
  - However, if the internal style is defined before the link to the external style sheet, the `<h1>` elements will be "navy"

Cascading effect is really in the hands of the programmer because we should use different properties for the selected elements in different types of style sheet so that we will get combined effect of all the properties for the selected element.

External style sheet	Internal style sheet	Inline style sheet
<pre>p {     color: maroon; }</pre>	<pre>p {     padding-left: 5px; }</pre>	<pre>&lt;p style="letter-spacing: 3px; font-weight: bold"&gt; &lt;/p&gt;</pre>

In the above case for a particular selected paragraph, we can see effect of all the properties merged together.

## Assignments

1. Design a Web site for CDAC institute which offers various courses like DAC,WiMC,DHI etc. Also provide the information about the course syllabus, schedule ,placement opportunity, eligibility etc. Provide a form for student registration. Use images, paragraphs, links, tables etc for creating the overall designs. For all the formatting use style sheets. For example use the following :

  - o Back ground color should be pink
  - o Each paragraph must have a left margin of 50px
  - o Background color of each paragraph much be white
  - o Color of text of paragraph must be Red

## Assignments

1. Design a Web site for CDAC institute which offers various courses like DAC,WiMC,DHI etc. Also provide the information about the course syllabus, schedule ,placement opportunity, eligibility etc. Provide a form for student registration. Use images, paragraphs, links, tables etc for creating the overall designs. For all the formatting use style sheets. For example use the following :
  - o Back ground color should be pink
  - o Each paragraph must have a left margin of 50px
  - o Background color of each paragraph much be white
  - o Color of text of paragraph must be Red
  - o Font type must be veranda and size must be 12px
  - o Use different color for unvisited, visited and mouse over links.
  - o Use different styling on the basis of attributes of form? s input controls like button, textbox etc
2. Display bacground image for web page. Use different CSS attributes related with background image