

INTRODUCTION TO WEB DESIGN

CSS

What is CSS?

- ❑ CSS stands for **C**ascading **S**tyle Sheets
- ❑ **Styles** define how to display HTML elements
- ❑ Styles were added to HTML 4.0 to solve a problem

NOTE:

- External Style Sheets can save a lot of work
- External Style Sheets are stored in CSS files

Why CSS?

- HTML was never intended to contain tags for formatting a document.
- HTML was intended to define the content of a document, like:

```
<h1>This is a heading</h1>
```

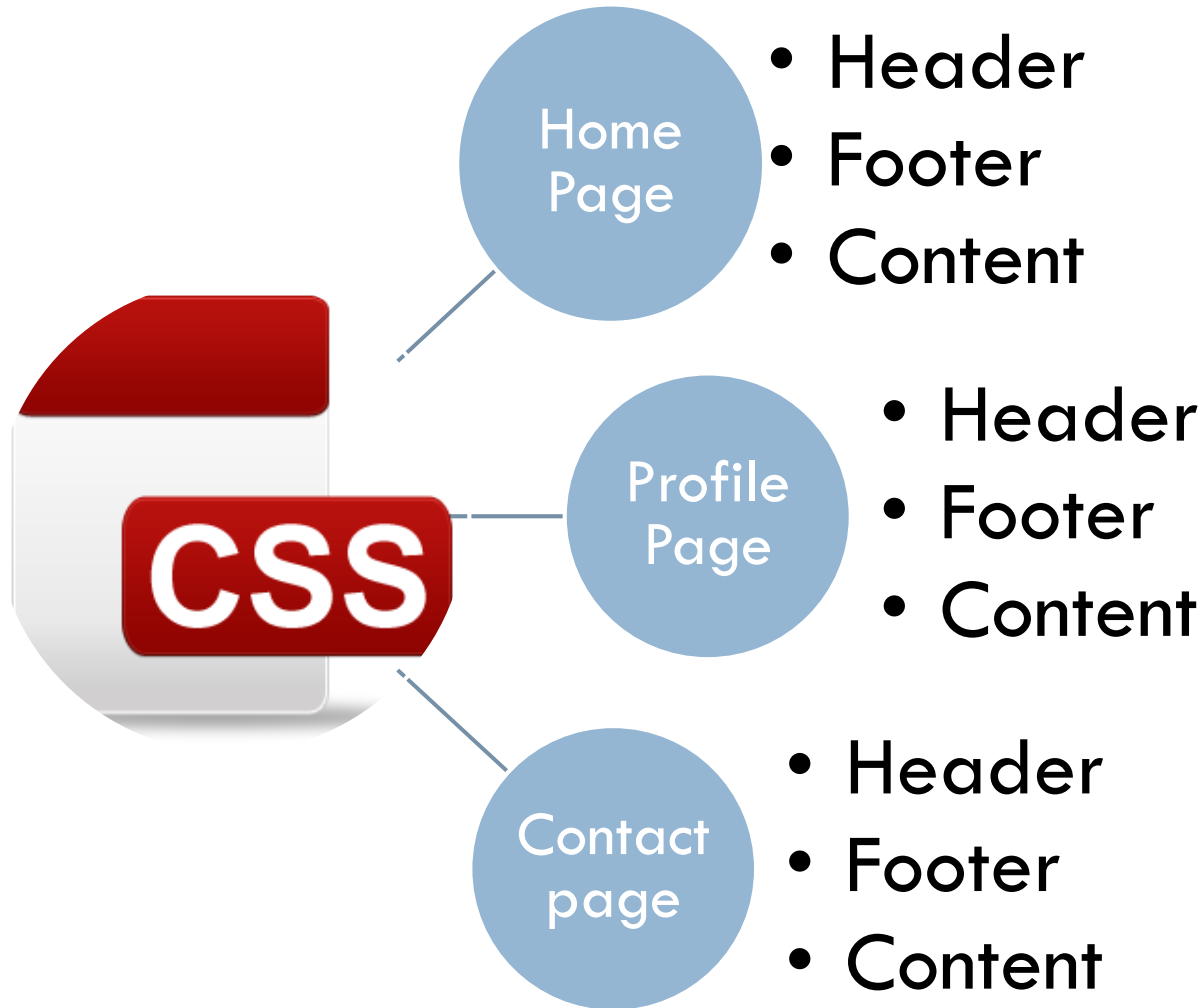
```
<p>This is a paragraph.</p>
```
- Defining styles within the HTML became a tedious work.

CSS Saves Time/ Effort

□ How?

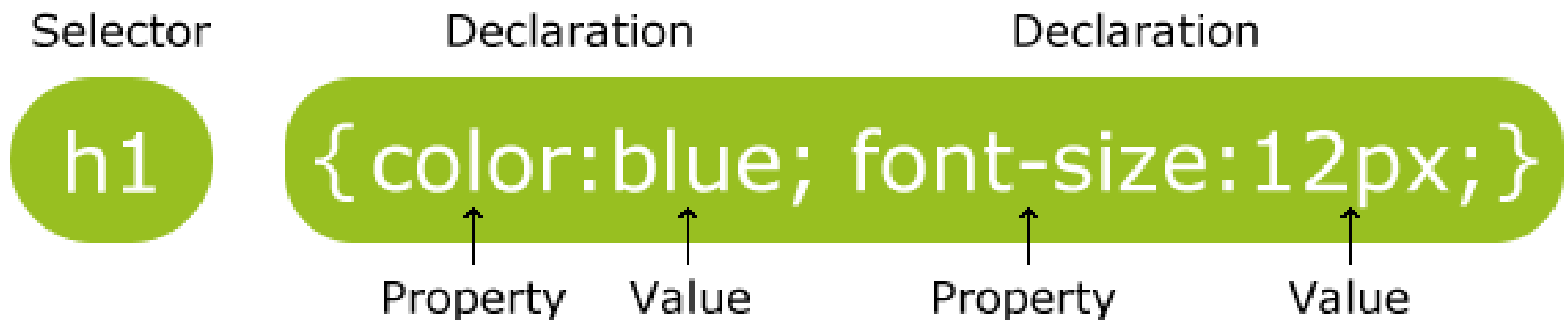
- ▣ CSS defines HOW HTML elements are to be displayed.
- ▣ Styles are normally saved in external .css files. External style sheets enable you to change the appearance and layout of all the pages in a Web site, just by editing one single file!

CSS Saves Time



CSS Syntax

- A CSS rule has two main parts:
 - ▣ A selector
 - ▣ One or more declarations:



Example

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

□ p – Selector

□ color – Property

□ red - Value

CSS Syntax

A CSS declaration always ends with a semicolon ;

Declaration groups are surrounded by curly brackets { }

```
p {  
  color:red;  
}
```


Descendant Selectors

- ❑ Selects elements based on their type.
- ❑ Example:
- ❑ `P { color : red; }`
- ❑ This will select all Paragraphs in the document and apply red color.

Custom selectors

In addition to setting a style for a HTML element, CSS allows you to specify your own selectors called "id" and "class".

□ **ID** `#main {color : blue;}`

`<p id="main">This is the main paragraph</p>`

□ **Class** `.main { color: blue;}`

`<p class="main">This is the main paragraph</p>`

#ID Selector;

- The id selector is used to specify a style for a single, unique element.
- The id selector uses the id attribute of the HTML element, and is defined with a "#".

Example:

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

.Class Selectors

The class selector is used to specify a style for a group of elements. Unlike the id selector, the class selector is most often used on several elements.

- This allows you to set a particular style for many HTML elements with the same class
- The class selector uses the HTML class attribute, and is defined with a "."

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

How to Apply CSS?

- There are three ways of inserting a style sheet:
 - External style sheet
 - Internal style sheet
 - Inline style

External Style Sheet

An external style sheet is ideal when the style is applied to many pages. With an external style sheet, you can change the look of an entire Web site by changing one file. Each page must link to the style sheet using the `<link>` tag. The `<link>` tag goes inside the head section:

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

Internal Style Sheet

- An internal style sheet should be used when a single document has a unique style. You define internal styles in the head section of an HTML page, by using the `<style>` tag, like this:

Internal Style Sheet Example

```
<head>
```

```
  <style type="text/css">
```

```
    hr {color:sienna;}
```

```
    p {margin-left:20px;}
```

```
    body {background-
```

```
      image:url("images/back40.gif");}
```

```
  </style>
```

```
</head>
```


Common CSS Properties

- Background
- Text
- Font
- Links
- List
- Table

CSS properties: Background

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

Example:

```
body {  
background-color:#b0c4de;  
background-image:url('img_tree.png');  
background-repeat:no-repeat; background-  
position:right top;  
}
```

CSS Background Properties

Property	Description
<code>background</code>	Sets all the background properties in one declaration
<code>background-attachment</code>	Sets whether a background image is fixed or scrolls with the rest of the page
<code>background-color</code>	Sets the background color of an element
<code>background-image</code>	Sets the background image for an element
<code>background-position</code>	Sets the starting position of a background image
<code>background-repeat</code>	Sets how a background image will be repeated

CSS Properties: Text Formatting

- Used for formatting the appearance of text.
- Some of the common properties for used to format text are
 - ▣ Text Alignment [text-align]
 - ▣ Text Decoration [text-decoration]
 - ▣ Text Transformation [text-transform]
 - ▣ Text Indent [text-indent]

Text formatting properties

Property	Description
color	Sets the color of text
direction	Specifies the text direction/writing direction
letter-spacing	Increases or decreases the space between characters in a text
line-height	Sets the line height
text-align	Specifies the horizontal alignment of text
text-decoration	Specifies the decoration added to text
text-indent	Specifies the indentation of the first line in a text-block
text-shadow	Specifies the shadow effect added to text
text-transform	Controls the capitalization of text
unicode-bidi	
vertical-align	Sets the vertical alignment of an element
white-space	Specifies how white-space inside an element is handled
word-spacing	Increases or decreases the space between words in a text

Font

- CSS font properties define the font family, boldness, size, and the style of a text.
- **CSS Font Families**
 - ▣ In CSS, there are two types of font family names:
 - **generic family** - a group of font families with a similar look (like "Serif" or "Monospace")
 - **font family** - a specific font family (like "Times New Roman" or "Arial")

Font Family [font-family]

- The font family of a text is set with the font-family property.
- The font-family property should hold several font names as a "fall-back" system. If the browser does not support the first font, it tries the next font.
- Start with the font you want, and end with a generic family, to let the browser pick a similar font in the generic family, if no other fonts are available.

Font family

- **Note:** If the name of a font family is more than one word, it must be in quotation marks, like font-family: "Times New Roman".
 - More than one font family is specified in a comma-separated list:
 - Example
- ```
P {
font-family:"Times New Roman", Times, serif;
}
```



# Font Style

The font-style property is mostly used to specify italic text.

- This property has three values:
  - ▣ normal - The text is shown normally
  - ▣ italic - The text is shown in italics
  - ▣ oblique - The text is "leaning" (oblique is very similar to italic, but less supported)

# Font Style: [font-style]

## □ Example:

```
p.normal {font-style:normal;}
p.italic {font-style:italic;}
p.oblique {font-style:oblique;}
```

# Font Size [font-size]

The font-size property sets the size of the text.

The font-size value can be an absolute, or relative size.

- Absolute size:

- ▣ Sets the text to a specified size
- ▣ Does not allow a user to change the text size in all browsers (bad for accessibility reasons)
- ▣ Absolute size is useful when the physical size of the output is known

- Relative size:

- ▣ Sets the size relative to surrounding elements
- ▣ Allows a user to change the text size in browsers

# Font Size

- Using pixels.

```
h1 {font-size:40px;}
```

```
h2 {font-size:30px;}
```

```
p {font-size:14px;}
```

- Using EM:

1em is equal to the current font size [16 px].

```
h1 {font-size:2.5em;}
```

```
h2 {font-size:1.875em;}
```

```
p {font-size:0.875em;}
```

# Font Size:

- Combining EM and percentage
- Example:

```
body {font-size:100%;}
```

```
h1 {font-size:2.5em;}
```

```
h2 {font-size:1.875em;}
```

```
p {font-size:0.875em;}
```

# CSS Links

- Links can be styled with any CSS property (e.g. color, font-family, background, etc.).
- Special for links are that they can be styled differently depending on what state they are in.
- The four links states are:
  - ▣ a:link - a normal, unvisited link
  - ▣ a:visited - a link the user has visited
  - ▣ a:hover - a link when the user mouses over it
  - ▣ a:active - a link the moment it is clicked

# CSS Links

```
a:link {color:#FF0000;}
/* unvisited link */
a:visited {color:#00FF00;}
/* visited link */
a:hover {color:#FF00FF;}
/* mouse over link */
a:active {color:#0000FF;}
/* selected link */
```

# Links: Text Decoration

- The text-decoration property is mostly used to remove underlines from links:

```
a:link {text-decoration:none;}
```

```
a:visited {text-decoration:none;}
```

```
a:hover {text-decoration:underline;}
```

```
a:active {text-decoration:underline;}
```



# Lists

- The CSS list properties allow you to:
  - ▣ Set different list item markers for ordered lists
  - ▣ Set different list item markers for unordered lists
  - ▣ Set an image as the list item marker

# Lists: list-style

The type of list item marker is specified with the list-style-type property:

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

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

```
ol.c {list-style-type: upper-roman;}
```

```
ol.d {list-style-type: lower-alpha;}
```

# Lists: list-style-image

- To specify an image as the list item marker, use the `list-style-image` property:

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

# Tables

- CSS can be used to greatly enhance a table

| 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  |
| The Big Cheese               | Liz Nixon          | USA     |
| Vaffeljernet                 | Palle Ibsen        | Denmark |

# Table: Border

---

```
table, th, td
{
border: 1px solid black;
}
```

# Table Width and Height

- Width and height of a table is defined by the width and height properties.
- The example below sets the width of the table to 100%, and the height of the th elements to 50px:

```
table { width:100%; }
th { height:50px; }
```

# Table: Text Align

- The text in a table is aligned with the text-align and vertical-align properties.
- The text-align property sets the horizontal alignment, like left, right, or center:

```
td
{
 text-align:right;
}
```

# Table: Text Align

The vertical-align property sets the vertical alignment, like top, bottom, or middle:

```
td
{
height:50px;
vertical-align:bottom;
}
```