junior

web
design

Lesson #2

Style Sheet

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Style sheet

(i) *Cascading Style Sheets is a style language that defines the display of CSS HTML documents.*

What can be done with CSS?

Cascading Style Sheets (CSS):
- defines the display of HTML documents.
- works with fonts and color,
- margins, lines,
- height, width,
- background images,
- designation of elements, etc.

HTML can be used to design web sites.

CSS provides great opportunities, it is more accurate and sofisticated.

CSS, to date, is supported by all browsers (*viewers*).

What is the difference between CSS and HTML?

HTML is used to structure the content of a page.

CSS – to format this content.

To meet the high demands of consumers, browser vendors (at that time *Netscape* and *Microsoft*) invented new HTML tags.

For example:

- **`<font>`** (differed from the original HTML tags in that they defined the appearance, not the structure).

This led to the fact that the original structuring tags:

- **`<table>`** – were more used for page design instead of text structuring;
- **`<blink>`** – supported only by one browser.

"You need browser X to view this page"– such a disclaimer became a common occurrence on web sites.

CSS was created to correct this situation: separation of the design and contents of the document. Web designers gained the opportunity of an accurate design, supported by all browsers.

What are the advantages of CSS?

CSS was a revolution in the world of web design.

CSS advantages:

- control the display of multiple documents using a single style sheet;
- more precise control over the appearance of the pages;
- convenient layout for different media;
- sophisticated and advanced design technique.

Combination of HTML + CSS technologies

Applying CSS to an HTML document

There are **three ways to apply CSS rules to an HTML document.**

❖ *We recommend that you focus on the third, that is, external stylesheet.*

Method 1: **In-line** (the attribute **style)**

You can apply CSS to HTML using the **HTML attribute style**.

The red background color can be set as follows:

```
1  <html>
2      <head>
3        <title>Example</title>
4      </head>
5      <body style="background-color: #FF0000;">
6        <p>This is a red page</p>
7      </body>
8  </html>
```

Method 2: **Internal** (the tag **style)**

Inserting CSS-codes – the HTML-tag <style>.

For example:

```
1  <html>
2      <head>
```

```
3        <title>Example</title>
4        <style type="text/css">
5          body {background-color: #FF0000;}
6        </style>
7      </head>
8      <body>
9        <p>This is a red page</p>
10     </body>
```
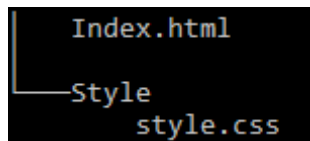
Method 3: **External** (link to a style sheet)

The recommended method _is to create a link to an external style sheet._ _This method will be used in all the following examples._

An external style sheet is a text file with the **.css** extension. You can put a style sheet on your web server or hard drive, like other files.

For example, your style sheet is named **style.css** and is located in the **style** folder. This can be illustrated as follows:

```
Index.html

└──Style
        style.css
```

You must create a link from the HTML document (index.html) to the style sheet (style.css). This can be done as a line of code. It is necessary to insert in the **section header HTML**, that is, between the <head> and </head> tags:

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

Notice how the path to your style sheet is specified using the **href** attribute. In the rest of the code it will look like this:

```
1  <html>
2      <head>
3        <title>My document</title>
4        <link rel="stylesheet" type="text/css" href="style/style.css" />
5      </head>
6      <body>
7      ...
```
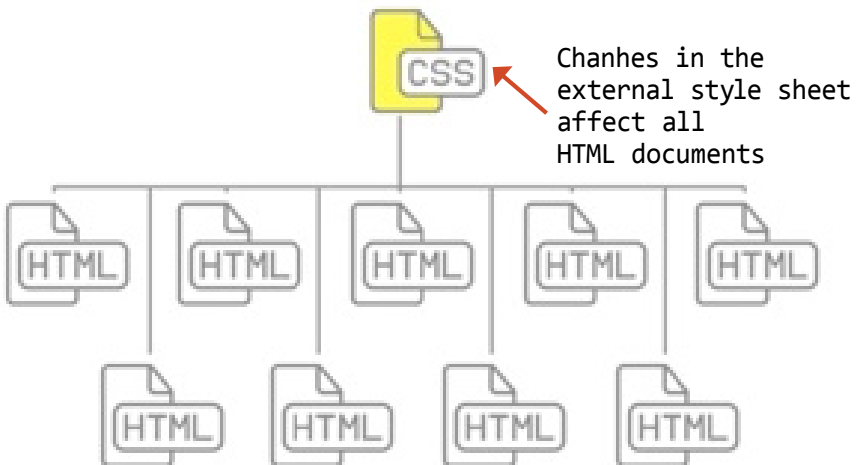
This link tells the browser that it should use the rules for displaying the HTML file from the CSS file.

It is important that several HTML documents can be linked to one style sheet. And if we want to change the color of the buttons on the site, then we can do this by changing one line of code, without making changes in each HTML file.

HTML documents linking to the same style sheet

The basics of writing styles

Foreground color: the [color] property

The **color** property describes the foreground color of the element.

1. We want to make all document headings dark red.
2. All headings are indicated by the HTML element <h1>.
3. In the code below, the color of the <h1> element is set to red.

```
1 h1 {
2    color: #ff0000;
3 }
```

Colors can be indicated as hexadecimal values (in the example (#ff0000)), or you can use the color names ("red") or rgb-values (rgb (255,0,0)). The first option is most often used. The first two digits indicate the amount of red, the third and fourth – of green, the last – of blue. All other colors can be made up of three source colors.

The [background-color] property

The **background-color** property describes the background color of the element.

The <body> element holds the entire contents of the HTML document.

To change the background color of the entire page, apply the **background-color** property to the <body> element.

But you can apply this property to other elements, for example, headings and text in a paragraph.

In this example, different background colors are applied to the <body> and <h1> elements.

```
1 body {
2    background-color: #FFCC66;
3
4 h1 {
5    color: #990000;
6    background-color: #FC9804;
7 }
```

The [font-family] property

The **font-family** property indicates the **priority font list**. They are used to **display an element or a web page**.

If the first font of the list is not installed on the computer or mobile phone used to open the site, the next font from the list is selected. Two types of names are used:

- / *family-name* and
- / *generic family*.

Family-name

The *family-name* is, for example, **Arial**, **Times New Roman** or **Tahoma**, the names of the fonts that can be found in Microsoft Word or Google Documents.

Generic family

It is a *family-names* group that has common features. An example is *sans-serif*, a set of fonts with *sans serif letters*.

When specifying fonts for your website, you:

1. Start with the preferred font;
2. Then list the alternative ones.

❖ *We recommend that you specify a generic name at the end of the list. Then the page will be displayed in the font of the same family (if all specified fonts are missing).*

The font list might look like this:

```
1 h1 {font-family: arial, verdana, sans-serif;}
2 h2 {font-family: "Times New Roman", serif;}
```

The headings <h1> will be displayed in the font **Arial**.

- If it is not installed on the user machine, **Verdana** will be used.

- If both fonts are not available, the **sans-serif** font will be used to display the headings.

> *Note that the font name **"Times New Roman"** contains spaces, so it is indicated in double quotes.*

The [font-style] property

The **font-style** property defines:

- **normal**,
- **italic**,
- or **oblique**.

In the example, all <h2> headings will be shown in *italic*.

```
1 h1 {font-family: arial, verdana, sans-serif;}
2 h2 {font-family: "Times New Roman", serif; font-style: italic;}
```

The [font-weight] property

The **font-weight** property describes how thick the font should be displayed.

The font can be **normal** or **bold**. Browsers also support numeric values from 100 to 900 (in hundreds) to describe the weight of the font.

```
1 p {font-family: arial, verdana, sans-serif;}
2 td {font-family: arial, verdana, sans-serif; font-weight: bold;}
```

The [font-size] property

The font size is set by the **font-size** property.

You can use different units of measure (for example, pixels and percentages) to describe the font size.

We will use the most frequent, for example:

```
1 h1 {font-size: 30px;}
2 h2 {font-size: 12pt;}
3 h3 {font-size: 120%;}
4 p {font-size: 1em;}
```

The [font] shorthand

Using the **font** shorthand, you can specify all font properties in one record. For example, four lines describing the font properties for <p>:

```
1   p {
2   font-style: italic;
3   font-weight: bold;
4   font-size: 30px;
5   font-family: arial, sans-serif;
6   }
```

Using the shorthand can be simplified to:

```
1   p {
2   font: italic bold 30px arial, sans-serif;
3   }
```

The order of the **font** properties is as follows:
font-style | font-variant | font-weight | font-size | font-family

The [text-indent] property

The **text-indent** property allows you to emphasize a paragraph, as in books, by indenting the first line. In the following example, each paragraph <p> begins with an indentation of **30 px**:

```
1   p {
2   text-indent: 30px;
3   }
```

The [text-align] property

The **text-align** CSS property came from older versions of HTML. The text can be aligned, as in any text editor: **left**, **right**, **center** or **justify**.

The [text-decoration] property

The **text-decoration** property allows you to add "decorative effects". For example, you can underline the text, draw a line on or above the text, etc.
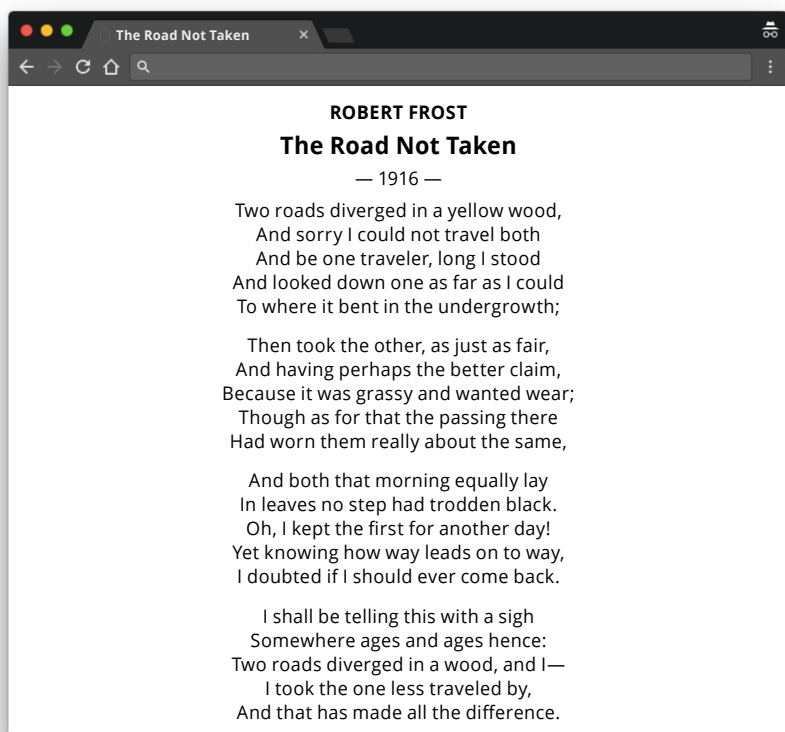
In the example, `<h1>` are underlined, `<h2>` have a line above the text, and `<h3>` are crossed out.

```
1    h1 {
2    text-decoration: underline;
3    }
4
5    h2 {
6    text-decoration: overline;
7    }
8
9    h3 {
10   text-decoration: line-through;
11   }
```
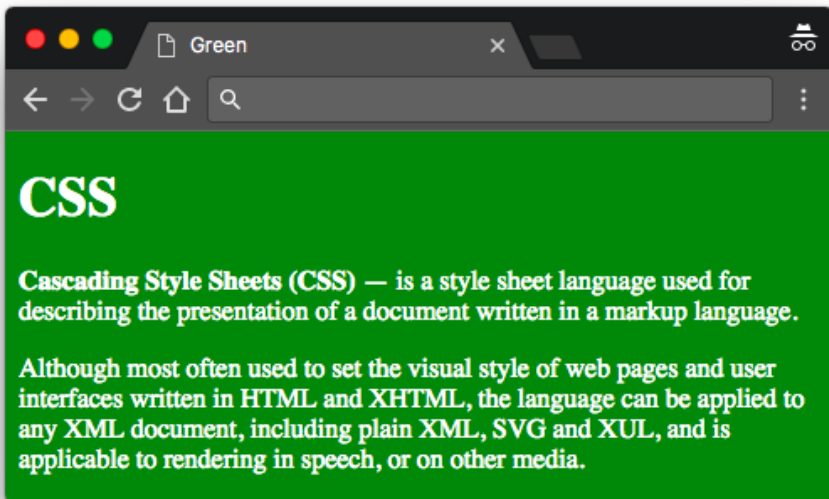
Workshop

Exercise 1

Design the poem, as shown in the picture.

ROBERT FROST

The Road Not Taken

— 1916 —

Two roads diverged in a yellow wood,
And sorry I could not travel both
And be one traveler, long I stood
And looked down one as far as I could
To where it bent in the undergrowth;

Then took the other, as just as fair,
And having perhaps the better claim,
Because it was grassy and wanted wear;
Though as for that the passing there
Had worn them really about the same,

And both that morning equally lay
In leaves no step had trodden black.
Oh, I kept the first for another day!
Yet knowing how way leads on to way,
I doubted if I should ever come back.

I shall be telling this with a sigh
Somewhere ages and ages hence:
Two roads diverged in a wood, and I—
I took the one less traveled by,
And that has made all the difference.

Exercise 2

Create a web page with a green background and white text, as shown in the figure.

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