

Lesson 2: Content and formatting separation in HTML and CSS

Lesson goal

During this lesson you should have got familiar with website formatting and layout using CSS. This is the recommended way of determining the webpage view, given the website performance and maintainability as well as the rich set of features available. From the more theoretical standpoint – those technologies provide us with an interesting example of implementing the principle of so-called separation of concerns. The processing of CSS can be considered a processing of declarative rules defined against the markup document structure. With such a style of processing, it is especially important to control the priorities between the formatting rules of various origin. Hence you should, apart from learning the particular features of the CSS, get a general understanding of the concept of *cascade*. This is how the various declarations (considering their origin, order of definition, importance, locality and specificity) combine and override to determine the final result of page formatting.

Important details to investigate

- Consider, what elements of the HTML you would need. Basically, it should suffice to introduce the purely structural and semantic elements, though you may need to apply some additional markup (like `div`, `span`, `col...`) to be able to hook the CSS definitions against them.
- Pay attention on the syntax of CSS selectors. You should be aware of the most important notions used in them (including selectors for element types, identifiers, classes (including multiple classes), pseudoclasses and pseudoelements, as well as the complex selectors describing the nested or adjacent elements).
- Check the different ways of combining CSS with the webpage (inlining in the `style` attribute, embedding in the `style` element, using the `@import` clause, using the `link` element).
- Try to experiment with mutually conflicting style definitions (within the same stylesheet or coming from another stylesheet linked with your page). Make sure you understand the rules making the particular definition “win”.

External resources in English

1. [HTML5](#) specification
2. [CSS](#) specification
3. [W3C validator for HTML, XHTML and XML](#)
4. [W3 Schools - tutorials for \(X\)HTML i CSS and others](#)
5. [CSS Puns](#) – humorous CSS statements: have fun but also try to spot and learn some new selectors and properties!

Assignment

Create well-formed and valid HTML5 document. The content of the document should be related to your chosen topic of the project. This could become the main page or the “About us” page of the website you are developing. The solution should consist of the HTML webpage and an external CSS stylesheet linked to it. The solution should include:

- CSS formatting for headings, paragraphs, table elements, ordered and unordered lists,
- CSS-defined page layout including decorations using graphical background element,
- A block containing hyperlinks and the main content block located next to each other (in contrast to their default layout, which would result in presenting them one after another), and a document footer element (occupying the full width of the page,
- an image.

Make sure you are not depending on deprecated features of HTML and do not introduce excessive markup where the proper CSS would suffice.

In addition, include in the same CSS stylesheet the media-specific formatting for printing the page. Make sure that in case of printing the following presentation changes occur:

- The navigational block with hyperlinks is omitted;
- The document content text uses a font Times or some other serif font.