

# HyperText Markup Language

## HTML & CSS



# Lesson 2

## Text formatting by means of HTML

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# Text Formatting with HTML

In the last lesson, we considered a number of tags that make up the basic structure of the html document and allow you to divide the text into basic blocks — paragraphs, headings, divs. As you know, these tags are not enough to create a full-fledged html-page, in which there are quite a lot of elements.

Today our task is to understand the classification of tags from the point of view of the space they occupy on the page and from the point of view of semantics — the logical structure of document markup.

- **There are references to files with examples and home task in the text. You can find them in the archive attached to the PDF of this lesson.**

# Block and Inline Tags

We have already examined the differences between block and line elements in the last lesson. Let us return to this question once more, because it is important when marking an html document.

**Block elements** are such HTML elements, which by default occupy all available space inside the browser or parent element, even if their content is very small. **Inline elements** are such elements that take up as much space as there are text in them, and they are placed inside the block ones. It is important to note that line elements are always located next to each other if they go in a row in the markup of the document, and block ones are to be moved to the next line. In addition, block elements are intended for structuring a page, and inline ones are used to give a specific function to a text (a link, for example) or to format this text (**<b>** or **<i>**). Another difference between block and inline tags is that block tags always contain both an opening and a closing tag, and inline tags can consist of only one opening tag (for example, **<br>** or **<img>**).

**From the standpoint** of CSS, the differences between these two groups are specified by different values of the same css property: `display: block` (for block elements) or `display: inline` (for inline elements).

Also, let's define what is a *parent element*, or a *parent container*? This is the element in which the required tag will be nested. Most often this container is the **<body>** tag, because everything that should be displayed on the html page is placed in this tag. But, if we are talking about the inline tags **<del>**

and <ins>, then most likely they will be placed in the <p> tag, which will be parent for them. Tags <del> and <ins> will be called nested, or child in this case.

Which elements apply to each of the categories?

### Block Elements

| Tag                 | Tag Assignment                                     |
|---------------------|--|
| html                | Root tag   |
| body                | Document body                                      |
| h1-h6               | Header tags  |
| p                   | Paragraph  |
| div                 | Content block                                      |
| address             | Address  |
| article             | Article  |
| aside               | Side column  |
| nav                 | Navigation on the page                             |
| main                | The main content of the web page                   |
| header              | The top of the page or section                     |
| footer              | The bottom of the page, section or block quotation |
| section             | Page section                                       |
| audio               | Insert audio                                       |
| video               | Insert video                                       |
| blockquote          | Block quotation                                    |
| caption             | Table header                                       |
| colgroup            | Defines the column group of a table                |
| table               | Table  |
| thead, tbody, tfoot | To select row groups of a table                    |
| form                | To create a form                                   |
| datalist            | Content for filling out the form field             |
| select              | Drop-down list                                     |
| fieldset            | Form field group                                   |
| legend              | Header for fieldset                                |
| dl, ul, ol          | List tags  |

| Tag        | Tag Assignment  |
|------------|---|
| canvas     | To draw graphics using JavaScript                       |
| details    | To create an interactive element                        |
| summary    | The visible part of the text of the details element     |
| figure     | The wrapper for the <img> element                       |
| figcaption | The header for the <figure> tag                         |
| map        | Interactive map   |
| iframe     | Container for loading the contents of another html-page |
| pre        | Preformatted text                                       |
| progress   | Progress indicator                                      |

### Inline Elements

| Tag                      | Tag Assignment  |
|--------------------------|---|
| a                        | Link  |
| abbr                     | Abbreviation  |
| b, strong                | Bold text   |
| i, em                    | Italic text   |
| dfn                      | Definition  |
| br                       | Line break  |
| button, input, textarea, | The button, the text field and the text area - the form elements                                    |
| label                    | Label for the form element  |
| cite                     | Title of work, reference to source  |
| code                     | To highlight program code   |
| kbd                      | Code input from the keyboard  |
| samp                     | An example of outputting something in a computer program  |
| var                      | Variable in any program   |
| col                      | Column in the table   |
| del                      | Text that has been deleted  |
| ins                      | The text that was added (often follow the <del> tag)  |
| s                        | Strikethrough text, i.e. text that is not already correct or reliable. It's better to use the <del> |

| Tag   | Tag Assignment   |
|-------|--|
| span  | Container for css-formatting of a certain amount of text |
| sub   | Subscript (H <sub>2</sub> O)                             |
| sup   | Superscript (x <sup>2</sup> )                            |
| small | Smaller text   |
| img   | Inserting images   |
| mark  | Highlighted text   |
| meter | Horizontal meter   |
| q     | Short quote  |

I immediately make a reservation that today we will look at the examples of only a part of these tags, since we simply do not have enough time for everything. In addition, some elements assume the use of several tags at once. For example, `<table>`, `<tr>`, and `<td>` tags are required to form a table, but `<caption>`, `<colgroup>`, `<col>`, `<thead>`, `<tfoot>` and `<tbody>` tags can be also used inside the table. In addition to the `<form>` tag, the `<input>`, `<textarea>`, `<select>` and `<button>` tags are usually used to create a form, and each of these elements has its own features, which we will be discussed in a separate topic.

Today, we need to understand the differences between inline and block tags and see how browsers display them when formatting an html page.

Examples can be found in separate documents:

- [Block tags](#)
- [Inline tags](#)

Topic-related links

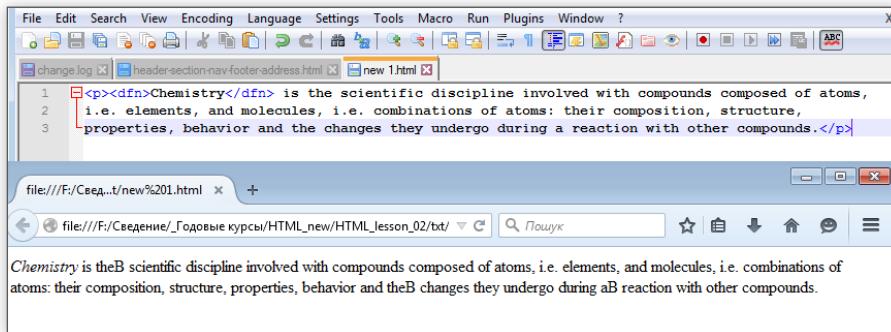
- <http://htmlreference.io/>
- [https://www.w3schools.com/html/html\\_blocks.asp](https://www.w3schools.com/html/html_blocks.asp).

# Tags of physical and logical formatting

At the beginning of the HTML development, new tags were added, which allowed, as a rule, visually changing the appearance of the text. These are **<b>** and **<i>** tags, which are used up to now and are already discussed, and which set bold and italic style of the text. There is also a **<u>** tag that underline the text, and the **<s>** tag strike it through, **<small>** makes the text smaller, and the **<sup>** and **<sub>** tags, respectively, convert the text to upper and lower indexes. Another tag — **<pre>** allows you to display text in the html-document in the form in which it was typed in a text editor, i.e. preserving all line breaks, tabs, and extra spaces.

We can say that all these tags physically change the appearance of the text on the html-page. Therefore, they are referred to the group of **physical formatting** tags.

In contrast to these tags there are **logical formatting** tags that also physically change the appearance of the text on the page, but their name contains, as a rule, a word or a part of it in English. For example, the **<del>** tag derives from the English word delete and indicates text deleted in the new version of the document or after some time. Visually, it displays the text stricken through. The **<dfn>** tag is derived from the English word definition, and is intended just for displaying any definitions. In the browser, it will be highlighted in italic text.



In HTML5, there are many logical formatting tags that define the *semantic structure of a document*. These are tags such as the header — header of a page or article, main — the main part of the document, section — a section of the document, article — an article, footer — the bottom of the document or article. These tags were introduced to replace the divs with the appropriate classes or id and define the markup logic for the page. In this case, the word **semantics**, which is very often encountered when describing html-markup in various articles, indicates the correspondence of the internal markup of the html-document and its visual formatting. From the point of view of semantics, consider page markup and search engines, and screen readers — programs for reading web pages from the screen for visually impaired people.

For example, the `<strong>` and `<em>` tags, like the `<b>` and `<i>` tags, print the text in bold or italic, but also have a semantic meaning. The text enclosed in the `<strong>` tags has the increased significance of its contents, and the text in the `<em>` tags (emphatic stress) contains an emotional emphasis on this passage of the text. In ordinary speech, we emphasize such words by voice (intonation, loudness, etc.).

It should be noted that the HTML5 standard introduced semantic content for physical formatting tags. The same **<b>** tag, already mentioned repeatedly, should be used for text that the reader should pay attention to, but without increasing the importance of text or intonation as it is for the **<strong>** tag (Link to an article). As for the **<i>** tag, it is implied that it contains a text that is out of the general environment, but not emotionally colored.

It should be noted that quite a few logical formatting tags are not used too often and on sites of a certain subject. For example, elements **<code>**, **<var>**, **<samp>**, **<kbd>**, as a rule, are used on websites devoted to one or another programming language, and **<abbr>** and **<dfn>** are more likely to be found on reference sites, providing information on any course (chemistry, physics, law, etc.). It is very convenient for such elements to describe uniform formatting rules for the entire site in css-properties.

I think that at this stage it will be quite difficult for you to understand why all these "semantic difficulties" are needed, if the text visually looks exactly the same. Nevertheless, in the process of learning HTML as a hypertext markup language, you will understand that you should pay close attention to semantics and use predominantly logical formatting tags, because they are more important for SEO<sup>1</sup>, and for screen readers able to emphasize some of the logical tags by voice.

---

<sup>1</sup> SEO (Search Engine Optimization) is a series of activities aimed at making the site appear on the first pages of search engines by certain search phrases or words. While the goal of the HTML course is not to promote the site, in fact it is very important to take into account some requirements related to SEO when designing the page, so that you do not have to re-structure the site later. Read about SEO: Wikipedia — [https://en.wikipedia.org/wiki/Search\\_engine\\_optimization](https://en.wikipedia.org/wiki/Search_engine_optimization); Google for web-masters — <https://www.google.com/intl/en/webmasters/learn/>

In order to view the use of both groups of tags, open the file tags\_start.html. Ready-made markup is in the tags.html file.

In HTML5, there are also added elements that can be conditionally referred to as interactive. These are elements such as `<details>` and `<summary>`, which allow you to display hidden content by click, and `<progress>` `<meter>`, the use of which makes sense after learning the JavaScript language since it is best to manage them in this language. Look at the appearance of these elements in the file interective.html.

# Deprecated tags and attributes

HTML, as the hypertext markup language, was repeatedly changed and had a number of standards, in which one tags were introduced and the use of others was abolished. HTML5 standard introduced many new tags, but some of those that were popular in previous versions of HTML were defined as obsolete or deprecated. Thus, the use of such tags is highly recommended in your document that supports the HTML5 standard, otherwise the document will not pass validation.

Let me remind you that the browser determines which standard your document belongs to by DOCTYPE, which is specified at the very beginning of the markup, and it looks like this for HTML5:

```
<!DOCTYPE html>
```

As for the deprecated tags and attributes it would be desirable to note that we will not consider them in detail in this course since our goal is to create a layout based on modern standards. Nevertheless, there are a lot of lessons on the Internet that were created long ago, in which these deprecated tags or attributes are used and recommended.

For example, to increase the font size, the `<big>` tag was used previously, which is now considered deprecated, but the `<small>` tag, which reduces the font size, is still used.

The same goes for the `<strike>` tag - it crossed out the text in HTML4, but it's out of date in HTML5. Instead, you can use the `<s>` tag or, better, the `<del>` tag, which indicates that

the crossed out information is obsolete or not correct at all. The same goes for the `<tt>` tag, which was previously used to display text in monospaced font.

Another example: to denote the abbreviation, it was possible to use previously two tags `<abbr>` or `<acronym>`. In the HTML5 standard, only `<abbr>` remains, and `<acronym>` becomes deprecated. This was done due to the fact that `<acronym>` tag (a conventional abbreviation that is used as an independent word, for example, the UN or DOM, or IMHO often used in comments), is different from the abbreviation (the `<abbr>` tag) by sound, but from the point of view of HTML has the same meaning, so the need to use acronyms has disappeared. For example, in the documentation of [developer.mozilla.org](https://developer.mozilla.org) you can see this message:

 **Obsolete**

This feature is obsolete. Although it may still work in some browsers, its use is discouraged since it could be removed at any time. Try to avoid using it.

## Summary

The HTML Acronym Element (`<acronym>`) allows authors to clearly indicate a sequence of characters that compose an acronym or abbreviation for a word. This element has been removed in HTML5. Use `<abbr>` element.



**Usage note:** This element has been removed in HTML5 and shouldn't be used anymore. Instead web developers should use the `<abbr>` element.

There is another deprecated tag, which for some reason is incredibly popular among students starting to learn HTML.

This is a <font> tag that allowed specifying the size, color and font family in previous standards. For example:



The HTML validator for this example produced the following error:

- Error** The `<font>` element is obsolete. Use CSS instead.  
From line 10, column 8; to line 10, column 49  
`<p><font size="5" color="red" face="Verdana">This i`

In fact, this tag earlier replaced the use of such css-properties as font-size, color and font-family. Please do not use this tag in your files. It is already so deprecated that its presence in your code is a direct indication that you do not know HTML, and you are simply too lazy to deal with css.

The same applies to attributes, which in earlier standards were used pretty often. For example, an attribute such as align had the following values: left, right, center, justify, and very often used to format text in headings, paragraphs, divs and even for text wrapping around images.

Due to the fact that all the possibilities of this attribute can be replaced with the css-property text-align or the property float for pictures, this attribute is deprecated.

Look at the list of deprecated tags and attributes in an article at [html.com](http://html.com). A screenshot with a list of tags and attributes can be viewed below.

### Deprecated Features in HTML5

- Invalid HTML
- Frames
- Applets
- <xmp> HTML Tag
- <table width="">
- <table summary="">
- <table rules="">
- <table hspace="">
- <table height="">
- <sound> HTML Tag
- <select readonly>
- <plaintext> HTML Tag
- <ol start="">
- <noembed> HTML Tag
- <multicol> HTML Tag
- <multicol width="">
- <multicol gutter="">
- <multicol cols="">
- <marquee> HTML Tag
- <listing> HTML Tag
- <input language="">
- <img suppress="">
- <img start="">
- <img nosave>
- <img naturalsizeflag="">
- <img name="">
- <img lowsrc="">
- <img loop="">
- <img hspace="">
- <img dynsrc="">
- <img controls>
- <img border="">
- <img align="">
- <hype> HTML Tag
- <frameset> HTML Tag
- <frame> HTML Tag
- <form name="">
- <font> HTML Tag
- <font weight="">
- <font size="">
- <font point-size="">
- <font face="">
- <font color="">
- <center> HTML Tag
- <caption align="">
- <body topmargin="">
- <body text="">
- <body stylesrc="">
- <body scroll="">
- <big> HTML Tag
- <bgsound> HTML Tag
- <basefont> HTML Tag
- <basefont size=""> HTML Attribute
- <basefont face=""> HTML Attribute
- <basefont color=""> HTML Attribute
- <applet> HTML Tag
- <applet width=""> HTML Attribute
- <applet vspace=""> HTML Attribute
- <applet name=""> HTML Attribute
- <applet mayscript=""> HTML Attribute
- <applet hspace=""> HTML Attribute
- <applet height=""> HTML Attribute
- <applet codebase=""> HTML Attribute
- <applet code=""> HTML Attribute
- <applet border=""> HTML Attribute
- <applet archive=""> HTML Attribute
- <applet align=""> HTML Attribute
- <app> HTML Tag
- <a name=""> HTML Attribute

If you look closely at this list, you can conclude that those tags and attributes have become deprecated, the need for which either has disappeared, or they can be replaced with css-properties.

Related Links:

- <https://developer.mozilla.org/en-US/docs/Web/HTML/Element>;
- [https://html.com/html5/#Deprecated\\_Features\\_in\\_HTML5;](https://html.com/html5/#Deprecated_Features_in_HTML5;)
- [https://html.com/invalid-html/#HTML\\_Elements\\_to\\_Stop\\_Using\\_Immediately.](https://html.com/invalid-html/#HTML_Elements_to_Stop_Using_Immediately.)

# Character Entities in HTML. Using Them in an HTML Page

You may have encountered characters in Word documents. They are usually not on the keyboard, but are inserted using a special menu item. For example, you cannot type the copyright character © or the arrow characters (↓ or ↑). The same situation is in HTML: some characters can either be copied from the text in the same Word, or added using special codes. Character entities have 2 syntax options — in the form of parts of English words or numbers, which necessarily begin with the ampersand (&) and end with a semicolon (;). You can use any of the options, but note that without a named code character entities can be displayed not completely or be displayed incorrectly in different browsers.

For example, the copyright symbol © can be represented as a character entity &copy; or &#169

In the text editor you will see a set of characters, and on the html-page they will represent only one character.

You will find tables of various characters divided by category in the [addendum](#) of this lesson. It should be noted that most of them, most likely, will never be used, but there are a number of characters, which should be known by heart, since you will apply them in different situations.

### Copyright or Trademark Signs

For example, this is the same copyright sign (copyright), without which usually any site cannot do. Most often, it is placed at the bottom of the site (footer). For example, on the official website of the STEP Academy it looks like this:



Also, the trademark (entity &trade; or &#8482) can be used next to the company name. For example:

© 2017 Audit Systems LLC ™

However, this sign is used much rarer than the copyright character.

As for the Brackets, when you enter the initial characters of the entity, a hint appears, which contains both the complete code and its appearance on the page.

```
<footer>
  <p class="copyright">&copy; 2017 LLC Audit Systems &tr</p>
</footer>
```

You can see the example in the header-section-nav.html file in the examples folder.

If the company (enterprise) for which the site is made has a registered trademark, then you can indicate the sign ® (entity &reg; or №) next to the name of this company (enterprise). For example, this entity is used on the Wikipedia site.

Wikipedia® — registered trademark of a non-profit-organization [Wikimedia Foundation, Inc.](#)

Excerpt from the page code:

```
470 <br/>
Wikipedia&reg; – registered trademark of a non-profit-organization <a href="http://wikimediafoundation.org/wiki/Приёмная">Wikimedia Foundation, Inc.</a><br /></li>
```

- **Note:** To see the code of the page opened in the browser, you can press **Ctrl + U** keys or right-click anywhere in the page to select the **View Page Code** item in the shortcut menu.

The screenshot shows a web browser window with a context menu open over a page. The menu includes standard options like Back, Forward, Reload, Save as..., Print..., Cast..., Translate to English, View page source (which is highlighted with a red box), and Inspect. Below the menu, there's a sidebar with links to Instant WebKiosk, operating systems, and a Linux kernel feature, followed by a References section with two items.

|   |                         |                 |
|---|-------------------------|-----------------|
| Instant WebKiosk  | Back                    | Alt+Left Arrow  |
| List of operating systems   | Forward                 | Alt+Right Arrow |
| Webconverger  | Reload                  | Ctrl+R          |
| zram – a Linux kernel feature   | Save as...              | Ctrl+S          |
| <b>References</b> [ edit ]  | Print...                | Ctrl+P          |
| 1. <a href="#">Pichai, Sundar (July 7, 2011). "Chrome OS". Official Google Blog</a> | Cast...                 |                 |
| July 11, 2012.  | Translate to English    |                 |
| 2. <a href="#">"Stable Channel Update for</a>                                       | <b>View page source</b> | <b>Ctrl+U</b>   |
|   | Inspect                 | Ctrl+Shift+I    |

### Using spaces and hyphens

There are situations where some phrases cannot be moved to another line by words. The most common situations are the surname and initials, the form of ownership and the name

of the company, the name of the city or village. For example, A.F. Ivanov, Stroyinvest LLC, Kharkov. In this case, for their "gluing", the non-breaking space &nbsp; or &#160; is used instead of the usual blank space. Compare the appearance of the text in the screenshot:

### **Without non-breaking space**

It should be considered that our company Stroyinvesttrade  
LLC represented by the Chief Executive Officer V.N.  
Boyko will represent all our best workings at the Expo  
2018 in January 2018 in Kharkov

### **With non-breaking space**

It should be considered that our company  
Stroyinvesttrade LLC represented by the Chief Executive  
Officer V.N. Boyko will represent all our best workings at  
the Expo 2018 in January 2018 in Kharkov

Another situation is related to the need to add hyphens between parts of words, because the text block size may be too small to accommodate long words like "recommendations". While HTML does not fully support the automatic hyphenation by syllables, although this is a matter of the near future. Now if you need to break the too long word, you can put the soft hyphen signs (&shy; or &#173;) in the right places. They should be set in accordance with the norms of the language. The number of hyphens depends on the length of the word and your needs. The soft hyphens can be used after each syllable:

Rec&shy;om&shy;men&shy;da&shy;tion

### **Soft Hyphen and Nonbreaking Space**

According to a report on the results of a sociological survey published by Microsoft in 2015, an average person aged

18 to 24 years old can focus on something for no more than 8 seconds. This is the so-called attention span, a period of continuous focus of attention. Fifteen years ago this indicator was equal 12 seconds. The goldfish has an attention span of nine seconds. That is, if we take the average "yesterday's teenager" and place him in a maze, such as those for studying the small rodents' ability to learn, then he will helplessly bang into the walls, since he is pathologically incapable of focusing attention for some time span to memorize the details of the route. And if you give him a mobile phone, he will never get out. ("What do you do when nothing is occupying your attention?" The 77% of respondents answered "I reach for my phone").

As for the automatic hyphenation, the css-property hyphens was introduced for this purpose. With the value auto when specifying the language in the lang attribute for the html tag, long words will be automatically hyphenated according to the desired dictionary. For example, the text that we previously hyphenated using the special character &shy; can now be hyphenated by specifying css-styles:

```
<html lang="ru">
...
<style>
    .hyphens {
        -moz-hyphens: auto;
        -ms-hyphens: auto;
        -webkit-hyphens: auto;
        hyphens: auto;
    }
</style>
```

The downside of this method is that such hyphens are not supported by all browsers. For example, if in Firefox text

appears with hyphens, then in Chrome we see "ragged edges" on the right side.

**Soft hyphen and non-breaking space**

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**Text source**

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**Non-breaking space**

**Without non-breaking space**

It should be considered that our company Stroyinvesttrade LLC represented by the Chief Executive Officer V.N. Boyko will represent all our best workings at the Expo 2018 in January 2018 in Kharkov

**With non-breaking space**

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**Non-breaking space**

**Without non-breaking space**

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**With non-breaking space**

It should be considered that our company Stroyinvesttrade LLC represented by the Chief Executive Officer V. N. Boyko will represent all our best workings at the Expo 2018 in January 2018 in Kharkov

## See the example in the file entities.html.

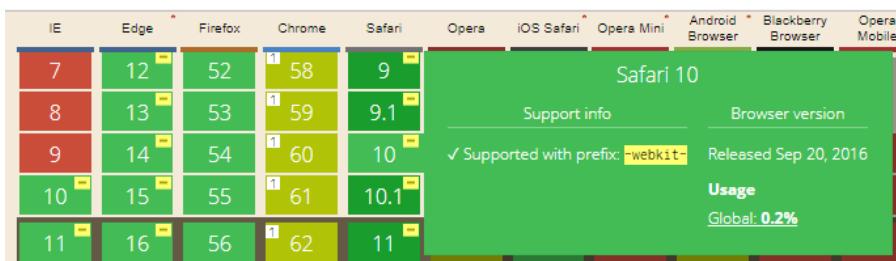
In order to be aware of how this or that css-property is supported in browsers, you can make a request at the site [caniuse.com](http://caniuse.com).

| IE | Edge | Firefox | Chrome | Safari | Opera | iOS Safari | Opera Mini | Android Browser | Blackberry Browser | Opera Mobile | Chrome for Android | Firefox for Android | IE Mobile | UC Browser for Android | Samsung Internet | QQ Browser | Baidu Browser |
|----|------|---------|--------|--------|-------|------------|------------|-----------------|--------------------|--------------|--------------------|---------------------|-----------|------------------------|------------------|------------|---------------|
| 33 | 33   | 40      | 46     | 32     | 31    | 33         | 34         |                 |                    |              |                    |                     |           |                        |                  |            |               |
| 40 | 41   | 47      | 48     | 3.1    | 3.2   | 3.5        | 3.6        | 3.2             |                    |              |                    |                     |           |                        |                  |            |               |
| 41 | 42   | 48      | 49     | 3.1    | 3.2   | 3.5        | 3.6        | 3.2             |                    |              |                    |                     |           |                        |                  |            |               |
| 42 | 43   | 49      | 50     | 4      | 5     | 37         | 4.1        |                 |                    |              |                    |                     |           |                        |                  |            |               |
| 43 | 44   | 50      | 51     | 5      | 4     | 36         | 4.1        |                 |                    |              |                    |                     |           |                        |                  |            |               |
| 44 | 45   | 51      | 52     | 5.1    | 5     | 38         | 4.3        |                 |                    |              |                    |                     |           |                        |                  |            |               |
| 45 | 46   | 52      | 53     | 6      | 6.1   | 39         | 5.1        |                 |                    |              |                    |                     |           |                        |                  |            |               |
| 46 | 47   | 53      | 54     | 6      | 6.1   | 40         | 6.1        |                 |                    |              |                    |                     |           |                        |                  |            |               |
| 47 | 48   | 54      | 55     | 7      | 7     | 41         | 7.1        |                 |                    |              |                    |                     |           |                        |                  |            |               |
| 48 | 49   | 55      | 56     | 7.1    | 7.1   | 42         | 8          |                 |                    |              |                    |                     |           |                        |                  |            |               |
| 49 | 50   | 56      | 57     | 8      | 8     | 43         | 8.4        |                 |                    |              |                    |                     |           |                        |                  |            |               |
| 50 | 51   | 57      | 58     | 9      | 9     | 44         | 9.2        |                 |                    |              |                    |                     |           |                        |                  |            |               |
| 6  | 7    | 51      | 52     | 58     | 9.1   | 45         | 9.3        |                 |                    |              |                    |                     |           |                        |                  |            |               |
| 7  | 8    | 52      | 53     | 59     | 9.1   | 45         | 9.3        |                 |                    |              |                    |                     |           |                        |                  |            |               |
| 8  | 9    | 53      | 54     | 60     | 10    | 46         | 10.2       |                 |                    |              |                    |                     |           |                        |                  |            |               |
| 9  | 10   | 54      | 55     | 61     | 10.1  | 47         | 10.3       |                 |                    |              |                    |                     |           |                        |                  |            |               |
| 10 | 11   | 55      | 56     | 61     | 10.1  | 47         | 10.3       | 4.4.4           | 7                  | 12.1         |                    |                     |           |                        |                  |            |               |
| 11 | 12   | 56      | 57     | 62     | 11    | 48         | 11         | all             | 56                 | 10           | 37                 | 61                  | 56        | 11                     | 11.4             | 5          | 1.2           |
|    |      |         |        |        | 57    | 63         | TP         | 49              |                    |              |                    |                     |           |                        |                  | 7,12       |               |
|    |      |         |        |        | 58    | 64         |            | 50              |                    |              |                    |                     |           |                        |                  |            |               |
|    |      |         |        |        | 59    | 65         |            |                 |                    |              |                    |                     |           |                        |                  |            |               |

In the screenshot you can see that the green color indicates browsers and their versions that support this property, red are those that do not support, olive means supported, but with some kind of condition (for example, Chrome started with version 55 only supports Android platforms or Mac).

The minus sign indicates that the property is supported with the so-called "vendor prefix":

- -moz — for Mozilla FireFox,
- -ms — for Internet Explorer,
- -webkit — for Safari, Chrome, and other browsers based on Chromium — the Chrome engine



## The Use of Entities

There are a lot of character entities, but I would like to emphasize two of them, which are related to the html-code. For example, on such reference sites as <http://htmlbook.ru/> or <https://webref.ru/> there are lots of code examples that you can copy into your text editor and see in reality. How can it be possible to display tags that the browser should interpret and display as text? To do this, all the angle brackets are "coded" using entities: the left corner bracket (less than sign <) — as &lt;, the right angle bracket (greater than sign >) — as &gt;.

After that, the code is displayed as plain text.

The screenshot shows two tabs: 'Values' and 'Example'. The 'Values' tab lists various entity types like Script, Color, etc. The 'Example' tab contains an HTML snippet with character entities. A tooltip from the browser highlights the entity <body> in the JSFiddle interface. The JSFiddle interface includes tabs for 'HTML' and 'Result', and a sidebar with 'Attributes' and 'Values' sections.

```
<!DOCTYPE HTML>
<html>
<head>
<meta charset="utf-8">
<title>Tag KVD</title>
<style>
  kbd {
    font-weight: bold; /* Жирное начертание */
  }
</style>
</head>
<body>

<p>After you fill the highlighted area with the background color, use the shortcut
<kbd>&lt;Alt&gt;+&lt;Backspace&gt;</kbd>
or
<kbd>&lt;Alt&gt;+&lt;Delete&gt;</kbd>.
In order to fill the highlighted area with the background color, use the shortcut
<kbd>&lt;Ctrl&gt;+&lt;Backspace&gt;</kbd> or
<kbd>&lt;Ctrl&gt;+&lt;Delete&gt;</kbd>.</p>

</body>
</html>
```

In the example in the file entities.html, you can see that the html code has ceased to be the same in a text editor due to replacing bracket with entities, but looks like the html code on the page.

```
&lt;code>
  &lt;!DOCTYPE html&gt;
  &lt;html lang="en"&gt;

    &lt;head&gt;
      &lt;meta charset="UTF-8"&gt;
      &lt;title&gt;Definition&lt;/title&gt;
    &lt;/head&gt;

    &lt;body&gt;
      &lt;p&gt;&lt;dfn&gt;Chemistry&lt;/dfn&gt; is the scientific discipline
      involved with compounds composed of atoms,
      i.e. elements, and molecules, i.e. combinations of
      atoms: their composition, structure, properties,
      behavior and the changes they undergo
      during a reaction with other compounds&lt;/p&gt;
    &lt;/body&gt;

  &lt;/html&gt;
&lt;/code>
```

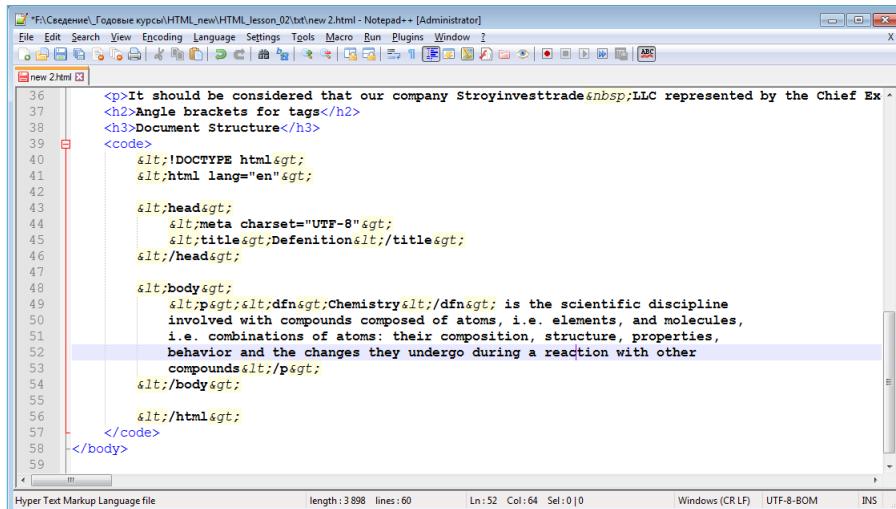
## Lesson 2. Text formatting by means of HTML

```
<code> <!DOCTYPE html> <html lang="en"> <head> <meta charset="UTF-8">
<title>Definition</title> </head> <body> <p><dfn>Chemistry</dfn> is the scientific
discipline involved with compounds composed of atoms, i.e. elements, and molecules, i.e.
combinations of atoms: their composition, structure, properties, behavior and the changes
they undergo during a reaction with other compounds</p> </body> </html> </code>
```

In order to save the appearance of text lines in the editor and on the page, you must set the following css-properties for the `<code>` tag:

```
code {
white-space: pre;
}
```

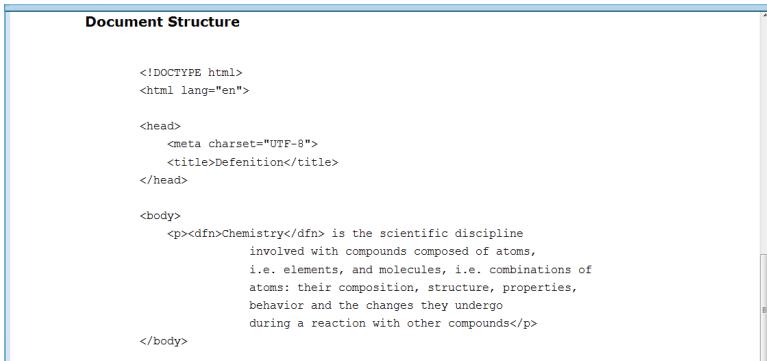
And we see that all the spaces, tabs, and line breaks are displayed on the html page.



The screenshot shows a Notepad++ window with the title bar "F:\ведение\_Годовые курсы\HTML\_new\HTML\_lesson\_02\txt\new 2.html - Notepad++ [Administrator]". The main pane displays the following HTML code:

```
36 <p>It should be considered that our company Stroyinvesttrade&nbsp;LLC represented by the Chief Ex -
37 <h2>Angle brackets for tags</h2>
38 <h3>Document Structure</h3>
39 <code>
40   <!DOCTYPE html>
41   <html lang="en">
42
43   <head>
44     <meta charset="UTF-8">
45     <title>Definitions</title>
46   </head>
47
48   <body>
49     <dfn>Chemistry</dfn> is the scientific discipline
50     involved with compounds composed of atoms, i.e. elements, and molecules,
51     i.e. combinations of atoms: their composition, structure, properties,
52     behavior and the changes they undergo during a reaction with other
53     compounds
54   </body>
55
56 </html>
57 </code>
58 </body>
```

The text within the `<code>` tag is highlighted in blue, indicating it is being displayed as code. The rest of the HTML structure is in black.



The screenshot shows a code editor window titled "Document Structure". The content is an HTML document with the following code:

```
<!DOCTYPE html>
<html lang="en">

<head>
    <meta charset="UTF-8">
    <title>Defenition</title>
</head>

<body>
    <p><dfn>Chemistry</dfn> is the scientific discipline involved with compounds composed of atoms, i.e. elements, and molecules, i.e. combinations of atoms: their composition, structure, properties, behavior and the changes they undergo during a reaction with other compounds</p>
</body>
```

Also, such angle brackets are converted into entities in CMS (content management systems) when trying to insert them into the text of the article. And in the server programming language PHP (*Hypertext Preprocessor*), which is used to create and edit a set of web sites, as well as to process these forms, for example, there is a special function for converting angle brackets into entities to prevent the insertion of malicious code. However, we will talk about this in other courses.

Sometimes you might need short (&ndash; or &#8211;) and long dashes (&mdash; and &#8212;). Probably, characters of quotes, arrows or currencies will be useful. They can either be copied from any text editor (for example, Microsoft Word) or added as an HTML entity.

All other entities are used quite rarely. Usually these are narrowly targeted sites where physical or chemical formulas should be used, and so on.

# CSS properties for text formatting

Today, we'll look at the properties that are used to break lines, to form intervals between characters or words, and to design a text.

**1. The white-space property** is responsible for displaying the spaces between words. By default, the value normal sets automatic word wraps when the right edge of the browser or the parent block is reached.

```
white-space: normal | nowrap | pre | pre-line | pre-wrap
```

The **nowrap** value does not take into account the spaces and line breaks in the HTML code, and all text is displayed as one line. In this case, a horizontal scroll bar can be added if the text does not fit the width of the parent container. Only adding the tag <br> moves the text to a new line.

The screenshot shows two windows. The top window is Notepad++ with the file 'new 2.html' open. The code is:

```

1 <!DOCTYPE html>
2 <html lang="en">
3
4 <head>
5   <meta charset="UTF-8">
6   <title>CSS-properties</title>
7   <style>
8     p {
9       white-space: nowrap;
10    }
11  </style>
12 </head>
13
14 <body>
15   kp3<dfn>Chemistry</dfn> is the scientific discipline involved with compounds composed
16
17 </body>
18
19 </html>

```

The bottom window is a web browser showing the rendered HTML. The text 'kp3<dfn>Chemistry</dfn> is the scientific discipline involved with compounds composed' is displayed as a single horizontal line, indicating that the white-space: nowrap; CSS rule has been applied.

*Chemistry is the scientific discipline involved with compound*

The pre value displays the text with all the spaces, tabs, and hyphenations that are present in the HTML code. For a too long line a horizontal scroll bar will be added in the browser.

The pre-line value does not take into account the spaces, and the text itself will be moved to the next line if it does not fit into the parent container.

The pre-wrap value saves all the spaces and hyphens that were in the text editor, but if the line does not fit the width of the parent container, the text will automatically be moved to the next line.

```
Emmet wsn, wsp, wsnw, wspl, wspw
```

**2. The word-break property** is responsible for breaking lines inside words that do not fit the intra-parent container in width. Has the following values:

```
word-break: normal | break-all | keep-all
```

The **normal** value (default) hyphenates the whole word when it reaches the right edge of the parent block

The **break-all** value adds line breaking so that the word fits into the given width of the parent block (cannot be used for text in Chinese, Korean or Japanese).

## Lesson 2. Text formatting by means of HTML

The screenshot shows a Notepad++ window with an HTML file named 'new 2.html'. The code includes a head section with meta tags and a style block containing a rule for 'p' elements to break words. The body contains a paragraph with a class 'chemical' containing the word 'Chemistry'. Below the editor is a browser preview window showing the rendered text: 'Chemistry is the scientific discipline involved with compounds composed of atoms, i.e. elements, and molecules, i.e. combinations of atoms: their composition, structure, properties'.

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <title>CSS-properties</title>
    <style>
        p {
            word-break: break-all;
        }
    </style>
</head>
<body>
    <p class="chemical"><dfn>Chemistry</dfn> is the scientific discipline involved with compounds composed of atoms, i.e. elements, and molecules, i.e. combinations of atoms: their composition, structure, properties</p>
</body>
</html>
```

The **keep-all** value prevents the line breaking for text in Chinese, Korean or Japanese. For other languages, it corresponds to normal.

Emmet: wbn, wbba, wb:ka

**3. The word-wrap property** specifies whether to wrap words that do not fit within the parent container in width. Has the following values:

word-wrap: normal | break-word

The **normal** value (default) wraps the whole word when it reaches the right edge of the parent block or in places where the **<br>** tag is added inside the text.

The **break-word** value adds the line breaking so that the word fits into the specified width of the parent block.

Emmet: wwn, wwb

**4. One of the new properties** added to the CSS3 specification is **writing-mode**, which defines the direction of text on the page — horizontal or vertical. The default value is horizontal-tb:

writing-mode: horizontal-tb | vertical-rl | vertical-lr

- The value **horizontal-tb** determines the direction of the text horizontally from top to bottom and from left to right.
  - The value **vertical-rl** determines the direction of the text vertically from top to bottom and from right to left.
  - The value **vertical-lr** determines the direction of the text vertically from top to bottom and from left to right.

Applies to all elements except for cells and table rows

Emmet :      wm

The screenshot shows the Brackets IDE interface. On the left, the code editor displays an HTML file named 'tags.html' with Emmet expansion. It contains a CSS rule for a class named 'orientation' that sets the 'writing-mode' property to 'vertical-rl'. The main content area has a `<body>` section with a `<p>` element that uses the 'orientation' class. The text inside the paragraph is oriented vertically from top to bottom. To the right of the code editor is a browser preview window titled 'Definition' showing the rendered HTML at the URL 127.0.0.1:28625/tags.html. The browser displays the same vertically oriented text.

```
tags.html (examples) - Brackets
nmet
orientation {
    writing-mode: vertical-rl;
}
</style>
</head>

<body>
<p class="orientation">Lorem ipsum dolor sit amet, consectetur adipisciing elit. Ullam vel, earum consequuntur nam qui dolorum explicabo cupiditate tempora dignissimos at consequatur molestiae, assumenda ducimus, asperiores deleniti.

```

5. The **word-spacing** property specifies the spacing between words. By default, the normal value sets the normal interval corresponding to the font parameters. You can also specify the size in any units except %:

```
word-spacing: number in px, pt, em, but not in %| normal
Emmet: wos
```

Negative values that reduce the distance between words are also supported.

In the case where the `text-align: justify` property is set for the text, the spacing between words will be set forcibly, but the value will not be less than that specified in `word-spacing`.

```
tags.html (examples) - Brackets
```

Emmet

```
.lorem {
    color: #999;
    word-spacing: 15px;
}
</style>
</head>
```

<body>

```
<p class="lorem">Lorem ipsum dolor sit amet, consectetur adipisicing elit. Nostrum voluptatem quis, culpa neque at recusandae laudantium facilis laboriosam nisi ipsam sed consequuntur quidem, earum molestias natus, quod quia deserunt soluta. Dicta repellendus sit atque optio, cum quas excepturi porro iste.
```

<p class="wrap">This paragraph

Defenition x  
127.0.0.1:28625/tags.html  
Сервисы Добавляйте на эту панель закладки, к которым...

Lorem ipsum dolor sit amet, consectetur adipisicing elit. Nostrum voluptatem quis, culpa neque at recusandae laudantium facilis laboriosam nisi ipsam sed consequuntur quidem, earum molestias natus, quod quia deserunt soluta. Dicta repellendus sit atque optio, cum quas excepturi porro iste.

This paragraph contains a very long word:  
soherewe have a very very very very very very very  
long word. There are no use

**6. The letter-spacing property** allows you to set the interval between the characters for the selector. By default, this distance is determined depending on the font. You can specify negative values, if necessary, and if this does not make the appearance ugly.

letter-spacing: number in px, pt, em, but not in % | normal

```
.lettering {
    font-family: Cambria;
    letter-spacing: 6px;
}
</style>
</head>
<body>
    <p class="lettering">Dolorum aut minus qu
    sint corporis doloribus nesciunt vitae of
    tenetur accusantium atque preferendis cor
    tempora facere ea laboriosam voluptates a
    Illum.</p>

```

```
Emmet: ltsn, lts:number  
.lettering {letter-spacing: 6px;}
```

**7. The text-transform property** allows you to change the case of text by converting characters to **uppercase** or **lowercase**. The value **none** leaves the text unchanged, and **capitalize** converts the first letters of each word to capital (more peculiar for the English language).

```
text-transform: capitalize | lowercase | uppercase | none
```

The screenshot shows a browser window with the URL `127.0.0.1:28625/tags.html`. On the left, the browser's developer tools are open, specifically the 'CSS-properties' panel. It displays the following CSS rule:

```
.transform {
    text-transform: uppercase;
}
```

Below the CSS, the HTML code is shown:

```
</head>
<body>
    <p class="transform">Officiis in cum ne  
asperiores aut tenetur a quo voluptates  
eaque veritatis laboriosam aspernatur d  
ratione dolore nemo distinctio numquam  
Nihil!</p>
```

The browser's address bar shows the URL `127.0.0.1:28625/tags.html`. The page content is displayed as:

OFFICIIS IN CUM NEQUE QUAS NATUS  
ASPERIORES AUT TENETUR A QUO  
VOLUNTATES IPSUM FACERE MAGNI  
EAQUE VERITATIS LABORIOSAM  
ASPERNATUR DELECTUS NESCIUNT  
VERO, RATIONE DOLORE NEMO  
DISTINCTIO NUMQUAM INVENTORE,  
NULLA! NIHIL!

Emmet: ttn, ttc, ttl, ttu

**8. The text-decoration property** adds text underlining (**underline** value), strikethrough (**line-through** value) or overlining (**overline** value). The value of **none** leaves the text unchanged.

```
text-decoration: underline | line-through | overline | none
```

The screenshot shows a browser window with the URL `127.0.0.1:28625/tags.html`. On the left, the browser's developer tools are open, specifically the 'CSS-properties' panel. It displays the following CSS rule:

```
.decoration {
    font-size: 1.7em;
    text-decoration: overline;
}
```

Below the CSS, the HTML code is shown:

```
</head>
<body>
    <p class="decoration">Dolorum a  
quisquam</p>
```

The browser's address bar shows the URL `127.0.0.1:28625/tags.html`. The page content is displayed as:

Dolorum aut minus quos aute  
quisquam

The text-decoration property consists of 3 properties that can be set individually or together in the integrated property text-decoration:

```
text-decoration: text-decoration-line |  
text-decoration-style | text-decoration-color
```

The text-decoration-line property defines the line type and has values as in the main property:

```
text-decoration-line: line-through | overline |  
underline | none
```

You can add multiple lines by listing values separated by commas.

The line type is defined by the text-decoration-style property:

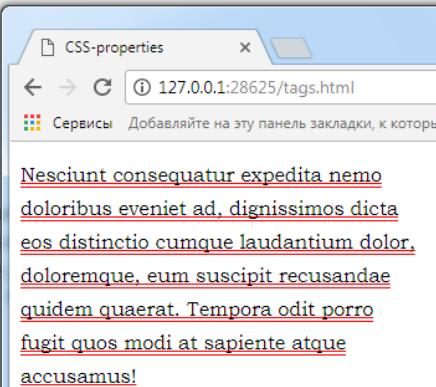
```
text-decoration-style: solid | double | dotted |  
dashed | wavy
```

The values of this property are as follows:

- solid — solid single line
- double — double line.
- dotted — dotted line.
- dashed — dashed line.
- wavy — wavy line.

The text-decoration-color property specifies the color of the line. Its values can be set in the same way as for the color property.

```
.transform2 {  
    text-decoration: double underline #f00;  
    line-height: 1.7;  
}  
</style>  
</head>  
  
<body>  
  
<p class="transform2">Nesciunt consequatur expedita nemo  
doloribus eveniet ad, dignissimos dicta  
eos distinctio cumque laudantium dolor,  
doloremque, eum suscipit recusandae  
quidem quaerat. Tempora odit porro  
fugit quos modi at sapiente atque  
accusamus!</p>
```



The screenshot shows a browser window with the URL 127.0.0.1:28625/tags.html. The page contains a single paragraph of Latin text: "Nesciunt consequatur expedita nemo doloribus eveniet ad, dignissimos dicta eos distinctio cumque laudantium dolor, doloremque, eum suscipit recusandae quidem quaerat. Tempora odit porro fugit quos modi at sapiente atque accusamus!". Each word in the paragraph is underlined with a thick red line.

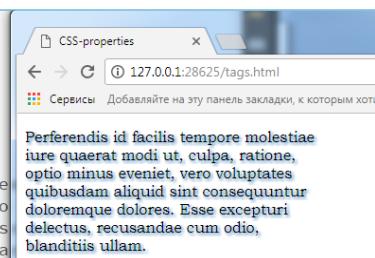
Emmet: tdn, tdlt, tdo, tdu, tdn

**9. The text-shadow property** allows you to add a shadow to the text. The values are: the horizontal offset (offX), the vertical offset (offY), the blur radius (blur), and the color (color).

By default, any text has no shadow (none).

```
text-shadow: none | offX offY blur color
```

```
.shadow {  
    text-shadow: 2px 2px 3px #176ab2;  
}  
</style>  
</head>  
  
<body>  
  
<p class="shadow">Perferendis id facilis te  
iure quaerat modi ut, culpa, ratione, optio  
vero voluptates quibusdam aliquid sint con  
dolores. Esse excepturi delectus, recusanda
```



The screenshot shows a browser window with the URL 127.0.0.1:28625/tags.html. The page contains a single paragraph of Latin text: "Perferendis id facilis te iure quaerat modi ut, culpa, ratione, optio minus eveniet, vero voluptates quibusdam aliquid sint consequuntur doloremque dolores. Esse excepturi delectus, recusandae cum odio, blanditiis ullam.". The word "Perferendis" is shadowed with a blue blur effect.

You can add multiple shadows by listing their parameters with a comma.

```
text-shadow: offX1 offY1 blur1 color1, offX2 offY2  
            blur2 color2, offX3 offY3 blur3 color3;
```



```
.shadow2 {  
    padding: 15px;  
    color: #333;  
    font-size: 2.5em;  
    text-shadow: 1px 1px white,  
                2px 2px #777;  
}  
</style>  
</head>  
<body>  
    <p class="shadow2">Officiis illo quis odio.
```

Emmet: ts

You can look at the css-properties in the file css-properties.html.

# Home Assignment

In the homework you will need to format the text of the article (use the <article> tag) using different tags and css-styles. Note that the font on the page is sans serif, and the size of the article is reduced in comparison with the size of the browser. At the moment we will not consider in detail how to do this, but simply use the following css properties:

```
article {  
    width: 90%;  
    margin: auto;  
}
```

This will reduce the width of the article and center it in the browser.

Note that in the text there is often the bold style, including the color emphasis (red, yellow, green, etc.). Think about which inline elements can be used for html-markup and do not forget to specify different classes for color characteristics.

You can find the task in the archive HW2. There is a text file and an image with the final appearance of the article.

# Assignment

## HTML SPECIAL ENTITIES

### Trademarks & Copyright

|   |         |         |                      |
|---|---------|---------|----------------------|
| © | &copy;  | &#169;  | Copyright Sign       |
| ® | &reg;   | &#174;  | Registered Trademark |
| ™ | &trade; | &#8482; | Trademark            |

### Signs of Hyphenation and Special Signs

|     |          |         |                     |
|-----|----------|---------|---------------------|
| %   | &permil; | &#8240; | Per Thousand Sign   |
| π   | &pi;     | &#960;  | Pi Sign             |
|     | &brvbar; | &#166;  | Broken Vertical Bar |
| §   | &sect;   | &#167;  | Section             |
| °   | &deg;    | &#176;  | Degree              |
| µ   | &micro;  | &#181;  | Micro Sign          |
| ¶   | &para;   | &#182;  | Paragraph Sign      |
| ... | &hellip; | &#8230; | Ellipsis            |
| -   | &oline;  | &#8254; | Overline            |
| –   | &ndash;  | &#8211; | En-Dash             |
| —   | &mdash;  | &#8212; | Em-Dash             |
| '   | &acute;  | &#180;  | Acute Accent        |
| Nº  |          | &#8470; | Number Sign         |
|     | &shy;    | &#173;  | Soft Hyphen         |
|     | &nbsp;   | &#160;  | Non-Breaking Space  |
|     | &ensp;   | &#8194; | En-Space            |
|     | &emsp;   | &#8195; | Em-Space            |

### Currency Signs

|   |        |         |      |
|---|--------|---------|------|
| € | &euro; | &#8364; | Euro |
| ¢ | &cent; | &#162;  | Cent |

|   |           |        |                   |
|---|-----------|--------|-------------------|
| £ | &pound;   | &#163; | Pound             |
| ¤ | &current; | &#164; | Currency Sign     |
| ¥ | &yen;     | &#165; | Yen And Yuan Sign |
| ƒ | &fnof;    | &#402; | Florin Sign       |

## Quotation Signs

|   |         |         |  |
|---|---------|---------|--|
| " | &quot;  | &#34;   | Double Quotes                              |
| & | &amp;   | &#38;   | Ampersand                                  |
| « | &laquo; | &#171;  | Double Left-Pointing Angle Quotation Mark  |
| » | &raquo; | &#187;  | Double Right-Pointing Angle Quotation Mark |
| < |         | &#8249; | Single Left-Pointing Angle Quotation Mark  |
| > |         | &#8250; | Single Right-Pointing Angle Quotation Mark |
| ' | &prime; | &#8242; | Prime                                      |
| " | &Prime; | &#8243; | Double Prime                               |
| ' | &lsquo; | &#8216; | Left Single Quotation Mark                 |
| ' | &rsquo; | &#8217; | Right Single Quotation Mark                |
| , | &sbquo; | &#8218; | Single Low-9 Quotation Mark                |
| “ | &ldquo; | &#8220; | Left Double Quotation Mark                 |
| ” | &rdquo; | &#8221; | Right Double Quotation Mark                |
| „ | &bdquo; | &#8222; | Double Low-9 Quotation Mark                |

## Markers

|   |          |         |               |
|---|----------|---------|---------------|
| • | &bull;   | &#8226; | Bullet        |
| ○ |          | &#9675; | White Circle  |
| · | &middot; | &#183;  | Middle Dot    |
| † |          | &#8224; | Dagger        |
| ‡ |          | &#8225; | Double Dagger |
| ♠ | &spades; | &#9824; | Spades        |
| ♣ | &clubs;  | &#9827; | Clubs         |
| ♥ | &hearts; | &#9829; | Hearts        |
| ♦ | &diams;  | &#9830; | Diamonds      |

|   |       |          |                    |
|---|-------|----------|--------------------|
| ◊ | &loz; | &#9674;  | Lozenge            |
| ✏ |       | &#9999;  | Pencil             |
| ✏ |       | &#9998;  | Lower Right Pencil |
| ✏ |       | &#10000; | Upper Right Pencil |
| ✍ |       | &#9997;  | Writing Hand       |
| ♥ |       | &10084   | Heavy Black Heart  |

## Mathematical Signs

|               |          |         |                          |
|---------------|----------|---------|--------------------------|
| ×             | &times;  | &#215;  | Multiplication           |
| ÷             | &divide; | &#247;  | Division                 |
| <             | &lt;     | &#60;   | Less Than Sign           |
| >             | &gt;     | &#62;   | Greater Than Sign        |
| ±             | &plusmn; | &#177;  | Plus/Minus               |
| <sup>1</sup>  | &sup1;   | &#185;  | Superscript 1            |
| <sup>2</sup>  | &sup2;   | &#178;  | Superscript 2            |
| <sup>3</sup>  | &sup3;   | &#179;  | Superscript 3            |
| ¬             | &not;    | &#172;  | Not Sign                 |
| $\frac{1}{4}$ | &frac14; | &#188;  | Fraction One Quarter     |
| $\frac{1}{2}$ | &frac12; | &#189;  | Fraction One Half        |
| $\frac{3}{4}$ | &frac34; | &#190;  | Fraction Three Quarters  |
| /             | &frasl;  | &#8260; | Fraction Slash           |
| -             | minus;   | &#8722; | Minus                    |
| $\leq$        | &le;     | &#8804; | Less-Than Or Equal To    |
| $\geq$        | &ge;     | &#8805; | Greater-Than Or Equal To |
| $\approx$     | &asymp;  | &#8776; | Almost Equal To          |
| $\neq$        | &ne;     | &#8800; | Not Equal To Sign        |
| $\equiv$      | &equiv;  | &#8801; | Identical To             |
| $\sqrt{ }$    | &radic;  | &#8730; | Square Root              |
| $\infty$      | &infin;  | &#8734; | Infinity                 |
| $\sum$        | &sum;    | &#8721; | N-Ary Summation          |
| $\prod$       | &prod;   | &#8719; | N-Ary Product            |

## Lesson 2. Text formatting by means of HTML

|               |          |         |                                   |
|---------------|----------|---------|-----------------------------------|
| $\partial$    | &part;   | &#8706; | Partial Differential              |
| $\int$        | &int;    | &#8747; | Integral                          |
| $\forall$     | &forall; | &#8704; | For All                           |
| $\exists$     | &exist;  | &#8707; | There Exists                      |
| $\square$     | &empty;  | &#8709; | Empty Set                         |
| $\emptyset$   | &Oslash; | &#216;  | Uppercase O With Slash (Diameter) |
| $\in$         | &isin;   | &#8712; | Element Of                        |
| $\notin$      | &notin;  | &#8713; | Not An Element Of                 |
| $\ni$         | &ni;     | &#8727; | Contains As Member                |
| $\subset$     | &sub;    | &#8834; | Subset Of                         |
| $\supset$     | &sup;    | &#8835; | Superset Of                       |
| $\not\subset$ | &nsub;   | &#8836; | Not A Subset Of                   |
| $\subseteq$   | &sube;   | &#8838; | Subset Of Or Equal To             |
| $\supseteq$   | &supe;   | &#8839; | Superset Of Or Equal To           |
| $\oplus$      | &oplus;  | &#8853; | Circled Plus                      |
| $\otimes$     | &otimes; | &#8855; | Circled Times                     |
| $\perp$       | &perp;   | &#8869; | Up Tack                           |
| $\angle$      | &ang;    | &#8736; | Angle                             |
| $\wedge$      | &and;    | &#8743; | Logical And                       |
| $\vee$        | &or;     | &#8744; | Logical Or                        |
| $\cup$        | &cup;    | &#8746; | Union                             |
| $\cap$        | &cap;    | &#8745; | Intersection                      |

### Arrows

|                        |         |         |                             |
|------------------------|---------|---------|-----------------------------|
| $\leftarrow$           | &larr;  | &#8592; | Left Arrow                  |
| $\uparrow$             | &uarr;  | &#8593; | Up Arrow                    |
| $\rightarrow$          | &rarr;  | &#8594; | Right Arrow                 |
| $\downarrow$           | &darr;  | &#8595; | Down Arrow                  |
| $\leftrightarrow$      | &harr;  | &#8596; | Left-Right Arrow            |
| $\updownarrow$         |         | &#8597; | Up-Down Arrow               |
| $\downarrow\leftarrow$ | &crarr; | &#8629; | Down Arrow With Corner Left |

|   |        |         |                               |
|---|--------|---------|-------------------------------|
| ← | &lArr; | &#8656; | Left Double Arrow             |
| ↑ | &uArr; | &#8657; | Up Double Arrow               |
| ⇒ | &rArr; | &#8658; | Right Double Arrow            |
| ↓ | &dArr; | &#8659; | Down Double Arrow             |
| ↔ | &hArr; | &#8660; | Left Right Double Arrow       |
| ↕ |        | &#8661; | Up Down Double Arrow          |
| ▲ |        | &#9650; | Black Up-Pointing Triangle    |
| ▼ |        | &#9660; | Black Down-Pointing Triangle  |
| ► |        | &#9658; | Black Right-Pointing Triangle |
| ◄ |        | &#9668; | Black Left-Pointing Triangle  |

## Stars, snowflakes

|   |          |  |
|---|----------|--|
| ☃ | &#9731;  | Snowman  |
| ❄ | &#10052; | Snowflake                                      |
| ✿ | &#10053; | Tight Trifoliate Snowflake                     |
| ❀ | &#10054; | Heavy Chevron Snowflake                        |
| ★ | &#9733;  | Black Star                                     |
| ☆ | &#9734;  | White Star                                     |
| ◐ | &#10026; | Circled White Star                             |
| ☆ | &#10027; | Open Centre Black Star                         |
| ☆ | &#10031; | Pinwheel Star                                  |
| ☆ | &#9885;  | Outlined White Star                            |
| ○ | &#9898;  | Medium White Circle                            |
| ● | &#9899;  | Medium Black Circle                            |
| * | &#9913;  | Sextile  |
| ✳ | &#10037; | Eight Pointed Pinwheel Star                    |
| ✿ | &#10057; | Balloon-Spoked Asterisk                        |
| ❀ | &#10059; | Heavy Eight Teardrop-Spoked Propeller Asterisk |
| ✳ | &#10042; | Sixteen Pointed Asterisk                       |
| ✳ | &#10041; | Twelve Pointed Black Star                      |

|   |          |  |
|---|----------|--|
| ★ | &#10040; | Heavy Eight Pointed Rectilinear Black Star |
| ★ | &#10038; | Six Pointed Black Star                     |
| ★ | &#10039; | Eight Pointed Rectilinear Black Star       |
| ★ | &#10036; | Eight Pointed Black Star                   |
| * | &#10035; | Eight Spoked Asterisk                      |
| ※ | &#10034; | Open Centre Asterisk                       |
| ＊ | &#10033; | Heavy Asterisk                             |
| ◇ | &#10023; | White Four Pointed Star                    |
| ◆ | &#10022; | Black Four Pointed Star                    |
| ⌚ | &#9055;  | Apl Functional Symbol Circle Star          |
| ⌚ | &#8859;  | Circled Asterisk Operator                  |

## Clocks, Time

|   |         |                             |
|---|---------|-----------------------------|
| ⌚ | &#9200; | Alarm Clock                 |
| ⌚ | &#8986; | Watch                       |
| ⌛ | &#8987; | Hourglass                   |
| ⏳ | &#9203; | Hourglass With Flowing Sand |

## Greek Alphabet

| Lowercase |           | Uppercase |           | Description |
|-----------|-----------|-----------|-----------|-------------|
| Symbol    | HTML-code | Symbol    | HTML-code |             |
| α         | &alpha;   | Α         | &Alpha;   | Alpha       |
| β         | &beta;    | Β         | &Beta;    | Beta        |
| γ         | &gamma;   | Γ         | &Gamma;   | Gamma       |
| δ         | &delta;   | Δ         | &Delta;   | Delta       |
| ε         | &epsilon; | Ε         | &Epsilon; | Epsilon     |
| ζ         | &zeta;    | Ζ         | &Zeta;    | Zeta        |
| η         | &eta;     | Η         | &Eta;     | Eta         |
| θ         | &theta;   | Θ         | &Theta;   | Theta       |
| ι         | &iota;    | Ι         | &lota;    | Iota        |
| κ         | &kappa;   | Κ         | &Kappa;   | Kappa       |

| Lowercase |           | Uppercase |           | Description |
|-----------|-----------|-----------|-----------|-------------|
| Symbol    | HTML-code | Symbol    | HTML-code |             |
| λ         | &lambda;  | Λ         | &Lambda;  | Lambda      |
| μ         | &mu;      | Μ         | &Mu;      | Mu          |
| ν         | &nu;      | Ν         | &Nu;      | Nu          |
| ξ         | &xi;      | Ξ         | &Xi;      | Xi          |
| ο         | &omicron; | Ο         | &Omicron; | Omicron     |
| π         | &pi;      | Π         | &Pi;      | Pi          |
| ρ         | &rho;     | Ρ         | &Rho;     | Rho         |
| σ         | &sigma;   | Σ         | &Sigma;   | Sigma       |
| ς         | &sigmaf;  |           |           | Final Sigma |
| τ         | &tau;     | Τ         | &Tau;     | Tau         |
| υ         | &upsilon; | Υ         | &Upsilon; | Upsilon     |
| φ         | &phi;     | Φ         | &Phi;     | Phi         |
| χ         | &chi;     | Χ         | &Chi;     | Chi         |
| ψ         | &psi;     | Ψ         | &Psi;     | Psi         |
| ω         | &omega;   | Ω         | &Omega;   | Omega       |

## Латинский алфавит

| Lowercase |           |        | Uppercase |           |        | Description       |
|-----------|-----------|--------|-----------|-----------|--------|-------------------|
| Symbol    | HTML-code | Code   | Symbol    | HTML-code | Code   |                   |
| à         | &agrave;  | &#224; | À         | &Agrave;  | &#192; | A With Grave      |
| á         | &aacute;  | &#225; | Á         | &Aacute;  | &#193; | A With Acute      |
| â         | &acirc;   | &#226; | Â         | &Acirc;   | &#194; | A With Circumflex |
| ã         | &atilde;  | &#227; | Ã         | &Atilde;  | &#195; | A With Tilde      |
| ä         | &auml;    | &#228; | Ä         | &Auml;    | &#196; | A With Diaeresis  |
| å         | &aring;   | &#229; | Å         | &Aring;   | &#197; | A With Ring Above |
| æ         | &aelig;   | &#230; | Æ         | &AElig;   | &#198; | AE symbols        |
| ç         | &ccedil;  | &#231; | Ç         | &Ccedil;  | &#199; | C With Cedilla    |
| è         | &egrave;  | &#232; | È         | &Egrave;  | &#200; | E With Grave      |
| é         | &eacute;  | &#233; | É         | &Eacute;  | &#201; | E With Acute      |

## Lesson 2. Text formatting by means of HTML

| Lowercase |           |        | Uppercase                              |           |        | Description         |
|-----------|-----------|--------|--|-----------|--------|---------------------|
| Symbol    | HTML-code | Code   | Symbol                                 | HTML-code | Code   |                     |
| ê         | &ecirc;   | &#234; | Ê                                      | &Ecirc;   | &#202; | E With Circumflex   |
| ë         | &euml;    | &#235; | Ë                                      | &Euml;    | &#203; | E With Diaeresis    |
| ì         | &igrave;  | &#236; | Ì                                      | &lgrave;  | &#204; | I With Grave        |
| í         | &iacute;  | &#237; | Í                                      | &iacute;  | &#205; | I With Acute        |
| î         | &icirc;   | &#238; | Î                                      | &lcirc;   | &#206; | I With Circumflex   |
| ï         | &iuml;    | &#239; | Ï                                      | &luml;    | &#207; | I With Diaeresis    |
| ð         | &eth;     | &#240; | Ð                                      | &ETH;     | &#208; | Eth (D with dash)   |
| ñ         | &ntilde;  | &#241; | Ñ                                      | &Ntilde;  | &#209; | N With Tilde        |
| ò         | &ograve;  | &#242; | Ò                                      | &Ograve;  | &#210; | O With Grave        |
| ó         | &oacute;  | &#243; | Ó                                      | &Oacute;  | &#211; | O With Acute        |
| ô         | &ocirc;   | &#244; | Ô                                      | &Ocirc;   | &#212; | O With Circumflex   |
| õ         | &otilde;  | &#245; | Õ                                      | &Otilde;  | &#213; | O With Tilde        |
| ö         | &ouml;    | &#246; | Ö                                      | &Ouml;    | &#214; | O With Diaeresis    |
| ÷         | &divide;  | &#247; | ×                                      | &times;   | &#215; | Multiplication Sign |
| ø         | &oslash;  | &#248; | Ø                                      | &Oslash;  | &#216; | O With Stroke       |
| ù         | &ugrave;  | &#249; | Ù                                      | &Ugrave;  | &#217; | U With Grave        |
| ú         | &uacute;  | &#250; | Ú                                      | &Uacute;  | &#218; | U With Acute        |
| û         | &ucirc;   | &#251; | Û                                      | &Ucirc;   | &#219; | U With Circumflex   |
| ü         | &uuml;    | &#252; | Ü                                      | &Uuml;    | &#220; | U With Diaeresis    |
| ý         | &yacute;  | &#253; | Ý                                      | &Yacute;  | &#221; | Y With Acute        |
|           |           |        | Þ                                      | &THORN;   | &#222; | THORN               |
| f         | &fnof;    | &#402; | Latin Small Letter F With Hook- Florin |           |        |                     |
| œ         | &oelig;   | &#339; | Œ                                      | &OElig;   | &#338; | Ligature OE         |
| š         | &scaron;  | &#353; | Š                                      | &Scaron;  | &#352; | S With Caron        |
|           |           |        | Ÿ                                      | &Yuml;    | &#376; | Y With Diaeresis    |

### Cards

|   |          |         |        |
|---|----------|---------|--------|
| ♠ | &spades; | &#9824; | Spades |
| ♣ | &clubs;  | &#9827; | Clubs  |

|   |          |         |          |
|---|----------|---------|----------|
| ♥ | &hearts; | &#9829; | Hearts   |
| ♦ | &diams;  | &#9830; | Diamonds |

## Zodiac Signs

|   |         |             |
|---|---------|-------------|
| ♈ | &#9800; | Aries       |
| ♉ | &#9801; | Taurus      |
| ♊ | &#9802; | Gemini      |
| ♋ | &#9803; | Cancer      |
| ♌ | &#9804; | Leo         |
| ♍ | &#9805; | Virgo       |
| ♎ | &#9806; | Libra       |
| ♏ | &#9807; | Scorpio     |
| ♐ | &#9808; | Sagittarius |
| ♑ | &#9809; | Capricorn   |
| ♒ | &#9810; | Aquarius    |
| ♓ | &#9811; | Pisces      |

## Chess Symbols

|   |         |                    |
|---|---------|--------------------|
| ♔ | &#9812; | White Chess King   |
| ♕ | &#9813; | White Chess Queen  |
| ♖ | &#9814; | White Chess Rook   |
| ♗ | &#9815; | White Chess Bishop |
| ♘ | &#9816; | White Chess Knight |
| ♙ | &#9817; | White Chess Pawn   |
| ♚ | &#9818; | Black Chess King   |
| ♛ | &#9819; | Black Chess Queen  |
| ♜ | &#9820; | Black Chess Rook   |
| ♝ | &#9821; | Black Chess Bishop |
| ♞ | &#9822; | Black Chess Knight |
| ♟ | &#9723; | Black Chess Pawn   |

## BLOCK TAGS

**<address> Text </address>**

**Attribute:** universal.

**Description:**

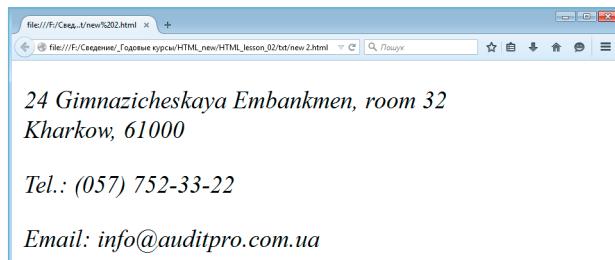
Used to display contact information about the author of this article or site and can include such HTML-elements as links, address, author's name, and other text reporting some author's data.

If the `<address>` tag is inside the `<body>`, then the data refers to the entire document, if it is inside the `<article>` tag, then the information applies to the author of the article.

By default, the text inside the `<address>` container is displayed in italics.

**Example:**

```
<address>
    <p>24 Gimnazicheskaya Embankmen,
       room 32<br>Kharkow, 61000</p>
    <p>Tel.: (057) 752-33-22</p>
    <p>Email: info@auditpro.com.ua</p>
</address>
```



View the file header-section-nav-footer-address.html.

## <blockquote> Text </blockquote>

**Attribute:** cite — address, which specifies the source of the quote.

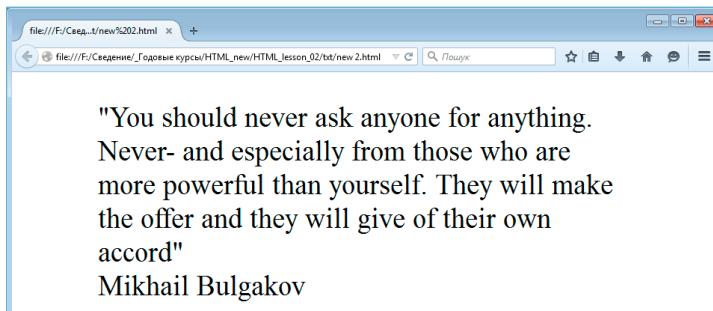
### Description:

Designed to highlight long quotes within the document. The text indicated by this tag is traditionally displayed as a justified block with left and right indents (approximately 40 pixels), and also with a top and bottom interval.

**Note:** to highlight short quotations that are part of the current paragraph, use the <q> tag.

### Example:

```
<blockquote cite="https://citaty.info/quote/554">
    "You should never ask anyone for anything.
    Never- and especially from those who are more
    powerful than yourself. They will make the offer
    and they will give of their own accord"
    <footer>Mikhail Bulgakov</footer>
</blockquote>
```



View the file tags.html

## <div> Text </div>

**Attribute:** universal.

### Description:

<div> is a "brick" element for creating a document structure, for example, for building multiple columns. Has no indents, compared to <p>. All formatting is specified using css-styles, in which the selectors for the <div> tag are .class or #id.

You can not put it in <p>.

### Example:

```
<div class="block">
    Lorem ipsum dolor sit amet, consectetur adipisicing elit. Adipisci iure, deserunt tenetur facilis earum veritatis.
</div>
<div class="block">
    Veniam mollitia minus ab, hic, sint illo inventore neque quod perspiciatis explicabo. A, impedit, earum.
</div>
```

Lorem ipsum dolor sit amet,  
consectetur adipisicing elit. Adipisci  
iure, deserunt tenetur facilis earum  
veritatis.

Veniam mollitia minus ab, hic, sint  
illo inventore neque quod  
perspiciatis explicabo. A, impedit,  
earum.

**<h1> Text </h1> ... <h6> Text </h6>**

**Attribute:** universal.

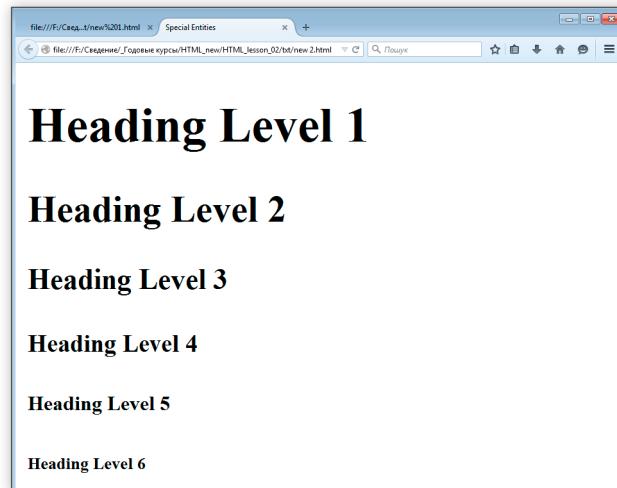
**Description:**

They are intended for designing headings on a web page. Each of the headings has a certain weight (importance), which is determined by the figure after the letter h, i.e. **<h1>** is the most important of headings, and **<h6>** is the least significant one.

The text enclosed inside any heading is displayed in bold and has a different size, decreasing as the number increases.

**Example:**

```
<h1>Heading Level 1</h1>
<h2>Heading Level 2</h2>
<h3>Heading Level 3</h3>
<h4>Heading Level 4</h4>
<h5>Heading Level 5</h5>
<h6>Heading Level 6</h6>
```



**<header> Text and other <tags> </header>**

**Attribute:** universal.

**Description:**

Usually placed at the top of the document, article or section. This element contains navigation, headers, and also some input content. This tag can be placed inside `<article>` or `<section>`, but more often it starts the mark-up of the whole html-page. In this case, the site heading and logo, the menu, the main heading (`<h1>`), the search form and so on are placed inside the `<header>` element.

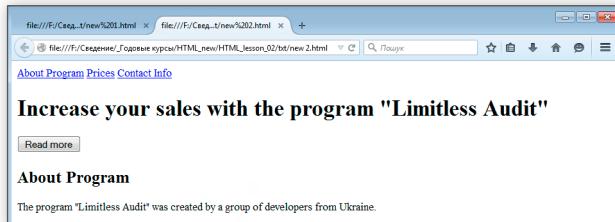
If the header is placed in `<article>` or `<section>`, it must have a heading or an introductory part for its parent element.

The `<header>` tag cannot be placed in `<footer>`, `<address>`, or another `<header>` element

**Example:**

```
<header>
    <nav>
        <a href="#about">About Program</a>
        <a href="#prices">Prices</a>
        <a href="#contact">Contact Info</a>
    </nav>
    <h1>Increase your sales with the program
        "Limitless Audit" </h1>
    <button>Read more</button>
</header>

<section>
    <h2>About Program</h2>
    <p>The program "Limitless Audit" was created by
        a group of developers from Ukraine....</p>
</section>
```



View the file header-section-nav-footer-address.html.

**< p > Text </ p >**

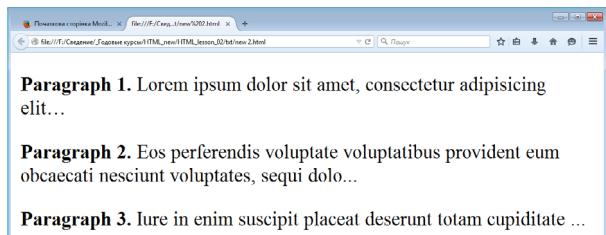
**Attribute:** universal.

**Description:**

Paragraph is the main element for text formatting. By default, it is separated from the previous and following element by an empty string.

**Example:**

```
<p> <strong>Paragraph 1.</strong> Lorem ipsum dolor  
sit amet, consectetur adipisicing elit...</p>  
  
<p> <strong>Paragraph 2.</strong> Eos perferendis  
voluptate voluptatibus provident eum obcaecati  
nesciunt voluptates, sequi dolo...</p>  
  
<p> <strong>Paragraph 3.</strong> Iure in enim  
suscipit placeat deserunt totam cupiditate ...</p>
```



## <article> Text and other <tags> </article>

**Attribute:** universal.

**Description:**

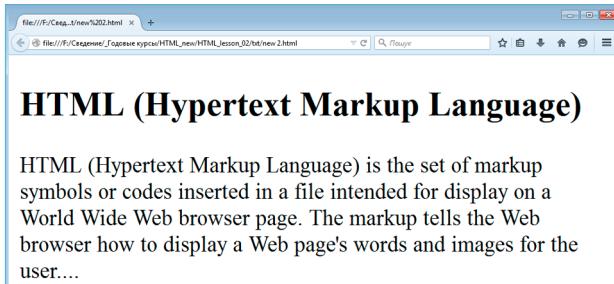
It is used to output some integral information in the form of an article, a message on the forum, a blog entry, a user comment.

Elements <article> can be nested inside each other. For example, the forum message can be in one <article> element, and each comment on the message can be in a separate child <article> element.

Headings in the form of h1 ... h6 tags must be present for the <article>.

**Example:**

```
<article>
    <header>
        <h1>HTML (Hypertext Markup Language)</h1>
    </header>
    <p>HTML (Hypertext Markup Language) is the set of
       markup symbols or codes inserted in a file
       intended for display on a World Wide Web
       browser page. The markup tells the Web browser
       how to display a Web page's words and images
       for the user....</p>
    <footer>
        <p>Information from <a href="http://
           searchmicroservices.techtarget.com/
           definition/HTML-Hypertext-Markup-Language">
           searchmicroservices</a>
        </p>
    </footer>
</article>
```



View the example in the file article-blockquote-q.html.

**<main> Text and other <tags> </main>**

**Attribute:** universal.

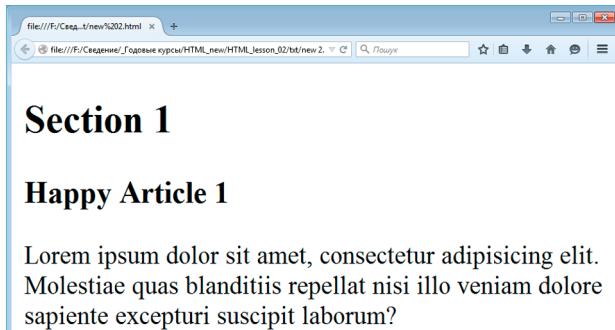
**Description:**

Designed to display the main content of the page. It can be on the page in a single instance, unlike section, article, nav. It should not include such sections of the site as navigation, site name, logo, search form, banners, etc.

You cannot nest it in elements such as article, aside, header, footer, nav

**Example:**

```
<main>
  <section>
    <h2>Section 1</h2>
    <article>
      <h3>Happy Article 1</h3>
      <p>Lorem ipsum dolor sit amet, consectetur
         adipisicing elit. Molestiae quas blanditiis
         repellat nisi illo veniam dolore sapiente
         excepturi suscipit laborum?</p>
    </article>
  </section>
</main>
```



II View the example in the file main-section-aside.html.

**<aside> Text and other <tags> </aside>**

**Attribute:** universal.

**Description:**

Specifies a section with content that complements the main content, but is not an integral part of it.

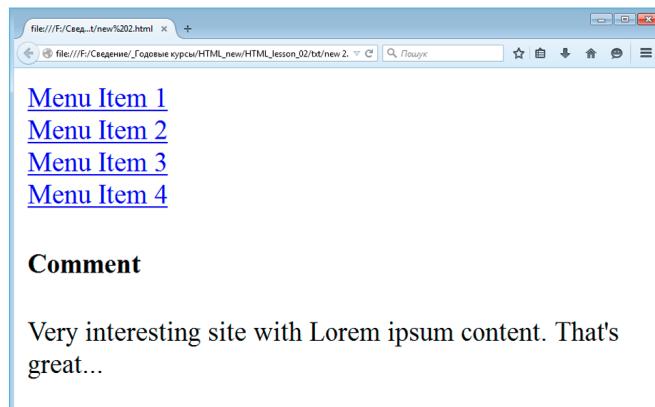
The `<aside>` element may contain additional comments, help information, a list of terms, a collection of links on a topic or even an advertisement if the ads are relevant to the content.

This element can even contain a full-fledged article, placing it in its child `<article>` element with the `<header>` and `<footer>`, for example, a comment.

**Example:**

```
<aside>
  <nav>
    <a href="#">Menu Item 1</a><br>
    <a href="#">Menu Item 2</a><br>
    <a href="#">Menu Item 3</a><br>
    <a href="#">Menu Item 4</a><br>
  </nav>
```

```
<article>
  <h4>Comment</h4>
  <p>Very interesting site with Lorem ipsum
  content. That's great...</p>
</article>
</aside>
```



Посмотреть пример можно в файле `main-section-aside.html`.

**<section> Text and other <tags> </section>**

**Attribute:** universal.

**Description:**

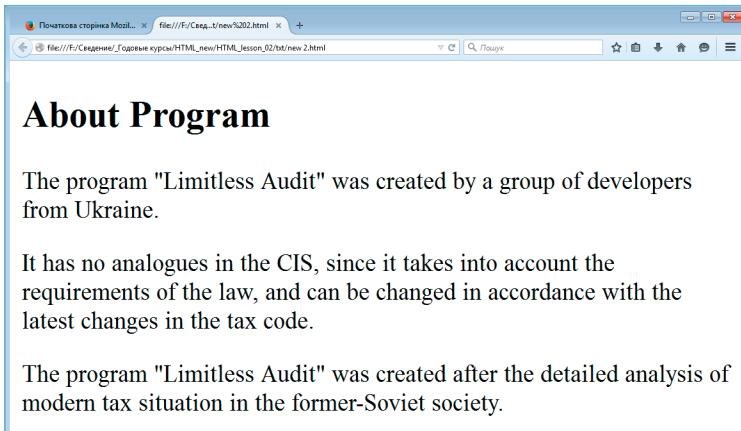
The content of the `<section>` tag is a section of the web page. It requires its own heading.

Examples of grouping content are the usual chapters to which the content is divided, or the home page of a website that can be divided into sections for introduction, news, and contact information.

Can contain its own header, footer.

### Example:

```
<section id="about">
    <h2>About Program</h2>
    <p>The program "Limitless Audit" was created by
       a group of developers from Ukraine.</p>
    <p>It has no analogues in the CIS, since it takes
       into account the requirements of the law, and can
       be changed in accordance with the latest changes
       in the tax code.</p>
    <p>The program "Limitless Audit" was created after
       the detailed analysis of modern tax situation in
       the former-Soviet society.</p>
</section>
```



View the file header-section-nav-footer-address.html

**<footer> Text and other <tags> </footer>**

**Attribute:** universal.

**Description:**

Defines a footer for the entire web page or for a specific section. It can also be used in a **<blockquote>** tag. Usually

it contains additional information about the contents of its parent element, for example author's full name, contact details, copyright or license information, additional navigation, links to other documents, and so on. In it, you can place the <address>

The <footer> element must necessarily have a closing tag and can contain any HTML elements, except for the <header> element and the other <footer>.

### Example:

```
<footer>
  <p class="copyright">&copy;
  2017 Audit Systems LLC &trade;</p>
</footer>
```

© 2017 ООО "Аудиторские системы"™

View the file header-section-nav-footer-address.html.

**<pre> Text </pre>**

**Attribute:** universal.

### Description:

It is intended for blocks with preformatted text, i.e. text in which all spaces, tabs, and line breaks are saved from a text editor. In addition, the text located inside the <pre> tags is displayed in monospaced font. Inside the <pre> tag, you can use such elements to format a text, for example: <code>, <b>, <i>, etc.

It should be used for:

- Displaying poems with authorial arrangement of lines;
- Displaying pictures;
- Code mapping.

### Example:

```
<pre>
    Sale!!!
        Sale!!
            Sale!
Buy an Elephant at an Attractive Price!
</pre>
```



View the file tags.html

<hr>

**Attribute:** universal (for HTML5). In HTML 4 it had 5 attributes.

### Description:

Abbreviation of horizontal rule; in the browser it displays a horizontal line, the appearance of which depends on the browser.

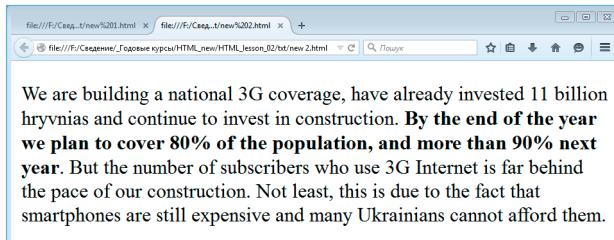
### Example:

<p>We are building a national 3G coverage, have already invested 11 billion hryvnias and continue to invest in construction. <b class="blue">By the end of the year we plan to cover 80% of the population, and more than 90% next year</b>. But the number of subscribers who use 3G Internet is far behind the

pace of our construction. Not least, this is due to the fact that smartphones are still expensive and many Ukrainians cannot afford them.</p>

<hr>

<p>It is not easy to open a store: ...</p>



View the file tags.html.

**<nav> Text and other <tags> </nav>**

**Attribute:** universal.

**Description:**

The tag is a container for navigation - a group of links that lead to other pages of the site or to sections of the current web page. Also in <nav> there may be content of this page.

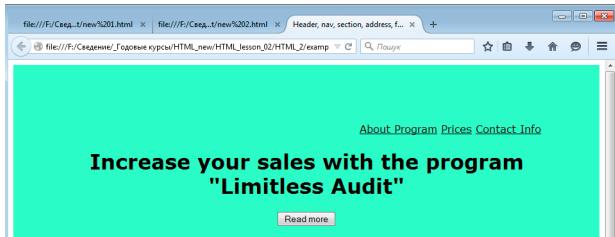
You can use multiple <nav> tags on a page.

It is undesirable to place normal link groups in the <nav> element, and also the <address> tag cannot be placed in it.

**Example:**

```
<nav>
    <a href="#about">О программе</a>
    <a href="#prices">Цены</a>
    <a href="#contact">Контакты</a>
</nav>
```

## Lesson 2. Text formatting by means of HTML



View the file header-section-nav-footer-address.html.

## INLINE TAGS

### <abbr> Text </abbr>

**Attribute:** Title — a tooltip for full decryption, which becomes active when you move the cursor over the abbreviation text. Recommended for screen readers and search engines.

#### Description:

Required to indicate an abbreviation or acronym (established abbreviations). By default, the characters in this tag with the title attribute are underlined with a dashed line.

#### Example:

```
<abbr title="Cascading Style Sheets">CSS</abbr>
allows you to change the style of any logic
formatting tag easily!
```



### <b> Text </b>

**Attribute:** universal.

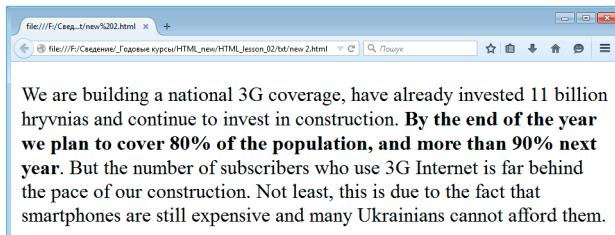
#### Description:

Used to make a text bold. You can use it together with the class attribute to assign a highlight color, for example.

#### Example:

```
<p>We are building a national 3G coverage, have
already invested 11 billion hryvnias and continue
to invest in construction. <b class="blue">
```

By the end of the year we plan to cover 80% of the population, and more than 90% next year. But the number of subscribers who use 3G Internet is far behind the pace of our construction. Not least, this is due to the fact that smartphones are still expensive and many Ukrainians cannot afford them.



### <strong> Text </strong>

**Attribute:** universal.

#### Description:

Used to highlight an **important piece** of text, to which you need to pay attention of both the user and the search engine. By default, it is highlighted in bold type in browsers.

If you just want to select a font with boldface, without emphasis on the importance of the text, it is recommended to use the CSS property font-weight.

#### Example:

```
<p><strong>Attention</strong>: the bus schedule  
"Kharkov-Ternovaya" was changed on <em>12.12.2012  
</em>. </p>
```



**<mark> Text </mark>**

**Attribute:** universal.

**Description:**

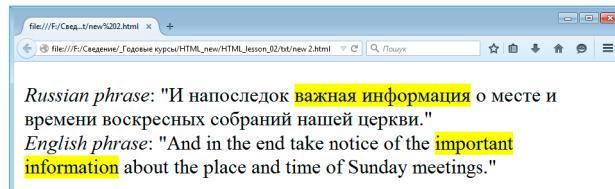
Highlights a piece of text in yellow.

It is necessary where you need to draw the user's attention to something that is relevant at the moment.

It is not about the importance of the selected text, unlike the **<strong>** tag.

**Example:**

```
<p><em>Russian phrase</em>: "И напоследок <mark>важная  
информация</mark> о месте и времени воскресных  
собраний нашей церкви."<br>  
<em>English phrase</em>: "And in the end take  
notice of the <mark>important information</mark>  
about the place and time of Sunday meetings."</p>
```

**<em> Text </em>**

**Attribute:** universal.

**Description:**

This tag (abbreviated from *emphasized*) is designed to highlight text, which is worth paying attention to. It is displayed in browsers in italics.

Compared with **<i>** it has a more pronounced emotional coloring. A text is emphasized in speech browsers.

### Example:

```
<p><strong>Attention</strong>: the bus schedule  
"Kharkov-Ternovaya" was changed on  
<em>12.12.2012</em>.</p>
```



### <i> Text </i>

**Attribute:** universal.

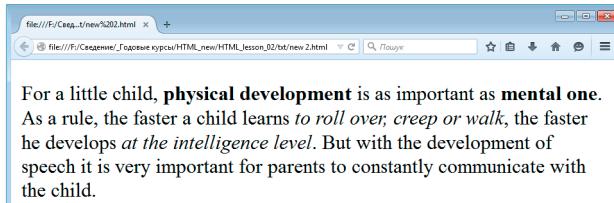
### Description:

Designed to highlight text in italics. The *<i>* tag can be used to indicate technical terms, phrases from another language, thoughts, names of something, etc. Less important than other semantic elements with italic text, namely:

- *<em>* (emphasized text)
- *<cite>* (work title)
- *<dfn>* (term definition)

### Example:

```
<p> For a little child, <b>physical development</b>  
is as important as <b>mental one</b>. As a rule,  
the faster a child learns <i>to roll over, creep or  
walk</i>, the faster he develops <i>at the intelligence  
level</i>. But with the development of speech it is  
very important for parents to constantly communicate  
with the child.</p>
```



### <cite> Text </cite>

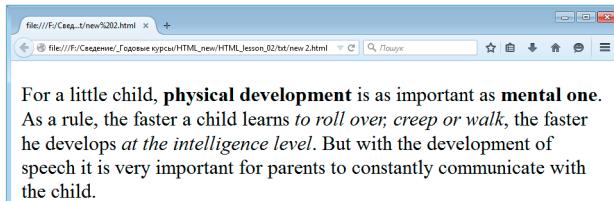
**Attribute:** universal.

**Description:**

Required for presenting the title of a book, article, film, script, song, game, etc. It can be a work referenced in a quote, or just some kind of work. In browsers it is usually italicized.

**Example:**

```
<p>In the magazine <cite>"Pulp Fiction #11/2017"</cite>,  
the cover cites an article <cite>"Lenin is awesomer  
than Padva and Reznik"</cite>. </p>
```



### <q> Text </q>

**Attribute:** cite — indicates the address of the document quoted.  
The attribute is required for screen readers.

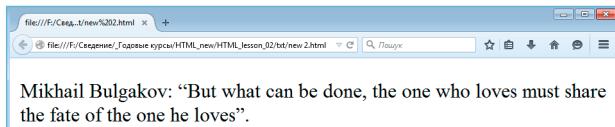
**Description:**

Designed to emphasize a quote text with quotation marks within a text. This tag is useful for search engines when they select pages with quotes.

It also makes sense to use the `<q>` tag to create styles for citations using CSS on specialized sites.

### Example:

```
<p>Mikhail Bulgakov: <q cite="http://masterimargo.ru/quote.html">But what can be done, the one who loves must share the fate of the one he loves</q>.</p>
```



### `<dfn> Text </dfn>`

**Attribute:** universal.

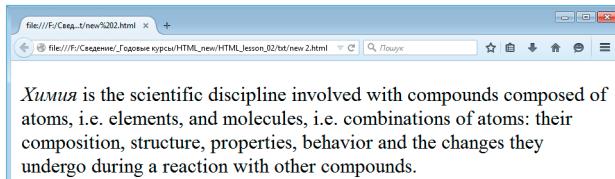
### Description:

The `<dfn>` tag is used to define the terms that first appeared in the text of the document.

The text in `<dfn>` is displayed in italics.

### Example:

```
<p><dfn>Химия</dfn> is the scientific discipline involved with compounds composed of atoms, i.e. elements, and molecules, i.e. combinations of atoms: their composition, structure, properties, behavior and the changes they undergo during a reaction with other compounds.</p>
```



View the file `css-properties.html`.

**<code> Text </code>**

**Attribute:** universal.

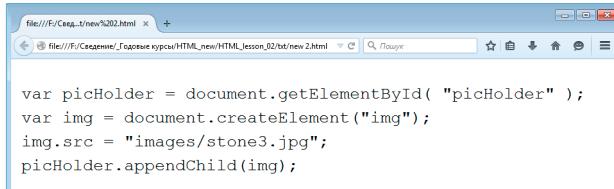
**Description:**

It is intended for the text containing the program code. The code includes variable declarations, keywords, functions, etc. In the browser, the content of the `<code>` tag is displayed in a monospaced font of a smaller size than the main text.

In the `<code>` tag, line breaks can be done using the `<br>` tag or css-properties.

**Example:**

```
<p><code>
    var picHolder = document.getElementById(
        "picHolder" );
    <br>
    var img = document.createElement("img");
    img.src = "images/stone3.jpg";
    picHolder.appendChild(img);
</code>
</p>
```

**<del> Text </del>**

**Attribute:** universal.

**Description:**

It is intended to highlight text that was deleted in the new version of the document. The tag allows you to track changes in the text of the document compared to the old version.

In the browser, the text in the `<del>` tag looks crossed out. It is intended to highlight the text that was added to the new version of the document. The tag allows you to track changes in the text of the document compared to the old version.

In the browser, the text in the `<ins>` tag looks underlined.

### Example:

```
<p>To display abbreviations, use the tag  
<del>acronym</del> <ins>abbr</ins>. </p>
```



### `<ins> Text </ins>`

#### Attribute:

*Cite* — to specify the address of the document, which explains the reasons for editing and adding text.

*Datetime* — specifies the date and time when the text was either edited or deleted. The date format can be varied.

**Description:** It is intended to highlight the text that was added to the new version of the document. The tag allows you to track changes in the text of the document compared to the old version.

In the browser, the text in the `<ins>` tag looks underlined.

### Example:

```
<p>To display abbreviations, use the tag  
<del>acronym</del> <ins>abbr</ins>. </p>
```



### <s> Text </s>

**Attribute:** universal.

**Description:**

Determines the text, which at the moment is not correct or relevant. It is displayed in the browser as a crossed out text. If you want to show that the text was deleted, use the <del> tag.

**Example:**

```
<p><s>Old price 1000UAH</s> - New price 999UAH!!!</p>
```



### <u> Text </u>

**Attribute:** universal.

**Description:**

It is used for text that should be stylistically different from the usual text. It can be misspelled words, text in another language. It is advisable to **avoid using the <u> element**, since visually it can be confused with a link, which is also underlined by browsers.

**Example:**

```
<p><s>Old price 1000UAH</s> - <u>New price 999UAH!!!</u></p>
```



### <small> Text </small>

**Attribute:** universal.

**Description:**

Indicates that its contents are in addition to the main text. Displayed in the browser in a font smaller than the main text. Can represent a quote, clarification, notice of copyright, licenses, any restrictions. Not intended for large amounts of text, only for short phrases embedded in the main text, or footnotes located after the article or at the end of the document.

**Example:**

```
<p><small>The text is available under the Creative  
Commons Attribution-ShareAlike license; in some  
cases, additional conditions may apply. For more  
information, see Terms of Use.</small></p>
```



### <sub> Text </sub>

**Attribute:** universal.

**Description:**

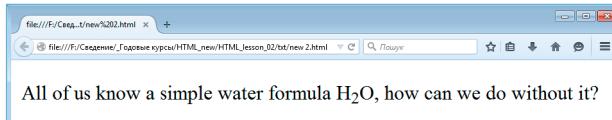
Defines the text in the **subscript**.

This text will be smaller than the main text, and is located lower than the base line of the characters in the string. Most often used for formulas.

Can be replaced with the css-property vertical-align

### Example:

```
<p> <p>All of us know a simple water formula  
H<sub>2</sub>O, how can we do without it? </p>
```



### <sup> Text </sup>

**Attribute:** universal.

### Description:

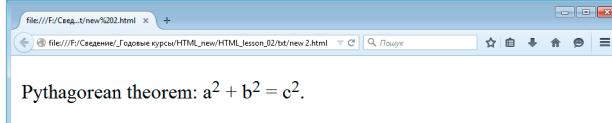
Defines the text in the **superscript**.

This text will be smaller than the main text, located higher than the base line of the characters in the string. Most often used for formulas.

Can be replaced with the css-property vertical-align

### Example:

```
<p>Pythagorean theorem: a<sup>2</sup> + b<sup>2</sup> =  
c<sup>2</sup>. </p>
```



### **<var> Text </var>**

**Attribute:** universal.

#### **Description:**

It is used to highlight variables when writing code.  
The browser displays this text in *italics*.

#### **Example:**

```
<p>This function uses the variable  
<var>$count</var>. After the increase, it can be  
assigned to the variable <var>$score</var>.</p>
```



### **<kbd> Text </kbd>**

**Attribute:** universal.

#### **Description:**

Used to indicate the text that is typed on the keyboard or for the name of the keys. The browser displays it as a mono-spaced font.

#### **Example:**

```
<p>Press <kbd>Ctrl + Z</kbd> to undo the last action.  
To return the undone operation, press <kbd>Ctrl + Y</kbd></p>
```



**<samp> Text </samp>****Attribute:** universal.**Description:**

Used for the text that results from the output of the program code or script. The browser displays it as a monospaced font.

**Example:**

```
<p>In the process of solving the problem
<samp>2+2</samp> the program will output: <samp>4
</samp> </p>
```

**<span>...</span>****Attribute:** universal.**Description:**

It is intended for selection of elements inside the main text of block elements basically in order to set css-formatting for a small amount of the text. Therefore, such attributes are most often set for it:

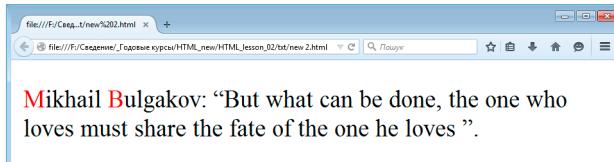
- style — style of element
- class — class of styles
- id — unique identifier

**Example:**

```
<p><span class="red">M</span>ikhail
<span class="red">B</span>ulgakov:
```

## Lesson 2. Text formatting by means of HTML

```
<q cite="https://www.goodreads.com/author/quotes/  
3873.Mikhail_Bulgakov">But what can be done, the one  
who loves must share the fate of the one he loves  
</q>.</p>
```



## Assignment. Inline tags



## Lesson 2. Text formatting by means of HTML

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