

Programming of web pages – lab 1

Introduction

1. Structure of HTML document

```
<!DOCTYPE html> <!-- declaration of the document type !-->
<html lang="pl-PL"> <!-- main tag, language declaration -->
  <head> <!-- section containing meta data -->
    <title>Strona PSI</title> <!-- title shown in the browser bar -->
    <meta name="description" content="Strona przedmiotu Programowanie Stron Internetowych">
    <!-- ^description of the page content -->
    <meta name="keywords" content="HTML,CSS,JavaScript,programowanie stron">
    <!-- ^keywords -->
    <meta name="author" content="Jan Kowalski">
    <!-- ^information about author of the page -->
    <meta charset="utf-8">
    <!-- ^page encoding -->
  </head>
  <body> <!-- section with tags displayed in the website -->
  </body>
</html>
```

2. Basic tags

a. Empty tags

- `
` - defines a new line.
- `<hr>` - creates separator horizontal line.
- `` - creates an image, attribute `src` defines file path, attribute `alt` defines alternative text which is displayed when image can not be loaded..

b. Classic tags

- `<p>Tekst paragrafu...</p>` - creates paragraph.
- `Link` - creates hyperlink, attribute `href` defines target file address, attribute `target` defines a way of opening target file (it is optional).
- `<pre>tekst tekst</pre>` - displays text preserving its format.
- ``
 - `Programowanie stron internetowych`
 - `Programowanie obiektowe```

Unordered list tags.
- ``
 - `Programowanie stron internetowych`
 - `Programowanie obiektowe```

Ordered list tags. Tag `ol` can contain attribute `type` equal to „A”, „a”, „I” or „i”.
- `<iframe src="strona.html" width="500" height="200">` - displays external site in a border.

- `<table>`
`<tr>`
`<th>Imię</th>`
`<th>Nazwisko</th>`
`</tr>`
`<tr>`
`<td>Anna</td>`
`<td>Nowak</td>`
`</tr>`
`<tr>`
`<td>Jan</td>`
`<td>Kowalski</td>`
`</tr>`
`</table>`
 Table tags.

3. Formatting tags and semantic tags

- a. Formatting tags – they only change look of the website.

- Examples: *b* (defines bold text), *i* (defines italic text), u (defines underline text), ~~s~~ (defines strikethrough text).

WARNING! It is recommended that these markers be used only as a last resort. Semantic tags are preferred.

- b. Semantic tags – they define character/meaning of text, also changing also look of the website. But in this case the most important is information provided by the tags, not look of the website elements. These tags can look differently in different web browsers.

- Examples: *h1*, *h2*, ..., *h6* (headers), *strong* (important text), *em* (emphasis), *code* (computer code), *samp* (sample output from a computer program), *kbd* (keyboard input), *var* (variable), *cite* (title), *q* (quotation).

The following code presents semantic markups and they look in the Google Chrome v53.0.2785.143 m.

```
<h1>Header 1</h1>
<h2>Header 2</h2>
<h3>Header 3</h3>
<strong>Strong text</strong><br>
<em>Emphasized text</em><br>
<code>A piece of computer code</code><br>
<samp>Sample output from a computer program</samp><br>
<kbd>Keyboard input</kbd><br>
<var>Variable</var>
<cite>The Lord of the Rings</cite>
<p>WWF's goal is to:
<q>Build a future where people live in harmony with nature.</q>
We hope they succeed.</p>
```

Header 1

Header 2

Header 3

Strong text

Emphasized text

A piece of computer code

Sample output from a computer program

Keyboard input

Variable *The Lord of the Rings*

WWF's goal is to: "Build a future where people live in harmony with nature." We hope they succeed.

4. Validation

Correctness of our site can be changes at:

<https://validator.w3.org/>

5. Useful links

- HTML course: <http://www.w3schools.com/html/>
- HTML tags documentation: <http://www.w3schools.com/tags/>

Laboratory exercises

1. Please create a new website (subject of the page is optional) – file “index.html” – and all elements presented in point 1 of Introduction. **Please check created website using validator - <https://validator.w3.org/>.**
2. Please create new tags in the website in accordance to the following print screen (tags *p*, *h1*, *hr*, *img*). **Please check created website using validator - <https://validator.w3.org/>.**

Header 1

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Duis sollicitudin purus qua

Header 2



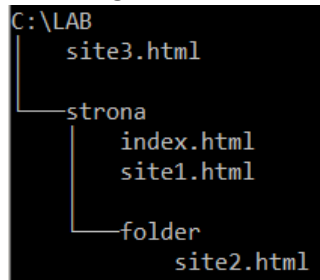
Lorem ipsum dolor sit amet, consectetur adipiscing elit. Duis

Header 3

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Duis sollicitudin purus qua

3. Please create in the website table which contains three columns and two rows plus header. **Please check created website using validator - <https://validator.w3.org/>.**
4. Please create in the website ordered list which contains three elements and test it for different values of *type* attribute. **Please check created website using validator - <https://validator.w3.org/>.**
5. Please create additional pages - „site1.html”, „site2.html” and „site3.html”. Please put them in the directory tree as shown below. **Please check created website using validator - <https://validator.w3.org/>.**

Tip: to go the path above use the following statement `../`



Next, please create in „index.html” hyperlinks to three other websites and one external website (e.g. www.iisi.pcz.pl).

6. Please create in „index.html” frame which contains „site1.html”. Next, please create in „site1.html” a hyperlink to external website. Please test working of this hyperlink with different values of attribute „target” - *_blank*, *_parent*, *_self*, *_top*. **Please check created website using validator - <https://validator.w3.org/>.**
7. Please create an account in one free hosting service (e.g. <http://freehosting1.net/hosting.aspx>) and load created website into server using FTP client (e.g. FileZilla, WinSCP).