

Introduction to Technologies for publication at web (ATPW1)

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Lecture content

- Subject content
- Study support tools, sources
- Study goals
- How to succeed in the subject
 - Points, tasks, dates, attendance
- Static www page, skeleton, head, body
- Content parts textual, non-textual
- Navigation elements, development process

Subject content

- Creation of static web pages in the HTML5 language
- Web page formatting in the CSS3 language
- Creation of interactive elements in the JavaScript language
- Responsive design
- Web page optimization for search engines, accessibility
- Web technologies (browsers, formatting, programming, networks, search engines)
- Web design process, navigation methods, GUI

Study support tools

- <http://oliva.uhk.cz>
- ATNPW1
- Lecture presentations
- Exercises
- Example solutions
- Project submission
- Exam tests
- Points administration

The screenshot shows the ATNPW1 course page on the oliva.uhk.cz platform. The page is titled "Technologie publikování na webu" and features a sidebar with a navigation menu. The main content area displays the course title "TECHNOLOGIE PRO PUBLIKOVÁNÍ NA WEBU I" and a diagram illustrating web technologies. The diagram includes a central laptop displaying a bar chart, surrounded by various technologies: HTML5, CSS3, JavaScript (js), XML, PHP, Cloud, and flat. Below the laptop, the terms "header", ".com", ".org", "footer", ".net", and "database" are listed. The footer of the page contains copyright information for Blackboard Inc. and a link to the course page.

Uvodní stránka Kurzy

THPW1 – Technologie publikování na webu Intro

THPW1 – Technologie publikování na webu

Uvodní informace

Intro

Syllabus

Harmonogram

Studijní materiály

Přednášky

Cvičení

Projekty, odevzdávání

Knihovna

Komunikace

Oznámení

Diskuse

Ostatní

Nástroje

SPRÁVA KURZU

Ovládací panel

Soubory

Nástroje kurzu

Hodnocení

Centrum hodnocení

Uživatelé a skupiny

Vlastní nastavení

Balíčky a pomůcky

Nápověda

Intro

TECHNOLOGIE PRO PUBLIKOVÁNÍ NA WEBU I

www HTML5 js Cloud XML flat PHP CSS3

header .com .org footer .net database

Zdroj: [http://www.whatsapp.com/group/164/TechnologyWeb-Technologies-\(HTML,-JS,-CSS\)](http://www.whatsapp.com/group/164/TechnologyWeb-Technologies-(HTML,-JS,-CSS))

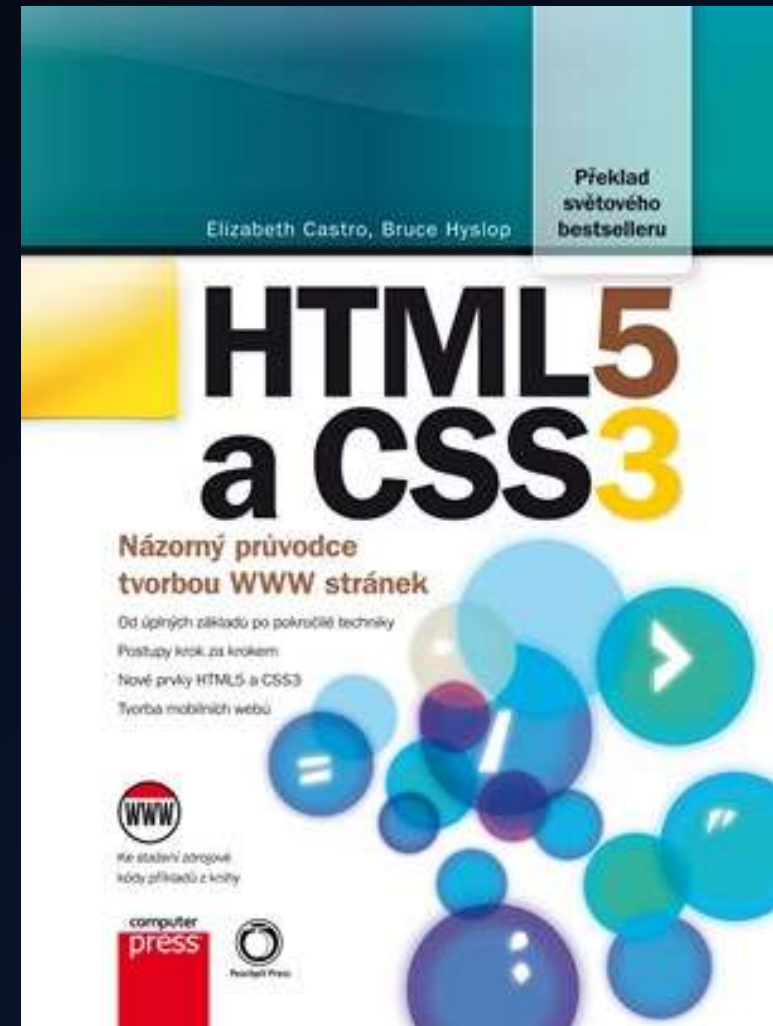
Bb Blackboard

© 1997-2017 Blackboard Inc. All Rights Reserved. U.S. Patent No. 6,968,136. Additional Patents Pending.

Informace o přístupu: <http://access.blackboard.com> Default instalace

Sources

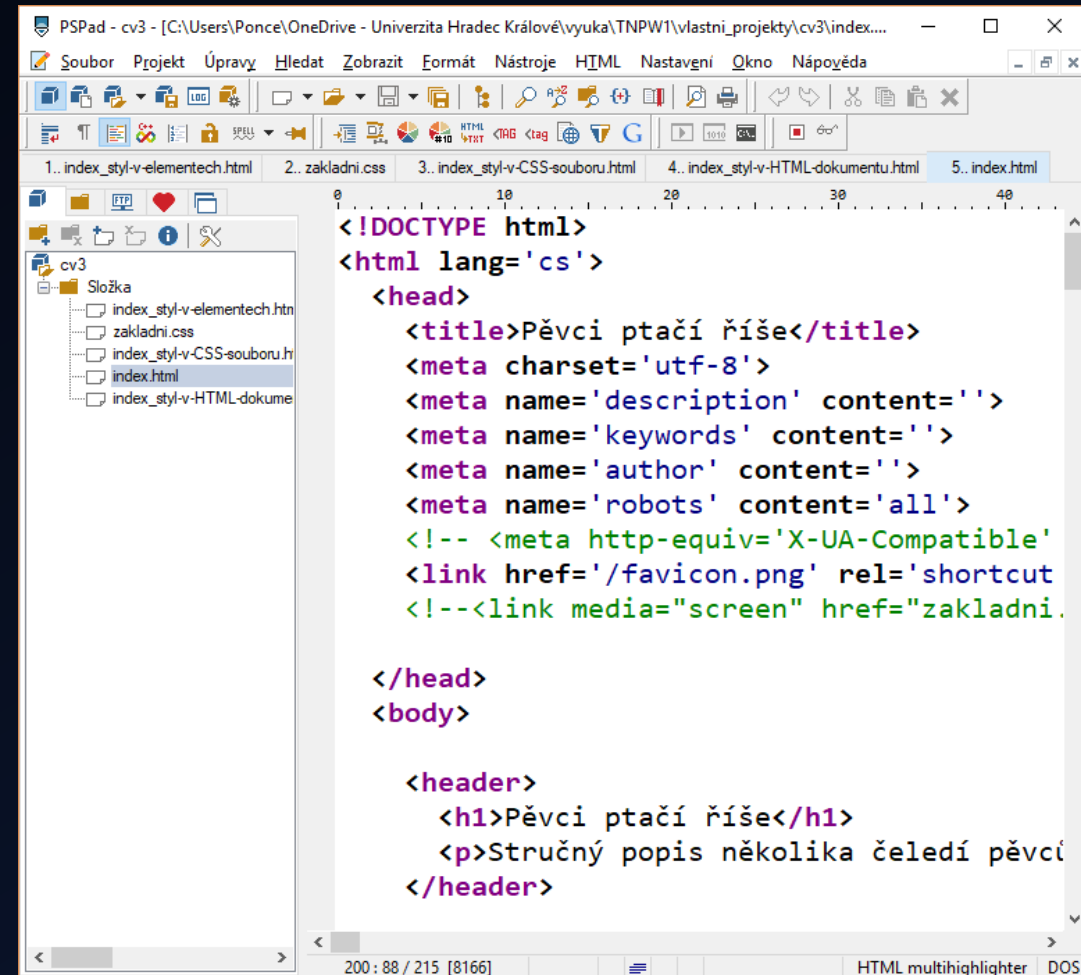
- Elizabeth Castro, Bruce Hyslop: HTML and CSS: Visual QuickStart Guide (8th Edition). Peachpit Press; 8 edition (August 19, 2013).
- www.w3schools.com
- developer.mozilla.org/en-US/docs/Learn



Tools

- Editors
 - Text based, WYSIWYG, IDE
- Validators
 - <https://validator.w3.org/>
- Developer tools in browser
 - Chrome: Ctrl+Shift+i
- Wire model editors (GUI emulators)
 - <http://framebox.org/>

PSPad



Study goals – you will be able to ...

- Create static pages in HTML5 language
- Style web page content in CSS3
- Include interactive elements in JavaScript language into web pages
- Create pages adaptable to the type and size of the terminal equipment
- Follow basic principles and guidelines of frontend solutions
- Optimize pages for search and accessibility
- Develop web pages in project based manner (with method, documentation, reusability and cooperation)

How to succeed in the subject

- Min. 24 points from 40 for signature (practical work):
 - Test 1
 - Test 2
 - Project
 - Analysis and design, implementation
 - Presentation
- Min. 25 points from 50 for successful exam:
 - Exam test

Points for signature

- Min. 24 points from 40
- 3 from 5 points ... test 1 (online in BBL)
- 3 from 5 points ... test 2 (online in BBL)
- 18 from 30 points ... project (submission in BBL)
 - analysis, design and implementation
- Test in second trial => max 3 points

Points for exam grade

- 25 points from 50 ... exam test (online test in BBL)

- Grade

- 45 – 50 A
- 40 – 44 B
- 35 – 39 C
- 30 – 34 D
- 25 – 29 E
- 0 – 24 F

Dates

- 1. test ... 5. week
- Control of the 1. part of the project ... 6. week
- 2. test ... 10. week
- Control of the 2. part of the project ... 10. week
- Project submission ... 10. week
- Presentation ... 11.-12. week
- Pre-exam ... 13th week
- Exams ... from 13th May 2019

Attendance to classes

- Not obligatory

BUT

- Participation at checking lessons is obligatory
 - 5. week ... 1. test
 - 6. week ... control of the 1. part of the project
 - 10. week ... 2. test, control of the 2. part of the project

MORE

- recommended

EVEN MORE

- Participation at classes can be taken into account in boundary cases passed/failed

Static WWW page in HTML

- Content for user is completed with symbols, telling how the browser should process the content into the shape understandable for user
- Symbols are defined by the language standard, e.g. HTML version 5.2 (<https://www.w3.org/TR/2017/REC-html52-20171214/>)
- HTML = hypertext markup language
- Language is defined by vocabulary (words set) and grammar (a set of rules of proper combination of the words from vocabulary)
- Vocabulary: tags and attributes; they mark up parts of the content
- Language versions differ in vocabulary and/or grammar

Example of HTML markup

```
<h2>Earthquake in Mexico</h2>
```

```
<p class=„news“>Last week, Mexico  
was shaken by an earthquake of the  
strenth 7.4 at Richter scale. The tremor  
has caused more than 200 victims so  
far. </p>
```

```
<cite>(Source: ČTK).</cite>
```

HTML5 vocabulary:

Tags: h2, p, cite

Atributes: class

Rule: h2, p, cite are pair tags

```
<p> ... </p>
```



Page skeleton

HTML page

```
<!DOCTYPE html>
```

```
<html lang='cs'>
```

page head

```
<head>
```

```
<title>World news 24/7</title>
```

site title

```
<meta charset='utf-8'>
```

```
<meta name='robots' content='all'>
```

meta elements

```
</head>
```

page body

```
<body>
```

```
<h2>Earthquake in Mexico</h2><p> Last week, Mexico was shaken by an earthquake of the  
strenth 7.4 at Richter scale. The tremor has caused more than 200 victims so  
far.</p><cite>(Source: ČTK).</cite>
```

```
</body>
```

```
</html>
```

Page skeleton

```
<!DOCTYPE html>  
<html lang='cs'>
```

```
<head>  
  <title>...</title>  
  <meta ...>  
  <meta ...>...
```



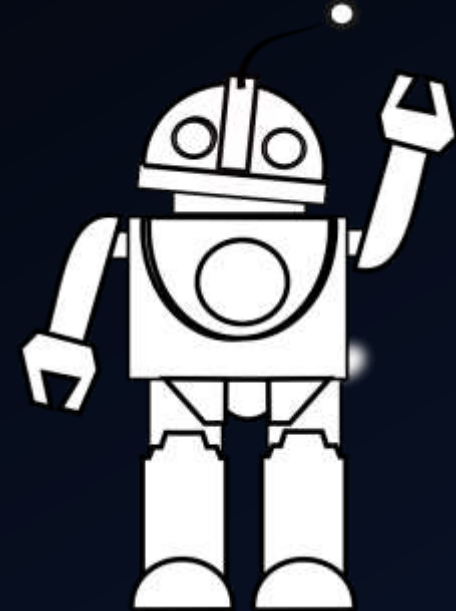
for machine processing (e.g. search, links to other programs)

```
</head>
```

```
<body>  
  ...  
</body>  
</html>
```



for human cognition



Page head

- Enclosed in pair element **head**
- Paired element **title**
 - Site title
 - Important for !SEO! (search engine optimization)
- Non-paired elements **meta**
 - Keywords, author, description (for browser, search engines, ...)
- Non-paired elements **link**
 - References to used files (CSS3 stylesheets, JS programs, libraries)
 - Example: `<link media="screen" href="basic" rel="stylesheet" >`

Page body

- Enclosed in pair element **body**
- The page content itself
 - Text, audio, video
 - Navigation (links to other content)
 - Other content, dynamically created by third-party APIs

Textual content elements – pair elements

- Heading **h1**
 - One at each page
 - Identical to the title of the site on the main page; page title otherwise
 - The most important for !SEO!
- Headings **h2**, ..., **h6**
 - Heading of other levels, expanding headings of previous levels
 - Levels cannot be skipped, can be repeated
- Paragraphs: **p**
- Other functional types:
 - Indices: **sub** (lower), **sup** (upper)
 - Preformatted text: **pre**
 - Phrase elements: source code (**code**), abbreviation (**abbr**), acronym (**acronym**), citation (**quote**, **blockquote**), and others

Navigational elements - links

- Link
 - Paired element `a`
 - `UHK`
 - Absolute ... target found **independently** on the document location
 - `UHK`
 - Relative ... target found **dependently** on the document location
 - `Merkur`
- Files of other formats can be referenced to, too (.pdf, .docx, etc.)
 - `content` (pdf 103kB)
 - File download can be invoked

Nontextual content elements

- Image
 - Non-paired element **img**
 - ``
- We always set a value to the **alt** attribute, namely image content description or image meaning
 - !SEO!, blind people, image display switch off, page slow loading, textual web browsers
- **Title** attribute
 - Displayed in a bubble when moving mouse on (not the case of mobile phones)
 - Usable at many other elements
- Other multimedia elements: **video**, **audio** tags

Development process

- Create a document in editor (PSPad, Microsoft Visual Studio Code)
- Save the document (P: network drive, e.g. P:/TNPW1/ex1/)
- Open the document in browser(s) (Chrome, Firefox, IE, Opera)
- Check the correct usage of the language (e.g. <https://validator.w3.org/>)
- Correct errors
- Publish the document:
 - Save at the network drive W:
 - The root directory has to contain the index.html file (croosroads, current document)
 - Afterwards, the document is accessible as <http://lide.uhk.cz/fim/student/login-of-the-user>

Contact and communication

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- Office hours: Tuesday 10:45-11:15 (anytime if previously agreed)
- www.uhk.cz/cs-CZ/FIM/Studium/Rozvrhy/Zmeny-ve-vyuce
 - Changes in lessons (cancelled lessons, classroom change, etc.)