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www.vsb.cz

Functional Programming

behalek.cs.vsb.cz/wiki/Functional_Programming

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 VSB TECHNICAL
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OF OSTRAVA

FACULTY OF ELECTRICAL
ENGINEERING AND COMPUTER
SCIENCE

DEPARTMENT
OF COMPUTER
SCIENCE



- Presentations: **Marek Běhálek** (EA404, tel: 5879, email: marek.behalek@vsb.cz)
- Laboratories: Michal Vašínek, Michal Fait, Marek Běhálek, ...
- Materials
 - Web pages <http://behalek.cs.vsb.cz/wiki>

- Basic information + Installation guide
http://behalek.cs.vsb.cz/wiki/index.php/Functional_programming
- Presentations - http://behalek.cs.vsb.cz/wiki/wiki/index.php/Functional_programming/en#presentations
- Laboratories - http://behalek.cs.vsb.cz/wiki/index.php/Functional_programming/en#laboratories

Subject aims expressed by acquired skills and competences



- Not a *traditional* Functional programming course, better name should be:
 - Introduction to Functional Style of Programming
- Complement to **Programming 1** (imperative language C++)
- Focused on:
 - usage of functions - scope of variables, visibility in modules, pattern matching;
 - recursion and recursive data structures (*VS* statements, třídy, objects);
 - functional style of programming - recognize, compare to other styles of programming (imperative, object oriented);
 - solve selected problems in *purely functional* programming language **Haskell**.

Evaluation criteria - where do i get **my** points?



- Subject end with *graded credit* (100 points from laboratories, 51 - 65 Good, 66 - 85 Very Good, **86 - 100 Excellent**).
- [4th week] 10 points - written test / computer test - mainly focused on types.
- [7th and 12th week] 50 points will be assigned for two programming exercises performed directly on computers in our laboratories,
 - each exercise 25 points,
 - each approximately 1 hour long,
 - **minimum** for each will be 11 points,
 - last week in the semester, you can repeat one of these exercises.
- [8th and 13th week] 40 points - 2 x homework (20 points each)



Lipovaca M.

Learn You a Haskell for Great Good!: A Beginner's Guide (1st ed.).

No Starch Press, San Francisco, CA, USA, 2011 - for free at: <http://learnyouahaskell.com/>



Wiki Books

Haskell

for free at: <https://en.wikibooks.org/wiki/Haskell>



O'Sullivan B., Goerzen J., Stewart D.

Real world Haskell.

O'Reilly Media, Inc. 2008. ISBN:0596514980 - for free at: <http://book.realworldhaskell.org/read/>



Thompson S.

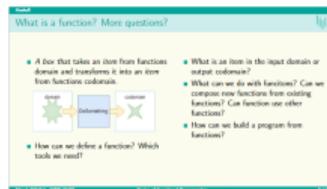
The Haskell: The Craft of Functional Programming (3rd ed.).

Addison-Wesley Professional, October 2, 2011, ISBN-10: 0201882957.

Presentation Style



- The *knowledge* is on normal slides.
- Important knowledge is on the slides marked with an exclamation mark.
- Practical demonstration
 - Summarizes slides from previous the practical demonstration slide.
 - We will do them based on how much time we have → You are encouraged do it by your self.
 - They are covered by some COVID videos.
- Detailed explanation
 - Nothing really new. But gives more details.



Thank you for your attention

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