VSB TECHNICAL UNIVERSITY OF OSTRAVA | FACULTY OF ELECTRICAL ENGINEERING AND COMPUTER SCIENCE | DEPARTMENT OF COMPUTER SCIENCE

Algorithms II – Subject Syllabus

Jiří Dvorský, Ph.D.

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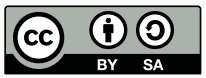
Department of Computer Science
VSB – Technical University of Ostrava



Lecture outline

Algorithms II – Subject Syllabus

About Algorithms II

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Software

Software

Primary Software

- C++ Development Environment
- C++ Documentation

Additional Software

- Doxygen Documentation System, *www.doxygen.org*
- Typography System LaTeX, *www.ctan.org*

Development Environment for C++

- Microsoft Visual Studio Community 2022 is available for classroom use.
- I recommend this development environment for home study.
- In general, any development environment with a compiler that supports at least the **C++17** specification can be used.

Development Environment for C++ (cont.)

Remarks

1. The **Microsoft Visual C++** compiler and the **C++17** language specification will be used to evaluate your projects.
2. The C language is not identical to C++!
3. Beware of non-standard C++ language extensions implemented in the GNU C++ compiler.
   - For example, a variable length array is such an extension.
   - It is recommended to compile with the `-pedantic-errors` option enabled, see Options to Request or Suppress Warnings.

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Study Literature

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The study literature can be divided into two groups:

- **mandatory literature** – strategies of algorithmic problems solving and
- **recommended literature** – C++ programming language.

The study literature is shared across Algorithms I and Algorithms courses.

Mandatory Study Literature

1. LEVITIN, Anany. *Introduction to the Design and Analysis of Algorithms*. 3rd ed. Boston: Pearson, 2012. ISBN 978-0-13-231681-1.
2. CORMEN, Thomas H., Charles Eric LEISERSON, Ronald L. RIVEST a Clifford STEIN, 2022. *Introduction to algorithms*. Fourth edition. Cambridge, Massachusetts: The MIT Press. ISBN 978-026-2046-305.
3. SEDGEWICK, Robert, 1998. *Algorithms in C++*. 3rd ed. Reading, Mass: Addison-Wesley. ISBN 978-020-1350-883.

Recommended study literature

1. STROUSTRUP, Bjarne., 2013. The C++ programming language. Fourth edition. Upper Saddle River, NJ: Addison-Wesley. ISBN 978-0321563842.
2. CADENHEAD, Rogers a Jesse LIBERTY, 2017. Sams teach yourself C in 24 hours. Sixth edition. Indianapolis, Indiana: Pearson Education. ISBN 978-0672337468.

Thanks for your attention