

Exercise 1.1 **Java, the "perfect" programming language?**

Please read "The Java Language Environment - A White Paper" (form six groups and assign the readings below to each group: Chapter 1, Chapter 2, Chapter 3, Chapters 4+5, Chapters 6+7, Chapters 8+9.)

Please also compare to <http://openbook.rheinwerk-verlag.de/javainsel/>, chapter 1.2

Read the chapter(s) assigned to your group and prepare a summary to be presented to the course (max 5 min. per presentation).

For your presentation of the chapter(s) read, present/answer the following:

- a. Summarise the chapter(s) assigned
- b. What is new compared to programming languages you already know?
- c. Which features of Java do you like/dislike? Provide arguments.
- d. Which concepts/features did you not understand?

Exercise 1.2 **Language Basics 1/2**

On www.learnjavaonline.org, please work through section "Language Basics", subsections "Hello, World!" to "Functions". Please also work on the exercises (w/o looking at the solutions upfront).

Exercise 1.3 **Self-Assessment**

Please answer the following questions:

- (1) List 5 special features/traits of the Java programming language and describe, why those are so special compared to other programming languages.
- (2) What does "Java is a strongly typed language" mean?
- (3) What is the difference between Strings in Java and in C?
- (4) What does "to cast" mean?
- (5) How can you declare and assign a number? List three different ways.
- (6) Describe the difference between the == and the equals operator
- (7) How can you determine the length of an array?
- (8) Where can one use the foreach statement?
- (9) What is the difference between the break and the continue statement?
- (10) What does it mean to be "static" for a method? What are the limitations implied by this?
- (11) Does the compiler differentiate between methods by using the return type, i.e., can there be a method `public int add(int a, int b)` and a method `public double add(int a, int b)` in parallel within the same class?