Object-Oriented Programming with Java – Advanced Course

Exercises

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1 Introduction

1.1 Setup of the Environment

Setup your working environment. You will need the following software that you can find free available on the internet:

- Java Development Kit

- IDE of choice (e.g. eclipse)

The JDK is available for Microsoft Windows, MacOS and Linux. Most IDEs should also be available for those operating systems. For installation, follow the instruction of the specific products or use the pre-installed environment in the lab.

1.2 The first "Hello World" (IDE)

Aim of this exercise is to print the first "Hello World" text on the screen. Following steps are necessary:

1. Start the IDE and create a new Java project

2. Inside the new project create a new class and give it a name

3. Create an entry point for your program like shown in the lecture

4. Write the line that is necessary to print the "Hello World" text on the screen

1.3 The first "Hello World" (commandline)

To understand how Java works it is useful to work also without IDEs that do most of the organizational stuff. In this exercise you will create a Java program "by hand" from the commandline using the following steps:

1. Start the commandline (e.g. "terminal" or "konsole" in Linux)

2. Navigate to the directory where you want to create the Java program

3. Create a class that is equivalent to the one you created in the exercise before (*Important:* the filename and the class name must be identical, e.g. "Test.java" implies "public class Test")

4. Compile your program with the commandline tool "javac" that gets installed while installing the JDK

5. Run your program with the "java" command

In case javac or java programs are not found examine the environment variables. Google will help you to find matching configurations for your environment.

1.4 Experiment with the IDE

Aim of this exercise is to get familiar with your tools. Experiment with the IDE, toggle options in the "Preferences" window and adjust windows as you like. Under "Help" you will find most likely an offline manual to for most IDEs.