

Exercise 01-Introduction

- 1) Does a program consist of an algorithm? Can every algorithm be formulated as a program?

Each program has at least an algorithm. The algorithm describes how the program works to solve a specific problem. Large programs usually consist of several algorithms. Each solves a part of a problem. An algorithm can be formulated as a program if the used programming language provides all functions to solve it.

- 2) What is the difference between a variable and a value?

A variable is a container for values such as numbers, text, or images. A variable can get different values during a program is running. A value is constant (for example the value 17)

- 3) Why do variables need a datatype? What are advantages and disadvantages?

Datatypes define which values can be stored in it. Datatypes allow the compiler to detect failures before the program is running. The disadvantage is that as a programmer we have to know beforehand which datatypes we want to use.

- 4) Install IntelliJ idea (<https://www.jetbrains.com/idea/download/download-thanks.html>)

- 5) Go through the simple get started example called "Hello World":
<https://www.jetbrains.com/help/idea/creating-and-running-your-first-java-application.html>