Introduction

Welcome to the fascinating world of Java. This Handbook focuses on several basic and essential aspects so that after having familiarized with it you can successfully write simple programs and express simple logics in the Java code. This does not mean that the material is only addressed superficially. On the contrary, each issue is explained in detail and exemplified. In addition, each chapter is concluded with exercises, and the final part of the Handbook includes some assignments for you to be done. However, due to the volume of the Handbook, it does not exhaust the subject.

I encourage you to read "from beginning to end". While reading, it is advisable to run code snippets on your own. Each chapter is concluded with a *Summary*, that is, a revision and reminder of information in a nutshell as well as additional conclusions. *Exercises* are meant for independent work, experimenting, verification and testing the codes. *Assignments* in many cases involve the knowledge from several chapters and they should be executed at the end, after reading the entire Handbook.

In many places additional markings have been applied.

> **Note**
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> This icon indicates additional information (usually to increase the knowledge) or a reference to a subject beyond the scope of this Handbook.

> **Tip**
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> This icon indicates advice, explanation or a good practice.

> **Important**
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> This icon is meant to highlight and emphasize very important information that should be memorized

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The individual chapters of the Handbook provide a brief introduction to the most important issues of Java language.

- Introduction
  In this chapter you will learn a short history of the language as well as its basic design goals and concepts. You will get to know how to set up your work environment and then you will write your first program in Java.
- Types of data
  This chapter fairly thoroughly discusses the available data types. You will learn about both primitive and object-oriented types and the conversion mechanisms between them.
- Operators
  After mastering the data types, it is time to perform operations on them. In this chapter you will learn about mathematical and logic operations and comparisons.
- Conditional statements
  Computer programs are a series of statements, but very often performing a given operation depends on a certain condition.
- Loops
  Just like in your everyday life, also in programming certain operations must be performed many times. You will learn how to use various types of loops and how to write an infinite loop.
- Arrays
  When you have many things of the same or similar kind, you often want to keep them together, close one to another. In programming, you can use arrays for this purpose, which allow you to store multiple data of the same type in one place.
- Object-oriented programming
  Java is an object-oriented language. This chapter describes classes and objects. You will learn to define classes, create objects of these classes and perform operations on them.

Enjoy your reading!

Complete Lesson