

# Interactive Java™

Java™ was officially launched in November 1995. Since then things have developed very rapidly. Today, most regard Java™ more as a platform than a programming language. Java™ is currently the leading programming language in the field of object oriented programming and is used world-wide.

The language has been influenced by several other languages. According to James Gosling, Java™ is object oriented like Smalltalk, numerical like Fortran, a system language like C/C++ and distributed like no other previous language. As regards syntax, the language has most similarities with C++.

*“Open Training have really succeeded in the art of explaining the programming language Java™ and making it comprehensible. With Interactive Java™, learning times are reduced dramatically whilst maintaining the level of knowledge.”*

*Mikael Westerlind, Regional Manager at Meridium*

Ten hours of theory and exercises for beginners and pros.

Interactive Java™ gives you a comprehensive run-through of the programming language Java™. The author, Hans-Erik Eriksson has written both books (“Programutveckling med Java™”, Studentlitteratur 97) and instructor-led courses on the subject.

Interactive Java™ teaches you the basics of the programming language as well as more advanced areas such as Streams, Threads and JDBC. After completing the course, you will have a command of the language and its most important features. You will, for example, be able to write applications and applets.

The sections of the course that deal with the basics provide you with a platform on which to stand when you start working with the more advanced sections. The course is geared towards both beginners and experienced programmers.

## Table of contents

### Basic elements of Java™

- Variables and data types
- Operators and expressions
- Incrementing operators
- Priority order
- Type casting
- Control structure
- Condition, iteration and break constructions

### Object orientation & Java™

- Methods
- Reference and value parameters
- Declaration and accessibility of variables
- Overloading methods
- Encapsulation and visibility
- Inheritance
- Call order for constructors
- Overriding methods
- Polymorphism-dynamic binding
- Abstract classes
- User interface

### The Internet & Java™

- Applets and applications
- Applets in Web pages
- Security and applets
- Networks and OSI
- Data packaging
- Network communication
- URL & Java™
- Sockets & Java™

### Advanced Java™

- Error management, checked and unchecked exceptions
- Streams
- Threads
- Garbage collection

### User interface & Java™

- JFC and Swing
- Buttons, dialog windows, lists
- Drop-down menu, text area and text field
- Layout Manager
- Event management

### JDBC, Servlets & JSP

- Database connection
- Servlets – Post & Get
- The lifecycle of a servlet
- Expressions
- Scriptlets
- HTML and Java™ code
- Importing packages - directives

# Ten sections to be taken in any order

## Test and syllabus

You test your knowledge and we will provide you with a personal syllabus. The syllabus will help you decide the order in which to do the sections. If you already know a lot about Java™ and just want a refresher course, then this section is invaluable. It will help you to identify and fill in any gaps in your knowledge.

## The exam

When you have passed the exam, you will receive a personal diploma and a grade. The grade also includes the number of stars that you have collected during the course.

## Introduction to Java™

In this section, you will be given an introduction to the course, a brief history, a description of the development environment and explanations of basic concepts. The section also includes directions regarding how to navigate through the course.

## Basic elements of Java™

The basic elements in Java™ are described in this section. You will, for example, learn what a variable is and how it is used, which operators are available and how to manage control structure.

## Object orientation and Java™

Classes are basic elements of Java™ and other object-oriented languages. You will learn how to create your own classes, variables and methods in this section.

## User interface and Java™

This section deals with creating graphic user interfaces using JFC/Swing. Event management is also described, as are components and how to use them.

## Advanced Java™

A number of errors may arise during the execution of a program. This section shows you how to handle these. You will learn how to use what is known as Threads and how to go about recovering memory.

## The Internet and Java™

You can introduce entertaining functions, animations and games on your homepages using applets. On top of this, you will learn the basics of network programming and what it takes to be able to communicate via networks like the Internet.

## JDBC, Servlets and JSP

You will learn how to send and retrieve data using Java™ in this section. It also describes what JDBC is and why it is so good, as well as what a servlet looks like and what it can be used for.

## Game – Squash dem bugs

The challenge here is to answer a number of questions and collect as many points as possible by carrying out specific tasks. The more correct answers you get, the more time you get to play the game.



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