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KAÏNA-COM
TRAINING CATALOGUE

Java Programming

This hands-on course is designed for the programmer who wants to learn Java

KJV001 – Java Programming

Reference	KJV001

Experience

- ☒ Beginner
- ☐ Intermediate
- ☐ Advanced

Duration

Training Program:

- 5 days

Training Method

☐ I: i-learning, individual training (web-based training)

☒ V: v-learning, virtual class

☐ C: c-learning, classroom training

KAÏNA-COM
LE CARRÉ HAUSSMANN II,
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Price

2.526,00 € HT

Prerequisite

Programmers wanting to learn Java.

Audience

Some programming experiences. An understanding of object-oriented programming.

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KJV001 – Java Programming, Continued

Objective   This hands-on course is designed for the programmer who wants to learn Java. The course is designed to give the programmer a good introduction to one of the most popular and varied programming languages available today. The use of classes in Java is explained. Exception handling, memory management, multithreaded programming, input-output, JDBC and the Java GUI are all introduced.

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KJV001 – Java Programming, Continued

Course Contents

Course Contents :

Table 1: KJV001 - Course Contents

Chapter	Description
Introduction	• Pros and Cons of Java • Introduction to the Java Language • The Java Virtual Machine • Working in the Java Environment • Understanding the Java byte code • Writing your first "Hello, World" program
Java Data Types and Sizes	• Variables • Handling arrays • Type conversions and casting
Operators	• Arithmetic operators • Increment/decrement operators • Relational operators • Logical operators
Control Statements	• Conditional statements (if-then-else) • Using switch • For • While • Do-while • Breaking • Continuing from loops
Classes	• Defining classes • Using classes to create objects • Writing methods with parameters

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KJV001 – Java Programming, Continued

Course Contents, continued

Chapter	Description
Constructors	• Overloading constructors • Access control – private • Public • Protected and default • Static variables and methods • Final • String object • Using command line arguments
Inheritance	• Super and subclasses • Polymorphism – method overriding • Abstract classes • Packages and import statements • Encapsulation and access protection • Using interfaces
Arrays and Strings	• Array of native type values • Array of objects • Square brackets position • Copying array values • Multi dimensional arrays • The length variable • String class: instantiating, comparing • toString() • StringBuffer, StringBuilder and StringTokenizer • Passing arguments

KJV001 – Java Programming, Continued

Course Contents, continued

Chapter	Description
Exception Handling	• Exceptions and errors • Throwing and re-throwing • Try and Catch • Handling exceptions • Exception Class Hierarchy • Checked and unchecked exceptions • System and application exceptions • Custom exceptions
Garbage Collection	• Memory management in Java
Java Wrapper Classes	• Integer • Float • Boolean • Using Java String • StringBuffer • StringTokenizer • Classes
Collections Framework	• Understanding Collections • List • Set • Sorted Interfaces • Different types of data structures • ArrayList • Linked list • Hash table • TreeSet

KJV001 – Java Programming, Continued

Course Contents, continued

Chapter	Description
Multithreaded Programming	• Multithreading framework of Java • The synchronized keyword • Wait/Notify mechanism • Re-using threads using a "Thread Pool"
Java GUI	• Swing Basics and the Composite design patterns • The Model-View-Controller architecture – and Observer Pattern • Event handling in Java and Observer Pattern • Drawing API • Complex swing components such as JList, JTable, Writing Renderers and Editors • Multi threading and GUI
Java File IO	• Character and byte streams • Object serialization and de-serialization • Reading and writing to a properties file

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KJV001 – Java Programming, Continued

Course Contents, continued

Chapter	Description
JDBC	• Overview of JDBC architecture • JDBC driver types • Loading a driver • Connecting to a database • Communicating with the database using SQL queries • Using the Statement class • Using the PreparedStatement class • Creating and inserting into tables • Retrieving and displaying results • Transaction handling
The End	• Summary • Q&A • Evaluation

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