Course description

This is an introductory three-day course aimed at newcomers to Java and who need to become familiar with the fundamentals. It is delivered online using video conferencing and remote desktop software, enabling the instructor to view your code and assist with exercises remotely.

The pace can be adjusted to suit your requirements and the content is modular: additional topics can be added from the advanced course, such as building a user interface or connecting to a database.

The course can be provided to a team or as individual tuition for a fee of £1200+VAT for 3 days. To discuss this course further, or to make a booking, please telephone 0118 966 4994 or email mailbox@javaconsult.co.uk

What you will learn

- Introducing Java
- Core Language Features
- Loops and Logic
- Arrays and Strings
- Defining Classes
- Extending classes and Inheritance
- Abstract classes and Interfaces
- Generics and the Collections Framework
- Input and Output
- Threads

Prerequisites

No existing programming experience is assumed.

Related courses

Our Advanced Java course is intended for developers who are already familiar with object-oriented programming, either in Java or a similar language such as C# or C++

Course instructor

Originally a Civil Engineer with a BSc from London University the course instructor, Simon Dineen, has 20 years' experience in Java training and development.

Course outline

1. Introducing Java

   - Features and uses of the language
   - Overview of the Java Development Kit and the Java Runtime Environment
   - Using the Eclipse Integrated Development Environment
   - Building, compiling and running a simple command line application

2. Core Language Features

   - Data and variables
   - Integer and floating point data types
   - Arithmetic calculations
   - Enumerations
   - Operator precedence

3. Loops and Logic

   - Making decisions
   - Logical operators
   - The switch statement
   - For and while loops
   - Nested loops with break and continue statements
   - Assertions

4. Arrays and Strings

   - Defining and using arrays of primitives and of Strings
   - Operations on Strings
   - Mutable Strings and the StringBuilder class

5. Defining Classes

   - Declaring a class
   - Comparing local and instance variables
   - Defining methods
   - Creating an object
   - The default constructor and overloading constructors
   - Understanding packages
   - Controlling access to class members

6. Extending classes and Inheritance

   - Creating a derived class
   - Overriding methods
   - The Object class
   - Casting objects

7. Abstract classes and Interfaces

   - Defining abstract classes
   - Understanding interfaces and comparing them with abstract classes
   - Using polymorphism

8. Generics and the Collections Framework

   - Defining and instantiating a Generic class type
   - Using Sets, Lists and Maps
   - Overriding the equals and hashCode methods

9. Input and Output

   - Understanding streams
   - Accessing files with the Path class
   - Using input and output streams to read and write bytes
   - Using character streams to read and write text

10. Threads

   - Understanding threads
   - Implementing the Runnable interface
   - Synchronizing threads
   - Using an executor to execute a Callable task