

Java - New User

Category: Graphics & Web Design, Java, Programming, Java

Introduction

- Java technology and the Java Runtime Environment
- Stand-alone applications and servlets

Object-oriented programming with Java

- Define a class comprising fields and methods
- Packages and encapsulation
- Build an object and invoke its methods
- Constructors and method overloading

Java's object-oriented features

- Instantiating objects from classes
- Aggregation and composition
- Extending existing classes
- Overloading and overriding methods

Java Language Syntax

- Keywords and primitive types
- Conversion, casting and autoboxing
- Operators and their precedence
- Declare arrays of primitive or class types
- Conditionals and loops
- Catching and throwing exceptions
- Enumerated types

Flow control

- Invoking methods and passing parameters
- Conditionals and loops
- Handling exceptions with try and catch

Defining and Class Design

- Fields (instance data)
- Methods (functions)
- Abstract classes and interfaces
- Organising classes with packages and visibility modifiers
- Composition vs. inheritance

Building the components of a Java program

- Working with existing classes
- Leveraging generics with the collections API
- Extending base classes
- Developing new classes
- Compiling and debugging

Developing GUIs

- Foundations of user interfaces
- Basic GUI widgets
- Event-driven programming
- Benefits of a portable windowing library

Java Foundation Classes (JFC)

- Advantages of lightweight Swing components
- Exploring the Swing component library
- Creating Swing components: buttons, text fields, drop-down lists
- Adding Swing components to containers
- Arranging Swing components using layout managers

- Dialogs and message boxes

Event handling

- Registering event handlers
- Inner classes and top-level classes

Storing and Retrieving Data with File I/O

- Java streams
- Streams, Readers and Writers
- Accessing files
- Catching and throwing exceptions
- Formatting text output

Files and directories

- Reading and writing files
- Creating, deleting and renaming files
- Obtaining directory and file information

Working with Relational Databases

- JDBC database access
- Leveraging the JDBC API
- Choosing database drivers
- Connecting to a database

Improving performance with prepared statements and stored procedures

- Submitting SQL statements
- Retrieving and processing results

Java Development Tools

- Java Development Kit (JDK)
- Compiler (javac)

- Javadoc utility
- Java Archive (JAR) utility
- Java Integrated Development Environments (IDEs)

About SquareOne

SquareOne is among the UK's leading providers of IT training to businesses of all shapes and sizes. Our company pledge is to deliver inspiring, motivational and cost effective training which brings about tangible improvements in productivity. Through our training courses, individuals are able to gain lifelong skills and realise their full potential while clients achieve their corporate goals.

Prerequisites

Delegates should have a good level of PC and windows skills, but do not need prior experience with Java.

Course Objectives

The Java Introduction course was designed to enable students with little or no programming experience to begin to learn programming using the Java programming language. The course teaches the significance of object-oriented programming, the keywords and constructs of the Java programming language, and the steps required to create simple Java technology programs.

Students taking this course will have hands on experience learning basic object oriented concepts such as inheritance, encapsulation, and abstraction. They learn how to create and use simple Java classes containing arrays, loops, and conditional constructs. They also learn to use and manipulate object references, and to write simple error handling code.

Course Details

This is a Closed Course only. The content on the left is a guide to the standard course material. If however you would like this customised to your business needs then please call us to discuss.

Duration: 5 days

Timings: 09:30 to 16:30

Training Locations

Our open classroom courses are held in Merseyside where we have state of the art training facilities. We also provide in-house training solutions at any office location in the UK or Europe. We frequently deliver training in Liverpool, Wirral, Blackpool, Manchester, London, Chester, Warrington, Leeds, Cardiff, Birmingham, Edinburgh, Bristol, Sheffield, Glasgow, Leatherhead, Aberdeen and Ireland.

Closed courses can also be delivered in European countries such as Austria, Belgium, Denmark, Greece, France, Finland, Hungary, Italy, Ireland, Netherlands, Norway, Portugal, Spain, Poland, Sweden, Switzerland and off shore.... Either in English or local languages

Training has been delivered to a diverse range of industries including oil and gas, agriculture, automobile manufacture, food production, the arts and finance.

BOOKING

To discuss course contents and booking arrangements, please call SquareOne on:

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