JAVA SE 8 FUNDAMENTALS

3 DAYS

Intensive and hands-on, this course emphasizes becoming productive quickly as a Java Application Developer.

Course Description

Intensive and hands-on, the course emphasizes becoming productive quickly as a Java application developer. This course quickly covers the Java language syntax and then moves into the object-oriented features of the language.

As a participant you will be able to create basic applications using the Java 8 programming language. The participant will also be able to describe object-oriented concepts, object-oriented programming (OOP) concepts, and Java platforms and technologies. This course will use NetBeans as an IDE.

Target Participant

This course is designed for participants who are looking for an entry into an application development or a software project management career using Java technologies. Programmers who wish to move to object-oriented programming using Java would benefit from this programme as well.

Prerequisite

The course assumes knowledge of Object Oriented Concepts and programming in any Object Oriented language.

Course Objectives

Participants will learn how to
- Write, compile and execute Java programs
- Build robust applications using Java's object-oriented features
- Create robust applications using Java class libraries

Course Content

Day 1

Programming Concepts
- What is Programming
- Components of a Programming Language
- Programming Paradigms
- What is Java
- The Object-Oriented Paradigm and Java

Writing Java Programs
- What is a Java Program
- Writing the Source Code
- Compiling the Source Code
- Running the Compiled Code
- Using NetBeans IDE

Data Types
- What is a Data Types
- What is an Identifier
- Data Types in Java
- Primitive Data Types in Java
- Special Floating-Point Numbers
- Rounding Modes

Operators
- What is an Operator
- Assignment Operator
- Declaration, Initialization and Assignment
- Arithmetic Operators
- String Concatenation Operator
- Relational Operators
- Boolean Logical Operators

Statements
- What is a Statement
- Type of Statements
- A Block Statement
- The if-else Statement
- The switch Statement
- The for Statement
- The for-each Statement
- The while Statement
- The do-while Statement
- The break Statement
- The continue Statement

Day 2

Classes and Objects
- What is a Class
- Declaring Fields in a Class
- Creating Instances of a Class
- The null Reference Type
- Using Dot Notation to Access Fields of a Class
- Default Initialization of Fields
- Access Level Modifiers for a Class
- Import Declaration
- Declaring Methods of a Class
- Local Variables
- Instance Method and Class Method
- Invoking a Method
- Access Level for Class Members

The Object and Objects Classes
- The Object Class
- What is the Class of an Object
- Computing Hash Code of an Object
- Comparing Objects for Equality
- String Representation of an Object
- Cloning Object
- Finalizing an Object
- Immutable Objects
- The Objects Class

Wrapper Classes
- Wrapper Classes
- Autoboxing and Unboxing
- Beware of Null Values
- Overloaded Methods
- Comparison Operators
- Collections

Exception Handling
- What is an Exception
- Using a try-catch Block
- Exception Class Hierarchy
- Arranging Multiple catch Blocks
- Throwing an Exception
- Creating an Exception Class
- The finally Block
- The try-with-resources Block

Assertions
- What is an Assertions
- Testing Assertions
- Enabling / Disabling Assertions
- Using Assertions
- Checking for Assertion Status

Day 3

Strings
- What is a String
- String Literals
- Creating String Objects
- String Operators
- Comparing Two Strings
- StringBuilder and StringBuffer

Dates and Times
- The Date-Time API
- Calendar Systems
- Clocks and Period Packages
- Period Between Two Dates and Times
- Partials
- Formatting Dates and Times
- Parsing Dates and Times

Formatting Data
- Wrapper Classes
- Autoboxing and Unboxing
- Beware of Null Values
- Overloaded Methods
- Comparison Operators

Arrays
- What is an Array
- Arrays are Objects
- Accessing Array Elements
- Length of an Array
- Multi-Dimensional Arrays
- Enhanced for Loop for Arrays
- Runtime Array Bounds Check

YOUR TRUSTED TRAINING PARTNER

www.axsel.com.my

AXSEL MANAGEMENT INTERNATIONAL SDN BHD (879857-T)
Approved Class A Training Provider (HRDF Reg.No: 2987)
No, 19, 1st Floor, Jalan 1/21, 46000 Petaling Jaya, Selangor Darul Ehsan, Malaysia.
Tel: +603 – 7783 3333   Fax : +603 – 7781 3333 | Email: info@axsel.com.my Web: www.axsel.com.my

Inheritance
- What is Inheritance
- The instanceof Operator
- Binding
- Method Overriding
- Method Overloading
- Method Hiding
- Field Hiding
- Disabling Inheritance

Interfaces
- What is an Interface
- Declaring an Interface
- Implementing an Interface
- Implementing Multiple Interfaces
- Interface Inheritance
- The instanceof Operator
- Marker Interfaces
- Functional Interfaces
- Polymorphism – One Object, May Views
- Dynamic Binding and Interfaces

Core Collection Classes
- The Collections Framework
- The Set Interface
- Set Implementation Classes
- The List Interface
- List Implementation Classes
- The Map Interface
- Map Implementation Classes

For more information, please contact:

- Mohd.Atif / K.Gopala / Palani / Sajeeb – 03 77 83 3333
- Email – info@axsel.com.my / kgopala@axsel.com.my
- Web – www.axsel.com.my