

## JAVA FUNDAMENTALS and JAVA ADVANCED

### • JAVA FUNDAMENTALS

DATE	DURATION	TIME	COST
28 June 2010	5 days	09:00 - 14:00	R350

**ABOUT:** This course provides an introduction to the theory and practice of programming using this versatile object-oriented programming language.

#### COURSE CONTENT:

- **Basic Java programming:** What is a computer?, What is Java?, What makes Java different from other programming languages?, Comparison of Java with C++, JavaScript and Basic, What is a JVM?, Writing a simple Java program
- **Data types:** Eight primitive types, Operators, Arithmetic statements, Numeric type conversion, Boolean data types, Comparison operators, Char data type, ASCII and UNICODE
- **Methods, classes and objects:** Methods and method keywords, Classes and class modifiers, Objects, Organise classes, Constructors
- **Object-Oriented concepts in Java:** Block and scope, Overloading a method, Ambiguity, Overloading a constructor, Prewritten constants and methods, Inheritance, Interfaces, Packages
- **Input / Output:** Keyboard input, GUI input/output
- **Decision-making and branching:** Looping (I): Decision-making statements (if-then, if-then-else, switch), Looping (I): Branching statements (break, continue, return), Looping (II): Java loop statements (for, while, do-while)
- **Strings:** Creating strings, String length, Concatenating strings, Creating format strings, Converting between numbers and strings, Manipulating characters in a string, Comparing strings and portions of strings
- **Applets:** Life cycle of an applet, Applets versus applications
- **Inheritance:** Extend classes, Overriding and hiding methods, Hiding information, Final classes and methods, Abstract methods

### • JAVA ADVANCED

DATE	DURATION	TIME	COST
5 July 2010	5 days	09:00 - 14:00	R350

**ABOUT:** This course provides a comprehensive overview to the theory and practice of programming using this versatile object-oriented programming language.

#### COURSE CONTENT:

- **Swing components and layout managers:** Use of JFrame class, JPanel class, JCheckBox class, ButtonGroup classes, JScrollPane, JComboBox class and Swing event listeners and Layout managers
- **Advanced topics:** File input / output, Multi-threading, Exception handling, Revision, Object-oriented analysis and design, Advanced Java programming, Input/Output, Java Beans, Security, Using relational databases, XML, Network programming, Graphical User Interface, Building

#### Contact detail

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