Course Guide

Fundamentals of Java

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"Thank you Skiva for providing me valuable guidance and training on Java. This has made a remarkable influence on my profession in terms of knowledge, confidence and attitude. Skiva instructors have outstanding technical skills and are very practical in their way of delivering these expertise among blend of people from diverse professional background. I have undoubtedly gained invaluable knowledge under your guidance. My success credit belongs to Skiva and its trainers."

- Varun Patel
Java Course Attendee

Fundamentals of Java

Java is one of the most popular programming languages in use. This course introduces you to the Java language basics and programming techniques. You will learn how to develop applications using the Java Platform.

Course Objectives

- ☑ You will learn how to download, install, and configure the Java environment on a Windows system.
- ☑ Learn how to install and use an Integrated Development Environment (IDE)
- ☑ To gain knowledge on java as technology and as programming language
- ☑ To give you insight on different versions of Java including EE, SE and ME.
- ☑ To provide you knowledge on the basic OOPS concepts like polymorphism, encapsulation and inheritance
- ☑ To help you learn the OOPS concepts and the implement them in the java programs

- ☑ You will learn to perform the basic error handling for your java programs.
- ☑ you will learn to write classes and how to declare them .
- ☑ You will learn how Java used as technology in both application development and product development platforms.
- ☑ you will learn how to use Java programming syntax, use variables, different data types, operators, loops,constructors etc.
- ☑ at the end of the course you will be able to write simple java programs and compile and run them successfully. This will give you idea about the benefits of using IDE.

Course Audience

- ☑ Anyone with interest
- ☑ Aspiring Developers
- ☑ Application Developers
- ☑ Testers learning Selenium
- ☑ Technical Consultant
- ☑ Project Managers
- ☑ Anyone willing to undertake Java Certification

Course Content

Module 1 - Java Introduction and Installation

- ☑ The Java Environment – Overview.
- ☑ Describing key features of the technology and the advantages of using Java.
- ☑ Relating Java with other languages.
- ☑ Difference between J2SE, J2EE, J2ME.
- ☑ Introduction to Integrated Development Environment (IDE) and types of IDE's
- ☑ Installing J2SE and IDE.
- ☑ Version controlling In Java
- ☑ Pathways to certification.

Module 2 - OOPs Introduction-Thinking in Objects

- ☑ Introduction to OOPS
- ☑ Comparison of OOP and Non-OOP
- ☑ Introduction to Oops Concepts
  - Inheritance
  - Polymorphism
  - Abstraction
  - Encapsulation
  - Package
- ☑ Class Fundamentals
  - Class, Object
  - Global variable and member variables
  - Static and final
  - Inner and Anonymous Class
  - Access Control Modifiers
  - Constructors

- ☑ Writing a Simple Class
- ☑ Compiling and running sample class/program

Module 3 - Working with Objects and Classes

- ☑ Declaring an Object
- ☑ Initializing an object
- ☑ Storing an Object
- ☑ Using object references to manipulate data
- ☑ Using JSE javadocs to look up the methods of a class
- ☑ Working with String and StringBuilder objects
- ☑ Compiling and running a sample class/program
- ☑ Declaring a class
- ☑ Working with super classes and subclasses.
- ☑ Identifying parts of class.
- ☑ Writing a simple class.
- ☑ Members of class.
- ☑ Creating Constructors
- ☑ Methods- Declaring Methods, Returning/Passing values in Methods, overloading and overriding of methods.
- ☑ Using Import Statement.
- ☑ Access Modifiers.
- ☑ Understanding Instance and class members.

Course Content

Module 4 - Basic Java Syntax

- ✔ Declaring and Initializing Variables
- ✔ Control flow Statements
- ✔ Blocks
- ✔ Statements
- ✔ Expressions
- ✔ Operators
- ✔ Arrays
- ✔ Primitive Data Types
- ✔ Logical - boolean
- ✔ Textual - character and String
- ✔ Integral - byte, short, integer, long
- ✔ Floating Point - float and double
- ✔ Literal Values
- ✔ Strings
- ✔ Creating Strings
- ✔ White Space
- ✔ Comments
- ✔ Scope of a Variable
- ✔ System.out/System.in

Module 5 - Understanding Inheritance, Encapsulation and Polymorphism

- ✔ Understanding Inheritance
  - understanding Access Modifiers
  - Overriding and hiding
  - Polymorphism and inheritance
  - Using Super keyword
  - Using Final Key word

- ✔ Understanding polymorphism-
  overloading and overriding of methods
- ✔ The concept of Encapsulation-
  Access modifiers.

Module 6 - Abstract Classes and Methods

- ✔ Declaring abstract Classes.
- ✔ Declaring abstract Methods.
- ✔ Defining an Interface.
- ✔ Implementing an Interface.
- ✔ Coding To Interfaces.
- ✔ Difference between abstract and interface.

Module 7 - Numbers and Strings

- ✔ Using Number Classes
- ✔ Using String Class.
- ✔ Comparison of two Strings.
- ✔ Numbers and Strings Conversion.
- ✔ String Builder Class.

Module 8 - Implementing Packages and Completion of OOP's

- ✔ Creating a package
- ✔ Naming a package
- ✔ Using package members
- ✔ Managing Source and class files

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