



**Mstechnologies.org**

<https://www.facebook.com/mindscapestechnologies/>

<http://mstechnologies.org/java/>

# **JAVA COURSE DETAILS**

---

DURATION : 3 MONTHS

## **Mindscares Technologies**

**Off # 01 , Mezzanine Floor, Park View AptNear Usmania  
Resturant,13 A, Gulshan-e -Iqbal Karachi, Pakistan. |**

**Ph:(021)34810770 Email:- info@mstechnologies.org**

**Mobile:-0300-3564990**

# Java Programming

## Core Java

JAVA is one of most popular programming languages due to its interactive Java,write once run anywhere multimedia capabilities, Java programming ensures list of Internet development skills in current commercial demand. It is widely being used in Web,desktop and mobile applications (Android). This course is recommended for students who have passion and desire to make their mark in java programming.



Android applications are developed using the Java language. As of now, that's really your only option for native applications. Java is a very popular programming language developed by Sun Microsystems (now owned by Oracle).

Some of the Java's important core features are:

- It's easy to learn and understand
- It's designed to be platform-independent and secure, using virtual machines
- It's object-oriented

Android relies heavily on these Java fundamentals. The Android SDK includes many standard Java libraries (data structure libraries, math libraries, graphics libraries, networking libraries and everything else you could want) as well as special Android libraries that will help you develop awesome Android applications.

In this course Java2 will be used to create cross platform console and GUI based applications using object-oriented technology of Java Language.

### What skills will the student gain?

- Develop object-oriented applications using Java language
- Use Sun coding and source code documentation conventions to write professional code
- Design GUI-based distributed applications using Swing
- Implement security in desktop applications & Connect applications to databases such as SQL Server using JDBC

**Mindscapes Technologies:** Off # 01 , Mezzanine Floor, Park View Apt Near Usmania  
Resturant,13 A, Gulshan-e -Iqbal  
Karachi, Pakistan. Ph:(021)34810770 Mobile:-0300-3564990 Email: [info@mstechnologies.org](mailto:info@mstechnologies.org)  
Website: [www.mstechnologies.org](http://www.mstechnologies.org) Facebook: [www.facebook.com/MindscapesTechnologies](http://www.facebook.com/MindscapesTechnologies)



## Why should you learn Java Language?

By learning java you will have a few advantages like these:

1. You will gather more useful and practical knowledge on computer and software.
2. You will have a better shot in securing a job in the software industry and for that you need not have to learn engineering, a course in java can be the stepping stone.
3. You will be able to write codes for software and make yourself pretty necessary for your company.
4. You can use your knowledge to land a job or to make your profile more appealing to the companies.

## Why should you learn from us?

There are many institutions in the market from where you can learn java, then why should you opt for us? The following reasons will be enough to answer your questions-

1. One to one teacher student ratio, so that you learn better.
2. High tech classrooms and mock tests will give you an idea about the real world out there.
3. The teachers are well experienced and really good.
4. You will get all the assistance possible, but the main work will be yours. It will help you to gain confidence for your life.
5. You will get placement after completing the course.
6. The course fee will be reasonable.

## Java Course Contents

### Java Language Environment

- Built-in Networking
- What is Java?
- The Java Platform
- Platform Independent
- Automatic Memory Management
- Editions and Versions of Java
- Java History
- The JDK
- Your First Java Program
- Revisiting the JVM
- API documentation

### Java Fundamentals

- Data types
- Operators

**Mindscapes Technologies:** Off # 01 , Mezzanine Floor, Park View Apt Near Usmania  
Resturant,13 A, Gulshan-e -Iqbal  
Karachi, Pakistan. Ph:(021)34810770 Mobile:-0300-3564990 Email: [info@mstechnologies.org](mailto:info@mstechnologies.org)  
Website: [www.mstechnologies.org](http://www.mstechnologies.org) Facebook: [www.facebook.com/MindscapesTechnologies](http://www.facebook.com/MindscapesTechnologies)

- 
- **Control Statements**
  - **Static import**
  - **Auto boxing**
  - **Variable arguments**

---

### **Control Flow**

- **If Statements**
- **If Else Statements**
- **Boolean Values**
- **Switch Statements**
- **For Loops**
- **While Loops**

---

### **Strings and Arrays**

- **Defining an Array**
- **Initializing & Accessing Array**
- **Multi –Dimensional Array**
- **Operation on String**
- **Mutable & Immutable String**
- **Using Collection Bases Loop for String**
- **Tokenizing a String**
- **Creating Strings using StringBuffer**
- **Variable arguments**
- **Enhanced for-loop**
- 

---

### **Essentials of Object-Oriented Programming**

- **Object and Class Definition**
- **Using encapsulation to combine methods and data in a single class**
- **Inheritance and Polymorphism**

---

### **Writing Java Classes**

- **OOP in Java**
- **Introduction of Object and Classes**
- **Creating a Class**
- **Creating an Object**
- **Using an Object**
- **Adding Instance variables**
- **Controlling accessibility**
- **Naming conventions for class members**
- **Static and non-static Members**
- **Using Objects**
- **Constructor**

- 
- **Garbage Collection**
  - **Method Overloading**
  - **Static Members**
  - **Enumerated types**
  - **Code Examples & Exercise**

---

### **Encapsulation & Data Hiding**

- **Encapsulation & Data Hiding**
- **Accessors/Mutators or Getters/Setters**
- **Access Modifiers**
- **Encapsulation/Data Hiding Resources**
- **Code Examples & Exercises**

- 
- **A Simple Example**
  - **The Object Class**
  - **Overriding Methods and Revisiting the Super Reference**
  - **Chaining Constructors**
  - **Additional Inheritance Examples**
  - **Other Inheritance Issues**
  - **Code Examples & Exercises**

---

### **Inheritance**

- 
- **Polymorphism**
  - **Benefits of Polymorphism**
  - **Object Type Casting**
  - **The Object Class**
  - **Code Examples & Exercises**

---

### **Polymorphism**

- 
- **Understanding Interface**
  - **Using Interfaces class**
  - **Abstract Classes**
  - **Inner Classes(Anonymous)**
  - **Code Examples & Exercises**

---

### **Abstract Classes and Interfaces**

- 
- **Why packages**
  - **Understanding Classpath**
  - **Access modifiers and their Scope**

---

### **Packages**



- 
- Code Examples & Exercises
- 

#### Exception Handling

- Importance of Exception Handling
  - Exception Propagation
  - Exception Types
  - Using try and catch
  - throw, throws, finally
  - Writing User defined Exceptions
  - Standard Exception Handling Options
  - Exception Class Hierarchy
  - Checked vs. Unchecked Exceptions
  - Catching an Exception: try and catch blocks
  - Methods Which Throw Exceptions: the throws clause
  - Handling vs. Declaring Exceptions
  - Writing Custom Exceptions
  - Code Examples & Exercises
- 

#### Abstract Window Toolkit

- Graphics
  - Color and Font
  - AWT Components/Controls
  - Event Handling and Layouts
- 

#### Swing Programming

- Introduction to Swing
  - Light Weight Component
  - Swing Hierarchy
  - Atomic Components e.g. JButton, JList and more
  - Intermediate Container e.g. JPanel and more
  - Top-Level Container e.g. JFrame
  - Swing Related Events
- 

#### JDBC (Java Database Connectivity)

- JDBC Features
  - Types of Drivers
  - Driver Manager
  - Connection
  - Statement
  - Prepared Statement
  - Callable Statement
  - Result Set
  - ResultSet MetaData
- 

**Mindscapes Technologies:** Off # 01 , Mezzanine Floor, Park View Apt Near Usmania  
Resturant,13 A, Gulshan-e -Iqbal  
Karachi, Pakistan. Ph:(021)34810770 Mobile:-0300-3564990 Email: [info@mstechnologies.org](mailto:info@mstechnologies.org)  
Website: [www.mstechnologies.org](http://www.mstechnologies.org) Facebook: [www.facebook.com/MindscapesTechnologies](http://www.facebook.com/MindscapesTechnologies)



---

**Participant Profile:**

This course is valuable for programmers and software engineers who are interested in learning to develop Java programming applications.

**Difficulty Level:**

Beginner

**Applicable Job Roles:**

Java programmers and Desktop application developers.

**Pre-Requisite:**

Experience with any programming language (e.g. C/C++, Pascal, VB) is assumed.

Familiarity with Web technologies and object concepts will be helpful.

**Course Duration and Fee:**

**Duration:** 3 Months

**Schedule:** 2 Days a Week

**Instructor:** (OCJP and OCWCD certified)

**Mindscapes Technologies:** Off # 01 , Mezzanine Floor, Park View Apt Near Usmania  
Resturant,13 A, Gulshan-e -Iqbal  
Karachi, Pakistan. Ph:(021)34810770 Mobile:-0300-3564990 Email: [info@mstechnologies.org](mailto:info@mstechnologies.org)  
Website: [www.mstechnologies.org](http://www.mstechnologies.org) Facebook: [www.facebook.com/MindscapesTechnologies](http://www.facebook.com/MindscapesTechnologies)