

Certificate Course in Java Programming

4 Weeks Online Course (40 Hours)

Duration: 02 hrs. per day
Medium of Instruction: Hindi & English

Objective

This Java course introduces the learner to the fundamentals of java programming. It starts with the basics, such as how to compile and run a Java program, discusses java language like keywords, data type, Operators, Oops concept and database connectivity. The candidate will get knowledge about java programming.

10th pass with basic computer knowledge.

Eligibility

Duration

4 Weeks (Monday-Friday)

- ✓ Candidate must have latest computer/laptop with preferably 2 GB RAM or higher and Graphics Card (2 GB)
- ✓ Software: notepad, JDK, ECLIPSE IDE, XAMPP Server (can be downloaded from respective websites)
- ✓ Internet connection with good speed (*preferably 2 Mbps or higher*)

Prerequisite

Certificate

Certificate will be provided to the participants, based on minimum 75% attendance and on performance (minimum 50% marks) in the online test, conducted at the end of the course.

Rs. 2000/- incl. GST & all other charges.

Course Fees

How to

- Step-1** : Read the course structure & course requirements carefully.
- Step-2** : Visit the Registration portal and click on apply button.
- Step-3** : Create your login credentials and fill up all the details, see the preview and submit the form.
- Step-4** : Login with your credentials to verify the mobile number, email ID and then upload the documents, Lock the profile and Pay the Fees online, using ATM-Debit Card / Credit Card / Internet Banking / UPI etc.

Course Contents

Day	Topic	Day	Topic	Day	Topic
Day #01	Introduction to Java	Day #02	Creating First Java Program	Day #03	Java Fundamentals
Day #04	Control & looping statements	Day #05	OOP's concept	Day #06	Inheritance in Java
Day #07	Polymorphism in Java	Day #08	Abstraction in Java	Day #09	Packages in Java
Day #10	Arrays	Day #11	String	Day #12	Exception Handling
Day #13	Multithreading in Java	Day #14	Programs in Multithreading	Day #15	I/O Operation in Java
Day #16	Programs in file I/O	Day #17	Swing in Java	Day #18	Programs in Swing
Day #19	Introduction to JDBC	Day #20	Database Programming using JDBC		

Contact

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Contents in Details

Introduction to Java

- What is Java
- History of Java
- Feature of Java
- Comparison in Java with C and C++
- JDK, JRE & JVM
- Installation of Java
- How to Set Path?

Creating First Java Program

- Simple Java Hello Program
- Explanation of Hello Program
- Compile and run Java Program

Java Fundamentals

- Data Type
- Variables
- Operators
- Keywords
- Constants
- Identifiers
- Comments
- Type Casting

Control & looping statements

- If statements
- If-else statement and if....else ladder
- Nested if statements
- Switch statements
- While loop
- Do-while loop
- for loop
- for-each loop
- Break and continue

OOP's concept

- OOP concepts with real life example
- Defining a Class
- Field declaration
- Creating Objects
- Constructor
- Type of constructor
- Methods
- static keyword
- this keyword

Inheritance in Java

- Introduction to inheritance
- Types of Inheritance
- Why multiple inheritances are not supported in java?

Polymorphism in Java

- Introduction to Polymorphism
- Type of polymorphism

- Difference between method overloading & method overriding
- Super keyword and it's usages
- Final keyword and it's usages

Abstraction in Java

- Different way to achieve Abstraction in java
- Abstract class
- Interface
- Multiple inheritance by interface
- Difference between abstract & Interface

Packages in Java

- Understanding Package
- Using system packages
- Creating package
- Accessing a package
- Using a package
- Setting Class path
- Reading Input from Keyboard
- Access Modifiers
- Implementation of Encapsulation

Arrays, String

- Introduction to Array
- Advantages from Array
- Creating an Java
- Initializing & Accessing Array
- 1-d Arrays
- 2-d Arrays
- Jagged Arrays
- Anonymous array
- Operations on Arrays
- WhatisString
- StringClass
- CreatingStringObject
- OperationsonString
- StringBufferClassandit'sMethods
- Difference between String and StringBuffer class
- StringBUILDERClassandit'sMethods
- Difference betweenStringBufferandStringBUILDER

Exception Handling

- Introduction to Exception
- Types of exception
- Exception Class Hierarchy
- Try & Catch Blocks
- Nested Try statements
- Throw, throws and finally keyword
- Creating Custom Exceptions
- Difference between Final, Finally and Finalize

Multithreading in Java

- Understanding Threads and process
- Multiprocessing v/s Multithreading
- How to create thread
- Creating Child Threads and understanding context switching
- Thread Life-Cycle
- Thread Priorities
- MainThread(DefaultJavaThread)
- Performing multiple job by multiple Thread
- Sleeping a thread
- Using thread methods
- Daemon thread

I/O Operation in Java

- What is I/O
- Why Need Streams
- Byte Streams and Character Streams
- Read/Write operations with file
- Scanner Class
- Input from keyboard by InputStreamReader

- PrintStream class
- PrintWriter class

Swing in Java

- Introduction to AWT & Swing
- Difference between AWT and Swing
- Hierarchy of java swing classes
- JButton class
- JLabel
- JTextField & JTextArea class
- JPasswordField class
- JRadioButton class
- JComboBox class
- JTable class
- Displaying Image
- JMenu, JMenuItem and JMenuBar

Database Programming using JDBC

- Introduction to JDBC
- Steps to connect to the database
- Types of JDBC Drivers
- Connectivity with MySQL