

Syllabus: Core Java Programming

Chapter 1: Introduction to Java programming

- Java Introduction
- Differences between C++ and Java
- Java Installation – JDK,JRE and JVM
- The Java Virtual Machine
- How to set Environment Variable path for Java
- OOPS concepts- class, object, polymorphism, inheritance, abstraction etc
- Java Hello World Program
- Basic Java Program to understand JAVA structure
- Java Some basic programs (EvenOdd)
- Variables and data types
- Access Specifiers in Java (public, private and protected)

Chapter 2:

- Java Operators
- Decision Making and Branching
- Decision Making and Looping
- Test No-I
- Jumps in Loop
- Standard Default Values in Java
- Constructors
- Overloading methods
- Garbage collection

Chapter 3:

- String, StringBuffer and StringBuilder
- Array
- Vector
- Wrapper Classes

Chapter 4: Exception handling

- Error and Exception
- Try, catch and finally
- Throw, throws
- User defined Exception
- Test No-II

Chapter 5: Inheritance

- Definition and types with example
- super keyword use
- Final keyword use
- Method Overriding
- Abstract method
- Abstract Class
- Interface Concepts and program

Chapter 6: Multithreading & Packages 4hrs

- Introduction- diff between multitasking and multithreading
- Thread Model and it's life cycle
- Thread creation using Thread Class and programs
- Thread creation using Runnable Interface and programs
- Multithreading program
- Starting, Stopping and Blocking thread
- Thread Exception
- Thread Priority
- Join() in Threading Concept and program
- Synchronization Concept and Program
- Inter-Thread communication with the help of Producer-Consumer problem
- What is Package
- Naming Conventions and Benefits of Packages
- Package types- User Defined and System specified.
- How to create jar (executable of the project)
- How to create and import own packages
- Test No-III

Chapter 7: HTML, Applets, awt & awt tools

- Introduction of Applet
- Life Cycle of Applet and description
- Difference between Applet and Application
- Applet program without HTML
- Applet program with HTML
- Passing parameter to the Applet
- awt Package
- Graphics Class
- Applet Some programs
- Applet capabilities and restrictions

Chapter 8: Event Handling and Layouts in Java

- Event Handling in Java
- Layout Managers , Panels
- Difference Between awt and swing
- Frame and JFrame example in java
- Some program like calculator etc
- Using menus

Chapter 9: Collection Framework in Java

Chapter 10: File handling in java

Chapter 11: Working with database (JDBC) in java

Chapter 12: Socket Programming in Java using TCP and UDP

Chapter 13: RMI (Remote Method Invocation) in Java