Core Java

1. Java Language Environment

a. Object Oriented
b. Platform Independent
c. Automatic Memory Management
d. Compiled / Interpreted approach
e. Robust
f. Secure
g. Dynamic Linking
h. MultiThreaded
i. Built-in Networking

2. Java Fundamentals

a. Data types
b. Operators
c. Control Statements
d. Arrays
e. Enhanced for-loop
f. Enumerated types,
g. Static import
h. Auto boxing
i. C-style formatted I/O
j. Variable arguments

3. Essentials Of Object Oriented Programming

a. Object and Class Definition

b. Using encapsulation combine methods and data in a single class
c. Inheritance and Polymorphism
d. Writing Java Classes
e. Encapsulation
f. Polymorphism
g. Inheritance
h. OOP in Java
i. Class Fundamentals
j. Using Objects
k. Constructor
l. Garbage Collection
m. Method Overloading
n. Method Overriding
o. Static Members
p. Understanding Interface
q. Using Interfaces

4. Packages

a. Why packages
b. Understanding Class path
c. Access modifiers & their Scope

5. Exception Handling

a. Importance of Exception Handling
b. Exception Propagation
c. Exception Types
d. Using try and catch

e. throw, throws, finally
f. Writing User defined Exceptions

6. I/Operations in Java

a. Byte Oriented Streams
b. File Handling
c. Readers and Writers

7. Multithreaded Programming

a. Introduction Multi-Threading
b. Understanding Threads & its States
c. Java Threading Model
d. Thread class & Runnable Interface
e. Thread Priorities
f. Thread Synchronization
g. Inter thread Communication
h. Preventing Deadlocks

8. Network Programming

a. Introduction Networking
b. InetAddress
c. URL
d. TCP Socket and ServerSocket
e. UDP Socket

9. Java Util Package / Collections Framework

a. Collection & Iterator Interface
b. Enumeration
c. List and ArrayList
d. Vector
e. Comparator
f. Set Interface & SortedSet
g. Hashtable
h. Properties

10. Generics

a. Introduction Generics
b. Using Built-in Generics Collections
c. Writing Simple Generic Class
d. Bounded Generics
e. Wild Card Generics

11. Inner Classes

a. Nested Top Level Classes
b. Member Classes
c. Local Classes
d. Anonymous Classes

12. Abstract Window Toolkit

a. Graphics
b. Color and Font
c. AWT Components/Controls
d. Event Handling & Layouts

13. Swing Programming

a. Introduction Swing & MVC Architecture
b. Light Weight Component
c. Swing Hierarchy
d. Atomic Components e.g. JButton, JList and more
e. Intermediate Container e.g. JPanel, JSplitPane and more
f. Top-Level Container e.g. JFrame and JApplet
g. Swing Related Events