

Syllabus:

J2SE:[Core Java]:

1. Introduction:

1. Java History

2. Differences between java and others

3. Java Features

4. Java Naming Conventions

5. Java Programming Format

2. First Java Application Development:

1. Java Installation

2. Editor

3. Java Application and Java File Saving.

4. Compile Java File

5. Execute Java Applications.

3. Language Fundamentals:

1. Tokens

2. Identifiers

3. Literals

4. Key Words /Reserved Words

5. Operators

6. Data Types and Type casting

7. Java Statements

8. Arrays

4. OOPS:

1. Types of Programming Languages

2. Object Oriented Features

3. Object Based PL VS Object Oriented PL

4. Class syntax

5. Method Syntax

6. Var-arg method.

7. Accessor Methods VS Mutator Methods

8. Syntax to create an object

9. Immutable Objects VS Mutable Objects

10. Object Vs Instance

11. Constructors

12. Instance Context

13. This keywords

14. Static keyword

15. Main () method

16. Factory Method

17. Singleton classes and Doubleton classes

18. Final Keyword

19. Enum keyword

20. Relationships in JAVA

21. Associations in Java

22. Inheritance and Types of inheritances

23. Static flow in inheritance

24. Instance flow in inheritance

25. Super keyword

26. Class level type casting

27. Poly Morphism

28. Method overriding

29. Abstract Methods Vs Concrete Methods

30. Abstract class Vs concrete Class

31. Class Vs Abstract class Vs interface
32. "Instance of" operator
33. What is Adapter class?
34. What is marker interface?
35. Object Cloning
36. JAVA8 features in interfaces
5. Inner classes:
  1. Member Inner class
  2. Static Inner class
  3. Method local Inner class
  4. Anonymous Inner class
6. Wrapper classes:
  1. Byte, Short, Integer, Long, Float, Double, Boolean, Character
7. Packages:
  1. What is a package?
  2. Adv. of packages
  3. Types of packages
  4. Jar files preparation
  5. Executable Jar files
  6. Batch files preparation
8. String manipulations:
  1. String
  2. String Buffer
  3. String Builder
  4. String tokenizer
9. Exception Handling:
  1. Error VS Exception
  2. Exception Def.
  3. Types of Exceptions
  4. Checked Exception VS Unchecked Exception
  5. Throw Vs throws
  6. try-catch-finally
  7. Custom Exceptions
  8. Java7 Features in Exception Handling
10. Multi-Threading:
  1. Process Vs Processor Vs Procedure
  2. Single Processing Mech. Vs Multi Processing Mech.
  3. Single Thread model And Multi Thread Model
  4. Thread Design
  5. Thread lifecycle
  6. Thread class library
  7. Daemon Thread
  8. Synchronization
  9. Inter Thread communication
  10. Deadlocks
11. IOStreams:
  1. What is stream?
  2. Types of Streams?
  3. File Input Stream Vs File Output Stream
  4. File Reader Vs File Writer
  5. File Vs Random Access File
  6. Serialization vs Deserialization
  7. Externalization
12. Networking:

1. Standalone Appl. Vs Distributed Appl.
2. Client-Server Arch.
3. Socket Vs Server Socket
4. Network Appl. Arch.
5. Socket Programming.
13. Collection Framework:
  1. Collection Arch.
  2. List and its implementations
  3. Set and its implementations
  4. Map and its implementations
  5. Queue and its implementations
  6. Iterators
14. AWT:
  1. Text Field, Text Area, Button, Label, Check Box, List.
15. Swing:
  1. J Text Field, J Password Field, J Check Box, J Radio Button, J Color Chooser.
  2. Event Delegation Model
16. I18N:
  1. Number Format
  2. Date Format
  3. Resource Bundle
17. Reflection API:
  1. Class
  2. Field
  3. Method
  4. Constructor
18. Annotations:
  1. What is Annotation?
  2. Adv of annotations
  3. Comments Vs Annotations
  4. Types Of annotations
19. Remote Method Invocation[RMI]:
  1. Introduction
  2. RMI Architecture
  3. Steps to Design RMI Application
  4. Parameters in Remote methods
20. Regular Expressions:
  1. Introduction
  2. Pattern
  3. Character
  4. Quantifiers
21. Garbage Collection:
  1. Introduction
  2. Approaches to make an object for GC
  3. Methods for requesting JVM to run GC
  4. Finalization
22. JVM Arch.
  1. Class Loading Sub System
  2. Memory Management System
  3. Execution Engine
  4. Java Native Interface
  5. Java Native library
23. Generics:
  1. Introduction

2. Generic Classes
3. Generic Methods & Wild Card Character.
4. Inter Communication with Non-Generic Code
24. Java 8 Features:
  1. Lambda Expressions
  2. Functional Interfaces
  3. Default Methods in Interfaces
  4. Static Methods in Interfaces
  5. Predicate
  6. Function
  7. Consumer
  8. Method Reference & Constructor reference Double Colon (::: operator.)
  9. Stream API
  10. Date & Time API ( Joda API. )

25. JAVA 9 NEW FEATURES:

1. The Java Shell (RPEL.)
  2. The Java Platform Module System(JPMS.)
  3. JLINK(JAVA LINKER.)
  4. Process API Updates
  5. Private Method in Interfaces.
  6. Factory Methods for Collections.
  7. Enhancements to Java 8 Stream API
  8. Try With Resources Enhancements.
  9. Diamond Operator
  10. SafeVargs Annotation
  11. HTTP/2 Client
  12. G1 Garbage Collector
26. Basics of JDBC:
1. Introduction.
  2. JDBC Drivers.
  3. Steps to prepare JDBC Applications
  4. JDBC Applications for CRUD Operations

Java 10 Updatons:

1. Local-Variable Type Inference
2. Consolidate the JDK Forest into a Single Repository
3. Garbage-Collector Interface
4. Parallel Full GC for G1
5. Application Class-Data Sharing
6. Thread-Local Handshakes
7. Remove the Native-Header Generation Tool (javah)
8. Additional Unicode Language-Tag Extensions
9. Heap Allocation on Alternative Memory Devices
10. Experimental Java-Based JIT Compiler
11. Root Certificates
12. Time-Based Release Versioning

Java 11 Version Updatons:

1. Running Java File with single command
2. New utility methods in String class
3. Local-Variable Syntax for Lambda Parameters
4. Nested Based Access Control
5. HTTP Client
6. Reading/Writing Strings to and from the Files
7. Flight Recorder

Java 12 Features:

1. Switch Expressions
2. File mismatch() Method
3. Compact Number Formatting
4. Teeing Collectors in Stream API
5. Java Strings New Methods – indent(), transform(), describeConstable(), and resolveConstantDesc().
6. JVM Constants API
7. Pattern Matching for instanceof
8. Raw String Literals is Removed From JDK 12.

Java 13 Updatons:

1. Text Blocks
2. New Methods in String Class for Text Blocks
3. Switch Expressions Enhancements
4. Reimplement the Legacy Socket API
5. Dynamic CDS Archive
6. ZGC: Uncommit Unused Memory
7. FileSystems.newFileSystem() Method

JAVA 14 Updatons:

Developers Required Features:

1. Switch Expressions (Standard)
2. Pattern Matching for instanceof (Preview)
3. Helpful NullPointerExceptions
4. Records (Preview)
5. Text Blocks (Second Preview)

ID's

1. Eclipse
2. IntelliJ Idea
3. Netbeans

Course Highlights:

1. Live instructor LED online classes.
2. Flexibility to reschedule your class at any convenient time.
3. Become a certified professional.
4. Free Demo session.
5. Daily session recordings.
6. Resume preparation & FAQs.
7. Presentations and documentations.
8. Scenarios explanation.
9. Software installation.