

CORE JAVA

- 1. Introduction To Java
- 2. Java History
- 3. Why Java
- 4. Features of Java
- 5. Environment Setup
- 6. Hello World Application
- 7. Java Program Internal
- 8. JDK, JRE, JVM
- 9. JVM- Java Virtual Machine
- 10. Class, Objects, Data Types
- 11. Variables
- 12. Type Casting
- 13. Operators
- 14. Java Comments
- 15. Object Oriented Programming Concepts
 - Abstraction
 - Encapsulation
 - Polymorphism
 - Inheritance
- 16. Java Coding Standards
- 17. Package – Creating package, naming package
- 18. Java Keywords
- 19. Access Specifiers – Public, Private, Protected, Default
- 20. Static Concept – Block, Variable, Method, Class
- 21. Scanner Class
- 22. Control Statement – If, If...else, Nested if...else and Switch Case
- 23. Java Break Statement
- 24. Java Continue Statement
- 25. Flow Statement- for, while, do..while
- 26. Constructor- Default, Parameterized
- 27. Inheritance
- 28. Extends, super and this keyword
- 29. Method Overloading, Method Overriding

- 30. Interface

- 31. Abstract Class
- 32. Abstract Class vs Interface
- 33. Garbage Collection
- 34. Serialization
- 35. Java instanceof
- 36. Instance initializer block
- 37. Volatile Keyword in Java
- 38. Exception Handling
- 39. Exception Handling- try, catch, throw, throws, finally
- 40. String Concept
 - String Basics
 - String Methods
- 41. String Buffer
- 42. String Builder
- 43. Custom Immutable Class
- 44. Java - Arrays

- 45. Collection Framework
 - Collection Basics
 - Iterator Interface
 - Methods of Collection Interface:
 - 1. List
 - [A] Array List [B] Linked List
 - [C] Vector
 - 2. Set
 - [A] Hash Set [B] Tree Set
 - 3. Map
 - [A] Hash Map [B] Tree Map
 - [C] Hashable

- 46. Collection Framework Advance Concepts
 - Comparable Interface
 - Comparator Interface
 - Collections class
 - Differentiate Comparable and Comparator

- 47. Java Enum

- 48. Date Concept
- 49. File Handling Concept
 - File Handling Basics
 - Create Folder
 - Create File- .txt, .pdf, .xlsx, .docs, etc
 - Write File
 - Read File
 - Delete File
- 50. Thread
 - 1. Concept, Lifecycle
 - 2. Extends Thread
 - 3. Implement Runnable Interface
 - 4. Thread Priorities
 - 5. Thread Methods
- 51. Multithreading
- 52. Thread Synchronization
 - 1. Synchronization
 - 2. Object Locking
 - 3. Inter Thread Communication
- 53. JDK 1.8.0 New Features with Hands-on
 - 1. Lambda Expression
 - 2. Functional Interface
 - 3. Default Method in Interface
 - 4. Static Method in Interface
 - 5. Method References
 - 6. Date Time API
 - 7. Stream API
 - 8. Collectors
 - 9. For each Loop
 - 10. String Joiner Class
 - 11. Parallel Sort
 - 12. Optional Class
- 54. Java Mail API- Realtime Live Implementation

Programming practices, Concepts & Interview Preparation

J2EE

• 1. JDBC

- JDBC Introduction
- JDBC Architecture
- Database Overview
- JDBC Basics
- My SQL
- Create Database
- Create Table
- Insert, Update, Delete
- Truncate
- SQL Join
 - Inner Join
 - Left Outer Join
 - Right Outer Join
 - Full Outer Join
- Aggregate Function
 - MIN
 - MAX
 - AVG
 - SUM
 - COUNT
- SQL HAVING Clause
- GROUP BY
- ORDER BY
- SQL Aliases
- SQL LIKE Operator
- SQL IN
- SQL NOT IN
- SQL Between
- SQL Null Values
- SQL LIMIT
- SQL Stored Procedures

- Java Application Using JDBC Connectivity
- Handling SQL Exceptions
- DriverManager
- ResultSet
- Connection
- Statement
- Prepared Statement
- Callable Statement
- DB Connectivity Steps
- Store Image in SQL
- Read Image in SQL
- SQL Queries using SQLYog
- JDBC CRUD Application

FRAMEWORK

• 1. Hibernate

- Hibernate Introduction
- Hibernate Basics
- Hibernate Architecture
- Hibernate Session
- Hibernate Configuration
- Hibernate Configuration Offline
- Hibernate with Annotation
- Hibernate Validator
- Hibernate CRUD
- Hibernate Association Mapping
 - One to One Mapping
 - One to Many Mapping
 - Many to One Mapping
 - Many to Many Mapping
- Hibernate Aggregation
- Hibernate Named Queries
- Hibernate Native SQL
- HQL- Hibernate Query Language
- Hibernate HCQL- Criteria Query Language

- Hibernate Application with Mysql DB- CRUD
- Diff. save(), saveOrUpdate(), update(), persist() and merge()
- Diff. get() and load()
- Hibernate vs. JPA
- Hibernate Application with Mysql DB, Servlet, JSP-User Interface- CRUD
- Hibernate, MySQL, Servlet, JSP, Apache Tomcat Login Application
- Hibernate, MySQL, Servlet, JSP, Apache Tomcat Sign Up | Sign In Application
- Hibernate, MySQL, Servlet, JSP, Apache Tomcat Advanced Custom Project
- 2. Spring Framework
 - Spring Framework Introduction
 - Spring Basics
 - Inversion of Control
 - Dependency Injection
 - Spring Annotations
- 3. Spring MVC
 - Spring MVC Basics
 - Spring MVC Annotations
 - Spring MVC Hello World Application
 - Spring MVC Restful Web Services Basics
 - Spring MVC without Maven
 - Apache Maven Basics
 - Spring MVC with Maven
 - Spring MVC Application Deployment
 - Spring MVC, Hibernate, Mysql, Apache Maven, Apache Tomcat- CRUD Operation

WEB SERVICES

- 1. SOAP Web Service
- 2. RESTful Web Service