D Core Solutions

Basic Concepts of JAVA

- Features of Java
- Byte code
- Java Virtual Machine
- Versions of JAVA
- Installation, PATH Setting
- Creating and executing programs using notepad and NetBeans
- Object Oriented concepts
- Packages
- Import Packages
- Data types
- Type conversion and casting
- Operators
- Control statements
- Jump statements
- Basic I/O

Class and packages

- Creating classes and object
- Method overloading
- Static member
- Garbage collection
- Finalize()n method
- This keyword
- Inheritance
- Method overriding
- Final
- Abstract function and class
- Interface
- Implementing interface
- Extending interface
- Polymorphism
- Wrapper class
- Autoboxing and Unboxing
- CLASSPATH
- **Array and String**
- One-Dimensional array
- Multi-dimensional array
- Irregular multidimensional array
- Initialization of array
- Passing array as arguments
- Return array

- Command line arguments
- String, stringbuffer and string builder class

Exception handling and assertion

- Fundamental of exception handling
- Built-in exceptions
- Handling exceptions
- Try, throw, catch, throws and finally
- Nested try statement
- User defined
- Exceptions
- Assertion

Multithreading

- Fundamental of thread
- Life cycle of thread
- Creating thread by extending thread class
- Create thread by implementing runable interface
- Methods of thread
- Thread priority
- Thread synchronization
- Interthread communication

I/O and NetWorking

- File Class
- Stream and its benefits
- Byte Stream
- Character Stream
- Serialization
- Basics ofNetworking
- Sockets
- InetAddress
- DataGram

Applets

- Introduction of Applet
- Applet Life cycle
- Applet tag
- AppletViewer
- Passing Parameters of Applet
- Generics and Collections
- Class, methods and interfaces
- Collection overview
- Collection interface
- Collection classes
- Iterator and listiterator

- Map interfaces
- Comparator
- Collection
- Algorithms
- Generic collections
- Internationalization (I18N)
- Internationalizing Number an currency format
- Internationalizing Date and Time format
- Internationalizing Textual Contents

JAVA Database Connectivity (JDBC)

- JDBC architecture
- JDBC API
- Establishing Connection
- Statement, preparedstatement, callablestatement
- Retrieving values from resultset
- Batch Processing
- Transaction

AWT & Event Handling

- Windows Fundamental
- Delegates & Event
- Event Class
- Event Listener interfaces
- Adapter classes
- Working with graphics
- AWT Controls

Swing Control

- Introduction to swing control
- Swing Features
- Model View Controller Architecture
- Pane
- Creating Swing application
- Various Swing Controls

Servlet

- Servlet model
- Structure and deployment
- State management
- Filters
- Developing secure web application

JSP

- JSP Architecture
- JSP elements

- Custom Tags
- JSTL
- Expression Language
- Exception handling

EJB

- Introduction to EJB
- Implementation of stateless and stateful session beans
- Introduction to JAVA Messaging service
- JMS configuration
- Developing JMS Clients
- Implementations of message driven Beans
- JAVA Persistence API (JPA)
- Hibernate
- **Struts**
- Introduction to struts
- MVC and struts
- Architecture
- Actions, Results and interceptor
- Custom Interceptors and Results
- ValueStack
- Annotations
- Spring
- Introduction to Spring
- Understanding Inversion of Control and Dependency injection
- Spring Architecture
- Implementing IOC in spring
- Understanding Aspect Oriented Programming (AOP)
- Simplifying Data Access using JDBC Template
- Abstracting Data Access Layer using DAO
- Introduction to Spring MVC

Hibernate

- Introduction to ORM and Hibernate
- Hibernate Architecture
- Hibernate Configuration
- Introduction to session and session factory
- Persisting objects using hibernate
- Inheritance mapping
- Collection mapping
- Bidirectional association mapping
- Hibernate query language
- Caching introduction
- Integrating Spring and Hibernate
- Integrating JPA & Hibernate