

SIX MONTHS TRAINING ADVANCED JAVA

IDE: Eclipse, Sublime and NetBeans

Database: MySQL

Module 1

Introduction to Java:

- History of Java
- Need for Java
- Java versions
- Features/Advantages of Java
- JVM Architecture
- Packages in Java

Programming in Java:

- Programming Structure
- Variables/Constants
- Datatypes
- Various operators
- Access Specifiers & Modifiers
- Decision Making & Branching
- Decision Making & Looping

Methods in Java:

- Introduction to Methods
- Argument passing mechanism
- Pass by value
- Pass by reference
- Arrays
- Wrapper Classes
- Manipulating strings

OOP'S Principle:

- Basic principles of OOPS
- Class & Object
- Access modifiers
- Constructors & destructors
- Static members

Inheritance and Polymorphism:

- Inheritance & polymorphism
- Overloading methods
- Hiding methods
- Abstract class
- Abstract methods
- Multiple inheritance
- Interfaces
- Method Overriding

Packages and Exception Handling:

- Packages in Java
- Importing packages
- Creating User defined packages
- Exception Handling
- Built-in Exceptions
- User defined Exceptions

Multithreading in Java:

- Multithreading Concept
- Implementing multithreading in Java
- Thread Life Cycle
- Thread Priorities
- Thread Synchronization

Module 2

Windows Programming:

- Introduction to GUI Programming
- Introduction to Frames
- Various component classes
- Creating Frames & Components in Java
- Invoking Properties & methods of components
- Overview of awt components

Swings Programming:

- Introduction to Swings
- Layout Managers
- Swings Vs AWT in Java
- GUI Programming using Swings

Event Handling:

- Event handling mechanism in Java
- Event Listeners & Event Handlers
- Handling mouse & keyboard listeners
- Using MouseListener & MouseMotionListener

Applet Programming:

- Applet Introduction
- Applet Life Cycle
- Creating Web pages using Applet
- Handling Events on Applet

I/O Programming:

- I/O Introduction
- Byte Streams & Character Streams
- Reading & Writing data
- Object Serialization & Deserialization

Socket Programming:

- Client Server Architecture
- Protocols Overview
- Client Server communication using TCP/IP

Collection Framework:

- Introduction to java.util package
- Various classes & interfaces
- Vector, Stack & Hashtable classes

JDBC Programming:

- JDBC API
- JDBC Architecture
- Classes & Interfaces of JDBC API
- Creating JDBC application
- Managing database transactions

Advanced JDBC Programming:

- Creating applications using PreparedStatement object
- Creating and calling stored procedures in JDBC
- Using Metadata in JDBC
- ResultSetMetaData & DatabaseMetaData interfaces

Module 3

Features of MS-SQL server:

- SQL
- DDL
- DML
- DCL

Using Selected Statement:

- Use the SELECT statement with logical operators
- Use wildcards
- Use the IS NULL and IS NOT NULL keywords
- Use the ORDER BY clause
- Use the TOP keyword
- Use the DISTINCT keyword
- Use aggregate functions in queries
- Group result sets
- Use the COMPUTE and COMPUTE BY clause

Using Functions:

- String functions
- Mathematical functions
- Datetime functions

Using Joins:

- Inner Join
- Outer Join
- Self Join
- Equi Join
- Natural Join
- Cross Join

Using Subqueries:

- Creating subqueries
- Use subqueries with the IN clause
- Use subqueries with the EXISTS clause
- Use nested subqueries
- Use correlated subqueries

Databases:

- Creating database
- Viewing database
- Deleting database
- Renaming database

Database Tables:

- Create tables
- Insert rows into tables
- Delete tables
- Altering tables
- Create user-defined datatype
- List various types of data integrity
- Adding the constraints to tables (PRIMARYKEY, UNIQUE, FOREIGNKEY, CHECK, DEFAULT)

DML Statement:

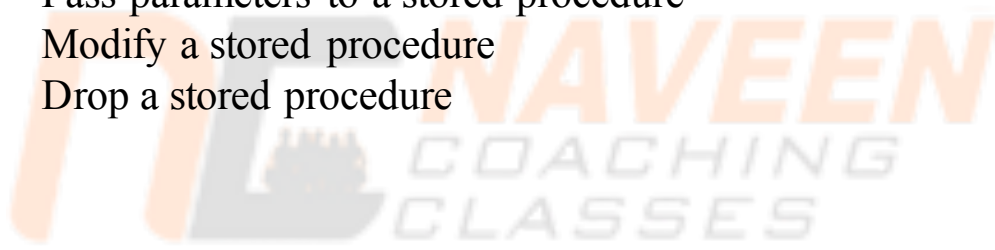
- Maintain data in a table by using
- INSERT statement
- UPDATE statement
- DELETE statement
- Truncate a table

Implementing Views and Batches:

- Create, alter, drop, and rename views
- Update data using views
- Declare variables
- Print messages
- Use comments
- Use conditional statements
- Use the iteration statements

Implementing Stored Procedure:

- Create a stored procedure
- Execute a stored procedure
- Pass parameters to a stored procedure
- Modify a stored procedure
- Drop a stored procedure



Module 4

Overview of HTML:

- HTML Introduction
- HTML Elements & Attributes
- Creating hyperlinks
- Creating Lists & Tables
- HTML Forms & Controls

Overview of XML:

- Introduction to XML
- Creating XML documents
- Introduction to parser
- Validating & Non-Validating parsers
- Introduction to DTD & XSD

J2EE Introduction:

- 2EE Concept
- J2EE Architecture
- Application Server
- Web & EJB Server
- Configuring J2EE data source

Servlet Programming:

- Introduction to Servlets
- HttpServlets & GenericServlets
- Servlet mapping & configuration
- Inter-Servlet communication
- Security in Web Application
- Session Management

Module 5

Project (Web based)

Web based Project using NetBeans IDE7.0 deployed using GlassFish Server and SQL Server as backend .

