



# GYANVRIKSH INTERACTIVE PVT LTD

III Floor, QZ Plaza, Opp Haveli Restaurant, Kothaguda, Kondapur  
Hyderabad - 500 084, ☎ 903 007 2121 & 903 007 2525

---

## Core Java Topics

### Introduction

- ✓ History of Java
- ✓ Features of Java
- ✓ Java Vs C++
- ✓ Flavors of Java
- ✓ What's covered in this course
- ✓ Kickstart Java – Sample Program, compile, Run & Execute

### Language Fundamentals

- ✓ JVM Vs JDK Vs JRE
- ✓ Setting up of Environment
  - Path, Classpath

### Basic Language Elements

- ✓ Lexical Tokens, Identifiers
- ✓ Keywords, Literals
- ✓ Variables, Constants
- ✓ Datatypes – Primitive & Non-primitive

### Operators

- ✓ Arithmetic Operators
- ✓ Unary Operators
- ✓ Relational Operators
- ✓ Conditional Operators
- ✓ Bitwise Operators
- ✓ Bitshift Operators

### Arrays

- ✓ Single Dimensional Arrays
- ✓ Multi-Dimensional Arrays

### Control Statements

- ✓ Selection Statements
- ✓ Usage of if, if...else, switch constructs
- ✓ Loop Statements
- ✓ Usage of while, do...while, for loops, Enhanced for loop
- ✓ Transfer Statements
- ✓ Break, continue and return statements
- ✓ Labeled and unlabeled goto statements

**Reach us @ 040-4026 2121 / 903 007 2121 / 903 007 2525**  
**...Empowering with Education & Expertise**



# GYANVRIKSH INTERACTIVE PVT LTD

III Floor, QZ Plaza, Opp Haveli Restaurant, Kothaguda, Kondapur  
Hyderabad - 500 084, ☎ 903 007 2121 & 903 007 2525

---

## OOPS Concepts

- ✓ Encapsulation, Abstraction
- ✓ Inheritance, Polymorphism
- ✓ Classes, Objects, Methods, Fields, Constructors, Destructor, Block in Java
- ✓ Access Specifiers – Public/Private/Protected, final, Static & Non-static
- ✓ Inheritance – Is-A Relationship
- ✓ Polymorphism – Method Overloading, Method overriding
- ✓ Abstract Classes
- ✓ Interfaces
- ✓ Inner Classes

## Packages

- ✓ Arrangements of Classes and Interfaces in Packages
- ✓ Access Modifiers
- ✓ Defining packages
- ✓ Naming Conventions

## Fundamental Classes

- ✓ String- Immutability of String class, == Vs .equals()
- ✓ String buffer, String builder
- ✓ Wrapper Classes
- ✓ Object

## Exception Handling

- ✓ Exceptions, Errors
- ✓ Types of Exceptions
- ✓ Checked & Unchecked exceptions
- ✓ Control flow in exceptions
- ✓ Usage of try, catch, finally, throws
- ✓ Runtime Exceptions

## Collections

- ✓ Collection of objects
- ✓ List
- ✓ Set
- ✓ Map
- ✓ ArrayList, Iterator, Vector
- ✓ Hashmap, Hashtable
- ✓ Comparable, Comparator Interfaces
- ✓ Generics

**Reach us @ 040-4026 2121 / 903 007 2121 / 903 007 2525**  
**...Empowering with Education & Expertise**



# GYANVRIKSH INTERACTIVE PVT LTD

III Floor, QZ Plaza, Opp Haveli Restaurant, Kothaguda, Kondapur  
Hyderabad - 500 084, ☎ 903 007 2121 & 903 007 2525

---

## Thread Programming in Java

- ✓ Understanding of Threads
- ✓ Thread life-cycle
- ✓ Creating Child Threads
- ✓ Thread priorities
- ✓ Synchronizing threads
- ✓ Deadlocks

## Input/Output

- ✓ Understanding streams
- ✓ The classes for input and output
- ✓ Working with File object
- ✓ Reading/Writing Files
- ✓ Formatted IO
- ✓ Buffered Reader/Writer
- ✓ Scanner
- ✓ Serialization

## Garbage Collection

- ✓ How memory is reclaimed by JVM
- ✓ Different GC collectors – Serial, Paralle, CMS,
- ✓ Generational GC
- ✓ JVM Settings for tuning GC
- ✓ Command line switches for tuning heap memory
- ✓ Can we force GC?

## Packaging & Jar file creation

- ✓ Creating JAR file
- ✓ Viewing /Extracting the contents of JAR file
- ✓ Updating JAR files
- ✓ Manifest

## JUnit

- ✓ Types of testing
  - Manual Testing, Automation Testing, Unit Testing
- ✓ Unit Tests in Java
- ✓ Junit Framework – Fixtures, Test Suites, Test Runners, JUnit classes
- ✓ Creating Test Case class, Test Runner class,
- ✓ Key APIs,
- ✓ Annotations & Assertions
- ✓ Writing Tests

**Reach us @ 040-4026 2121 / 903 007 2121/ 903 007 2525**  
**...Empowering with Education & Expertise**



# GYANVRIKSH INTERACTIVE PVT LTD

III Floor, QZ Plaza, Opp Haveli Restaurant, Kothaguda, Kondapur  
Hyderabad - 500 084, ☎ 903 007 2121 & 903 007 2525

---

## Enterprise Java – Topics

### JDBC – Java Database Connectivity

- ✓ Introduction to JDBC
- ✓ JDBC Drivers & Architecture
- ✓ Driver Manager, connection, statement, Result Set
- ✓ CRUD operation using JDBC
- ✓ Prepared statement
- ✓ Calling SQL functions, Database stored procedures callable statement
- ✓ Result Set Meta Data & Database Meta base
- ✓ Batch updates
- ✓ scrolled Result Set, Updatable Result set
- ✓ Working with row sets
- ✓ Connection pooling

### XML

- ✓ Overview of XML
- ✓ XML Syntax - Tags, Elements, Attributes, References, CDATA, Comments,
- ✓ Well formed & Valid XML documents
- ✓ DTD, XSD
- ✓ Namespaces
- ✓ Parsing of XML documents – SAX parsers, DOM parasers

### Network Programming in Java

- ✓ Networking Essentials
- ✓ Socket Programming
- ✓ TCP, UDP sockets
- ✓ URL
- ✓ Multicast Sockets

### HTTP

- ✓ Http phases, Http Methods
- ✓ Request, Request headers
- ✓ Response, Response headers, Status codes
- ✓ Http1.0 Vs Http1.1
- ✓ Persistent Connections
- ✓ Caching – Browser, Proxy
- ✓ Cookies

**Reach us @ 040-4026 2121 / 903 007 2121/ 903 007 2525**  
**...Empowering with Education & Expertise**



# GYANVRIKSH INTERACTIVE PVT LTD

III Floor, QZ Plaza, Opp Haveli Restaurant, Kothaguda, Kondapur  
Hyderabad - 500 084, ☎ 903 007 2121 & 903 007 2525

---

## Servlets

- ✓ Server side programming
- ✓ Comparison with CGI
- ✓ Introduction of servlets
- ✓ Servlet life cycle
- ✓ Generic Servlets, Http Servlets
- ✓ Servletconfig, Servletcontext, ServletRequest, ServletResponse
- ✓ Deploying Servlets in apache tomcat server
- ✓ Exploring Development Descriptor(web.xml)
- ✓ Session Tracking & Management
- ✓ Servlet Filters
- ✓ Include & forward Mechanism
- ✓ Web Application Security

## Java Server Pages

- ✓ Basic JSP Architecture
- ✓ Lifecycle of JSP (Translation, compilation)
- ✓ Model 1 & Model 2 Architecture
- ✓ MVC Architecture
- ✓ JSP Tags and expressions
- ✓ Comparison with servlets & JSP
- ✓ Script lets, declarations, expressions, directives.
- ✓ Action Tags
- ✓ Java Beans in JSP
- ✓ JSP Session
- ✓ JSP Scope
- ✓ Custom Tags, JSTL

## EJBs

- ✓ What are EJBs
- ✓ Session Beans
- ✓ Stateless Session beans
- ✓ Stateful Session beans
- ✓ Entity Beans
- ✓ Persistence - BMP Vs CMP

EJB – Callback methods

**Reach us @ 040-4026 2121 / 903 007 2121 / 903 007 2525**  
**...Empowering with Education & Expertise**



# GYANVRIKSH INTERACTIVE PVT LTD

III Floor, QZ Plaza, Opp Haveli Restaurant, Kothaguda, Kondapur  
Hyderabad - 500 084, ☎ 903 007 2121 & 903 007 2525

## Highlights of the Course:

- Teaching is oriented towards –
  - Practical's & Hands on
  - clear understanding of basics
  - what to expect as an interview question while topic discussion
- Exclusive Access to a variety of latest interview questions and answers
- Work on real-time projects
- Certification guidance & Material
- Hand-outs will be given which would serve as a knowledge-check
- Assistance in Resume preparation
- Interviews guidance
- Corporate level Training
- Finally, this training gives you all that are needed to secure a desired job & keeps you get going in your job!

## Why Gyanvriksh:

- **Authorized IT Certification Partners for many Courses**
- **Money back guarantee with 15% interest if not satisfied – Quality Assured**
- **Rated 90% excellent by students – Refer [Justdial](#) & [facebook](#) reviews**
- Complete Practical Oriented Hands on Training
- Situated in IT Hub Kondapur/Madhapur - Main Road
- Experienced, Certified & Real time working professional
- Class recordings of every session will be provided – Only for Online Training
- Maximum batch size 25 to give more focus at individual level. Online 1 to 1
- Register for a course and attend same course of same faculty in future any number of times for free
- Weekend, Weekday, Online & Corporate Trainings
- Nice corporate like ambience & AC Classrooms

**Reach us @ 040-4026 2121 / 903 007 2121 / 903 007 2525**  
**...Empowering with Education & Expertise**