IT WORKSHOP

ON

JAVA

J2SE & J2EE (CORE JAVA & ADVANCE JAVA)

Java is a programming language and computing platform first released by Sun Microsystems in 1995. There are lots of applications and websites that will not work unless you have Java installed, and more are created every day. Java is fast, secure, and reliable. From laptops to datacenters, game consoles to scientific supercomputers, cell phones to the Internet, Java is everywhere!

Java SE (formerly J2SE) is the basic Java environment. In Java SE, you make all the "standards" programs with Java, using the API described. You only need a JVM to use Java SE.

Java EE (formerly J2EE) is the enterprise edition of Java. With it, you make websites, Java Beans, and more powerful server applications. Besides the JVM, you need an application server Java EE-compatible, like Glassfish, JBoss, and others.

 Topics to be covered in Workshop

CORE JAVA

- Introduction to OOPs concept?
- What is Java?
- Features of Java
- How to Install Java and about Environment Variables
- JVM Architecture

- Data types, Variables, Keywords and Identifiers
- Operators and Expressions, Naming Conventions in Java
- Control Flow Statements
- Arrays
- Command Line Arguments
- Object and Class
- Object Oriented Programming(OOP)
- Inheritance
- Interfaces
- Abstract Classes
- Access Modifiers
- Packages
- Collection Frame Work
- Exception Handling
- Multi Threading
- Input/output Streams
- Networking
- AWT, Applets and Swings

ADVANCE JAVA

- Developing Web applications on Net Beans IDE.
- Deploying Servlets and JSPs on Tomcat application Server.

JDBC

- Introduction to JDBC
- JDBC architecture
- java.sql Package
- Connection, Statement, Result Set
- Prepared Statement
- Callable Statement

- Simple Transaction Management
- Four Levels of JDBC drivers, their pros & cons

Servlets

- Need of Server side Programming
- Introduction to Servlets
- Servlet Life Cycle
- javax.servlet package
- ServletConfig, Servlet Context, Servlet Response
- Supplying initialization parameters to Servlets
- Performing database operations in Servlets
- Include and forward mechanisms
- Applying filters to Servlets
- javax.servlet.http Package
- HttpServlet Life Cycle
- Http request methods GET vs POST
- HttpServletRequest, HttpServletResponse
- Session Tracking, purpose
- Hidden form fields, Cookies
- Http Session, URL rewriting

JSP

- Disadvantages of Servlets
- Introduction to JSP
- JSP Life Cycle
- Creating dynamic Web content with JSP
- Scripting elements
  - Scriplet
  - Declaration
  - Expression
  - XML syntax for JSP elements

- JSP directives page, include
- JSP implicit objects
- JSP scopes
- Include and forward mechanism
- Using a Java bean in a js

Duration: The duration of this workshop will be five consecutive days, with 6-7-hour session each day in a total of 30-35 hours.

Certification Policy:

- Certificate of Merit for all the workshop participants from Manac Infotech Pvt Ltd.
- At the end of this workshop, a small competition will be organized among the participating students and winners will be awarded with a **'Certificate of Excellence'**.
- Certificate of Coordination for the coordinators of the campus workshops.

Eligibility: It's a basic level workshop so there are no prerequisites. Anyone interested, can join this workshop.