Systems Domain

....Opportunities unlimited

JAVA

Mission- To bring in Continious improvement and achieve excellent customer satisfaction at all levels of software training and development, through its modular and systematic approach in accomplishing our goal of becoming a global giant.

Core Java

Introduction to Java

- History of Java
- Java v/s C & C++
- Features of Java
- Execution of Java Program

Programming Constructs

- Variables and Constants
- Data Types in Java, Data Type Conversion
- Operators in Java, Control Structures
- Best Practices

Object Oriented Programming

- Introduction to OOPS
- Access Modifiers
- Implementation of Classes and Objects
- Inheritance in Java
- Overloading and Overriding
- Abstract Classes, Constructors and Destructors
- Packages and Interfaces
- Super and this members
- Best Practices

Applet, AWT & Swings

- Life Cycle of Applet
- Applet vs Applications
- AWT Delegation Model
- Windows Components
- Layout Managers, Tour of Swings
- Best Practices

Exception Handling

- Types of Errors
- Exception Structure
- Exception Classes
- Throw and Throws blocks

Threading

- Thread Life Cycle
- Life Cycle Methods of a Thread
- Synchronization of Thread
- Dead Lock in Threads, Best Practices

Remote Method Invocation

- Introduction to RMI
- RMI vs Socket Programming
- RMI Architecture
- Execution of RMI

J2EE

Introduction

- Introduction to J2EE
- Elements of J2EE
- J2EE Platform
- J2EE Architecture
- Key enabling technologies of J2EE

Enterprise Application Architecture

- Client/ Server applications
- Multi-tire applications
- Web application Architecture
- Advantage of Multi-tier Architecture
- Server-side Application Development using Java

Java Beans & Component Models

- Basic of Software Components
- JavaBeans Architecture
- Bean Properties
- Methods and Events
- Creating JavaBeans
- Using JavaBeans
- Differences between EJB and JavaBeans

EJB Architecture

- Where and how EJB are used
- Roles in EJB Specifications
- Session and Entity Beans
- The EJB Container
- The EJB Server
- The EJB Clients

Systems Domain

....Opportunities unlimited

JAVA

Mission- To bring in Continious improvement and achieve excellent customer satisfaction at all levels of software training and development, through its modular and systematic approach in accomplishing our goal of becoming a global giant.

Remote Method Invocation (RMI)
- Purpose and Architecture of RMI
- RMI Classes and Interface
- RMI Clients and Server
- Parameter Passing and Serialization

Object Serialization
- What is Serialization?
- Serializable Object

Session Beans
- The Home Interface and Home Object
- The Remote Interface and EJB Object
- Stateful and Stateless Beans
- Session Beans Life Cycle
- Exceptions related to Session Beans

Deploying Session Beans
- Overview of Development Description
- Abilities and Limitations of Development Description
- Adding information to Deployment Descriptor
- Using JNDI with EJB

Entity Beans
- Implementing Business Logic Methods
- Entity Beans Interface
- Loading and Storing Entity Beans
- CjbCreate, CjbLoad and ejbStore Methods
- Primary Key Definition Persistence Management Techniques
- Container-Managed Persistence, Bean-Managed Persistence

JNDI
- Naming and Directory Services
- JNDI Packages
- JNI Service Providers

JMS Messaging Services
- JMS Overview
- Uses for JMS
- Classes and Interfaces in the JMS API
- Vendor Support for JMS
- Using JMS with EJB

JDBC
- The JDBC Connectivity Model
- JDBC Drivers, Connecting to Database
- Executing SQL with JDBC
- Processing Results from Query
- Stored Procedures and Functions

XML
- Introduction
- GML, SGML
- HTML, XML, Document, Element DTD
- Creating Elements, Creating Attribute
- Attribute type PCDATA
- CDATA, NMTOKENS etc
- DOM (Document Object Model) SAX (Simple AI to XML)
- XSLT, XML Schemas

Introducing COBRA into Enterprises Architecture
- Introduction to COBRA
- COBRA Architecture

JAVA Servlets & Server Pages
- Servlet Life Cycle
- Writing the Servlet using Servlet API
- Cookies, Session Tracking JSP
- Application Server Concepts (Webspher)

Introduction to Application Serve
- Difference between web server and Application Server
- Connection Pool Management
- Data Source, Load Balancing
- Complete Life Cycle and Development of J2EE Application

Project (Complete Life Cycle Project Demo for J2EE)
- Requirements phase (RS)
- Functional Specification (FS)
- Cut Phase
- Testing Phase
- Acceptance & Presentation

UDII
- Introduction (Service Discovery, Five Data types)
- Overall design Principles (Unique Identifiers)
- Containment
- Data Structure notation (Structure Specification. Structure Break down)
- The Business Service Structure (Structure Specification, Structure Break Down)
- The Binding template Structure (Structure Specification, Structure Break Down)
- The Model Structure (Two Main uses, Defining the technical fingerprint)
- The Publisher Assertion Structure (Structure Specification, Structure Break Down)