



QUICKSTEP COMPUTER CENTER

National Accreditation Board of Education Training.
(NABET)- Quality council of India) An ISO 9001:2008

*******J2EE Introduction*******

*******J2EE Architecture, Comparison between J2EE & .NET*******

*******J2EE Application development roles.*******

➤ **GUI Programming**

➤ **Designing Graphical User Interfaces in Java**

➤ **Components and Containers**

➤ **Basics of Components**

➤ **Using Containers**

➤ **Layout Managers**

➤ **AWT Components**

➤ **Adding a Menu to Window**

➤ **Extending GUI Features Using Swing Components**

➤ **Java Utilities (java.util Package)**

➤ **The Collection Framework :**

➤ **Collections of Objects**

➤ **Collection Types**

➤ **Sets**

➤ **Sequence**

➤ **Map**

➤ **Understanding Hashing**

- Use of Array List & Vector

Event Handling

- Event-Driven Programming in Java
 - Event- Handling Process
 - Event-Handling Mechanism
- The Delegation Model of Event Handling
 - Event Classes
 - Event Sources
 - Event Listeners
- Adapter Classes as Helper Classes in Event Handling
- Anonymous Inner classes a Short –cut to Event Handling
 - Avoiding Deadlocks in GUI Code
 - Event Types & Classes
 - Networking Programming
 - Networking Basics
 - Client-Server Architecture
 - Socket Overview
- Networking Classes and Interfaces
 - Network Protocols
- Developing Networking Applications in Java

Database Programming using JDBC

- Introduction to JDBC
- JDBC Drivers & Architecture
- CURD operation Using JDBC

- **Connecting to non-conventional Databases.**

Java Server Technologies

- **Servlet**

- **Web Application Basics.**

- **Architecture and challenges of Web Application.**

- **Introduction to servlet**

- **Servlet life cycle**

- **Developing and Deploying Servlets**

- **Exploring Deployment Descriptor (web.xml).**

- **Handling Request and Response**

- **Initializing a Servlet**

- **Accessing Database**

- **Servlet Chaining**

- **Session Tracking & Management**

- **Dealing with cookies**

- **Transferring Request**

- **Accessing Web Context**

- **Passing INIT and CONTEXT Parameter**

- **Sharing information using scope object**

- **Controlling concurrent access**

- **User Authentication**

- **Filtering Request and Response**

- **Programming Filter**

- **Filter Mapping**

- Servlet Listeners

✚ Enterprise JAVA Beans

- Enterprise Bean overview
- Types of enterprise beans
- Advantages of enterprise beans
- The Life Cycles of Enterprise Beans
 - Working with Session Beans
- Statefull vs. Stateless Session Beans
 - Working with Entity Beans
 - Introducing to Swings
 - Swings is built on the AWT
 - The swing packages
 - A simple swing application
 - Exploring swings

✚ EJB 2.0

- Local Enterprise Beans
- CMP2.0 model – Container Managed Persistency
 - EJBQL – EJB Query Language
 - EJB Select Methods
 - Finder Methods with EJBQL
- CMR – Container Manager Relationships
 - MDB-Message Driven Bean

✚ EJB 2.1

- Enhancements to EJB –QL
 - Timer Service
- Web services Support to SLSB

✚ EJB 3.0

- Introduction to EJB 3.0
- Architecture of EJB 3.0
- Session Beans in EJB 3.0
 - Stateless Session Bean
 - Stateful Session Bean
- Entity Components + JPA 1.0
- Simplified packaging on context dependency injection (CDI)
 - JPA-Java persistence API
 - Relations with Entities
 - one-to-one
 - one-to-many
 - many-to-one,
 - many-to-many
 - inheritance with Entities
 - JPQL-Java Persistence Query Language
 - Message Driven Bean in EJB 3.0
 - Transaction with EJB 3.0
 - AOP in EJB 3.0
 - AOP – Aspect oriented programming
 - Exposing EJB 3.0
 - Stateless Session Bean as Web Service

EJB 3.1

- Introduction of 3.1
- Removal of local business interface
 - Introduction of singletons
 - Asynchronous Session Beans
- Embeddable API for executing EJB in Java SE env

RMI-Remote Method Invocation

- Java Distributed Technology
 - RMI Architecture
- Dynamic / Bootstrap Clients
 - Object Passing in RMI
 - DGC
 - Activation
 - RMI-IIOP

JTS / JTA- JavaTransaction Service / Java Transaction API

- **ACID(Atomicity , Consistency, Isolation, Durability) properties**
 - **When to use Transactions**
 - **Local Transactions**
 - **Distributed Transactions**
 - **Flat Transactions**
 - **Nested Transactions**
 - **Chained Transactions**
 - **Two- phase Commit Protocol**

+XML (extensible markup Language)

- **Introduction**
- **Need of XML in application architectures**
 - **DTD (Document Type Definition)**
- **XML Parsers – SAX (Simple API for XML)**
 - **DOM (Document Object Model)**
 - **using IBM's XML4J parser**
 - **XML Schemas**
- **XML DB Utility (XML SQL Utility)**

+XSL

- **XSL tags**
- **using apache saxon's XSLT engine for transformation**
 - **X path specifications**
 - **X path expressions**

+Web Services

- **SOAP 1.1 (Simple Object Access Protocol)**
- **UDDI 2.0 (The Universe Description, Discovery and Integration)**
 - **WSDL 1.1(Web Services Description Language)**
- **JAX-RPC 1.1(Java API for XML Remote Procedure Call)**
 - **SAAJ 1.2 (SOAP with Attachments API for Java)**
 - **JAXR (Java API for XML Registration)**
 - **JAXB (Java Architecture for XML Binding)**
 - **JAXWS (Java API for XMLWeb services)**

J2EE Design Patterns Servers

- Weblogic 10.0
- IBM Websphere 6.0
 - J Boss
- Sun one Application Server 9.1
- Oracle 9i Application Server
 - Pramati
 - Glass Fish

IDE'S

- My Eclipse
- J Builder
 - IntelliJ
 - Net Beans
- Weblogic Workshop
- EXADEL Studio
 - WSAD

TOOLS

- Build – ANT
- Logging – Log 4j