



# PANYA TECHNOLOGIES

Technology to Live...

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## J2EE

### **Web applications and HTTP basics:**

- ✚ Servlets.
- ✚ Servlet model.
- ✚ Servlet Life cycle.
- ✚ Servlet container model.
- ✚ Coordinating servlets / Information sharing.
- ✚ Http servlet package.
- ✚ Session management.
- ✚ Filters.
- ✚ Listeners
- ✚ Web applications security.

### **JSP(Java Server Pages):**

- ✚ JSP Elements
- ✚ Directives.
- ✚ Declarations.
- ✚ Scriplets.
- ✚ Expressions.
- ✚ JSP Actions.
- ✚ Comments.
- ✚ Implicit objects.
- ✚ Expression Language (EL).

### **Model1 and Model2 Architectures:**

- ✚ JSTL.
- ✚ JNDI.
- ✚ Resource Connections
- ✚ JSP Elements

### **Data Source objects.**

- ✚ Connection pools.
- ✚ JTA (JavaTransactionAPI).
- ✚ MS (JavaMessagingService).
- ✚ JSP Elements
- ✚ Point-to-Point Messaging.
- ✚ Publish/Subscribe Messaging.
- ✚ RMI.
- ✚ Design Patterns.

### **Overview of EJB 3.0:**

- ✚ What is an EJB?
- ✚ Why should you use EJB?
- ✚ When should you not use EJB?
- ✚ What's new in EJB 3.0?

## **The EJB 3.0 Simplified API**

- ✦ A quick review of annotations in Java 5
- ✦ Overview of using annotations to develop EJB
- ✦ Annotations vs. Deployment descriptors

## **Interceptors**

- ✦ Aspect Oriented Programming (AOP) in JEE
- ✦ Intercepting methods
- ✦ Building Interceptor Classes

## **Session Beans**

- ✦ Developing Stateless and Stateful beans
- ✦ Related Annotations
- ✦ Life-cycle of session beans
- ✦ Session bean best practices
- ✦ Linking UML modeling constructs with Session Beans

## **Message-Driven Beans**

- ✦ Introduction to asynchronous beans
- ✦ Introduction to the Java Message Service (JMS) API
- ✦ Configuring the activation context
- ✦ Configuring the JMS message providers

## **Injectors**

- What are Injectors?
  - ✦ Using injectors to access resources and EJBs
  - ✦ Accessing the EJB context and the Environment Naming Context (ENC)
  - ✦ Setter injection
  - ✦ Simplifying lookup of beans and resources using injectors
  - ✦ Annotation used for injection

## **Java Persistence API (JPA)**

- ✦ Overview of Java Persistence API for EJB 3.0
- ✦ Entity class and O/R mappings
- ✦ Overview of packing and deploying entities

## **Entities**

- ✦ Persistent fields and properties
- ✦ Entity relationship mappings
- ✦ Inheritance mappings
- ✦ Annotations and XML descriptors for defining mappings

## **Entity Operations**

- ✦ The Entity Manager interface
- ✦ Entity instance life cycle
- ✦ Entity listeners and call-back methods

## **Java Persistence Query Language (JPQL)**

- ✦ Overview of EJB 3.0 query language
- ✦ Writing portable queries based on Entities
- ✦ Building native queries for performance
- ✦ Building custom finders
- ✦ Polymorphism
- ✦ Automatic storage of query results in plain old Java objects (POJO)

## **EJB Timer Service**

- ✦ Overview of Timer Service
- ✦ Timer Service APIs
- ✦ Using injectors to inject Timer Service
- ✦ Programming with Timer Service
- ✦ Scheduling recurring tasks

## **EJB Transactions**

- ✚ Container vs. Bean managed transactions
- ✚ Container-managed transaction attributes
- ✚ Transaction propagation
- ✚ Accessing the User Transaction service using injectors
- ✚ Invoking the User Transaction service using JTA
- ✚ Transaction Isolation attributes
- ✚ Session Synchronized Stateful Session Beans
- ✚ Transactions and exceptions
- ✚ Using annotation to specify transaction attributes

## **EJB Security**

- ✚ Security annotations
- ✚ Roles, Groups and Permissions
- ✚ Declarative vs. Programmatic security
- ✚ Accessing the Security services using the EJB Context
- ✚ Switching the security context

## **Struts Frame Work**

- ✚ Tools
- ✚ Eclipse.
- ✚ My Eclipse.
- ✚ Net Beans.

## **WEB/APPLICATION SERVERS**

- ✚ Tomcat.
- ✚ Web logic.
- ✚ Web sphere