ORACLE – BPEL COURSE CONTENT

1. Introducing Service-Oriented Architecture Concepts and Oracle SOA Suite 10g

- Describing Service-Oriented Architecture and Standards Enabling SOA

- Describing Oracle ESB Architecture

- Orchestrating Services with BPEL

- Adding Business Rules and Decision Services

- Oracle BPEL Process Designer and Oracle ESB Designer

- Creating Connections in Oracle JDeveloper

- Creating an Application Server and Integration Server Connection

2. Providing Services for SOA

- Defining an XML Schema and Creating the WSDL Document

- Creating the Web Service by Using Oracle JDeveloper 10g

- Deploying and Testing a Java Web Service

- Oracle Service Registry Consoles

- Publishing a Service Provider and WSDL Service

- Testing a Web Service in the Service Registry

3. Configuring Oracle Enterprise Service Bus (ESB)

- Enterprise Service Bus Architecture: Single Instance

- Creating an ESB Project in JDeveloper and Creating a ESB System

- Creating an ESB Service and Routing Rules in ESB

- Adding Target Service to Routing Rules

- Adding a SOAP Service to an ESB Project

- ESBBPEL Native Integration

- Registering an ESB Project

- Benefits of ESB

4. Developing a Simple BPEL Process

- Introducing Business Process Execution Language (BPEL)

- Describing Oracle BPEL Process Designer

- Creating a BPEL Process Project

- Designing the BPEL Process and Orchestrating with BPEL Activities

- Describing the Assign Activity
- Using the XPath Expression Builder
- Examining the BPEL Process XML Source Structure
- Deploying the BPEL Process and Executing a BPEL Process

5. Orchestrating Services with BPEL

- Developing a BPEL Process
- Importing a User-Defined XML Schema
- Creating and Configuring a Partner Link
- Exchanging Message Data with a Service
- Grouping Activities by Using a BPEL Scope
- Adding Activities to a Scope and Configuring a Scope

6. Processing BPEL Activities in Parallel

7. Processing Activities in Parallel

8. Processing in Parallel with a FlowN Activity

9. Working with a FlowN Activity

10. Adding a While Activity for Execution Loops

11. Implementing a Pick Activity

12. BPEL Deployment Descriptor Properties

13. Defining Preference Properties

14. Defining Deployment Descriptor Properties in JDeveloper

- Integrating Services with Adapters
- Describing the Adapter Framework
- Identifying OracleAS Adapter Types
- Technology, Application, Legacy, and Custom Adapters
- File and FTP Adapter
- Working with the File Adapter
- Creating and Configuring a File Adapter in BPEL and ESB
- Invoking a Database Adapter from BPEL
- Configuring the Database Adapter
- Transforming Data in ESB and BPEL
- Routing Rules in ESB
- Adding a Filter Expression to a Routing Rule

- Synchronous or Asynchronous Execution

- Transformation Services in BPEL and ESB

- Adding and Configuring Transformation Services in BPEL

- Using the XSLT Mapper in BPEL

- Adding Transformation to an ESB Service

- Dictionary and Report Generation

- Administration and Exception Handling in ESB

- Managing ESB Metadata Server and ESB Runtime Server

- Testing an ESB Service

- Error Handling in ESB

- Errors Raised in Synchronously and Asynchronously Called Services

- Changing Routing Rules

- Viewing Application Logs in ESB

- Configuring Logging Levels

- Import and Export Utilities in ESB

- Handling Exceptions and Monitoring in BPEL

- Reviewing the Scope Activity

- Managing Faults

- Throwing Exceptions in BPEL

- Compensation in Transactions

- BPEL compensation Handler

- Monitoring BPEL Processes with Sensors

- Introduction to Monitoring with Oracle BAM

- Interfacing with Oracle BAM

- Developing Business Rules

- Introducing Business Rules Technology

- Introducing Oracle Business Rules and Decision Service

- Developing a Rule-Enabled Application and accessing Oracle Rule Author

- Defining Oracle Business Rules Development Concepts

- Creating a Rule Repository and Rule Definitions 1

- Identifying the Structure of a Rule and creating a Rule

- Integrating Rules with a BPEL Process

- Creating a Decision Service PartnerLink

- Implementing Human Workflow in BPEL

- Workflow Services in Oracle BPEL Process Manager

- Implementing Human Workflow Services

- Workflow Exchange Patterns

- Describing Workflow As a Service

- Creating a Human Task in BPEL

- Working with Notification Services

- Configuring E-Mail Notification for a BPEL Process

- Understanding XMail E-Mail Server and Configuring the E-Mail Client

- Integrating Java Applications and BPEL

- Invoking a BPEL Process from Java

- Invoking One-Way and Two-Way Operations from Java

- Invoking a BPEL Process from JSP and with the JSP Tag Library

- Executing Java Code in a BPEL Process

- Web Services Invocation Framework

- Java Code with WSIF Bindings

- WSIF Java Calls

- Embedding Java Code in BPEL

- Configuring the Oracle WSM Component Archit

- Oracle WSM Component Architecture and Oracle WSM Server Components

- Configuring a Gateway and a Server Agent

- Registering a Web Service with the Gateway

- Policy Management in Oracle WSM

- Understanding Oracle WSM Policy Steps

- Pipeline Templates

- Creating a Policy Pipeline Template

- Using the Pipeline Template in the Server Agents Policy

- Securing BPEL and ESB Services with Oracle WSM

- Securing the Endpoints of the SOA Order Booking Application

- Invoking a Secured Service from BPEL

- Using Oracle WSM Client and Server Agents to Enforce Security Policies

- Installing and Configuring a Client Agent

- Securing a BPEL Process in Oracle WSM

- Invoking a Secured Web Service from BPEL

- Deploying and Testing the BPEL Process

- Invoking a Secured Web Service from ESB

- BPEL Process Deployment Compiling and Deploying a BPEL Process..

- Compiling and Deploying on JDeveloper BPEL Designer.

- Compiling Without Deploying on JDeveloper BPEL Designer.

- Compiling and Deploying on Eclipse BPEL Designer..

- BPEL Suitcase JAR File.

- Domain Management Creating and Managing a BPEL Domain

- Changing the Default Domain Password

- Changing Oracle BPEL Admin Console Password…

- Creating a BPEL Domain

- Changing Oracle BPEL Server Mode.

- Deploying a BPEL Suitcase to a Specific Domain…

- Location of BPEL JAR Suitcase Files in a Specific Domain..

- Underplaying a BPEL Process from a Specific Domain

- Viewing BPEL Processes in Oracle BPEL Console…

- Dashboard Tab: Viewing Processes..

- BPEL Processes Tab: Managing the Process Life Cycle…

- Process Life Cycle Recommendations for a Production Environment…

- Example: Life Cycle of Processes..

- Instances Tab: Viewing Process Instances

- Activities Tab: Viewing Process Activities…

- Build and Command Line Tools.

- Apache Ant. Bpelc… Examples…Schemac Examples…

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