

## Using Java - for PL/SQL and Database Developers

**Duration:** 2 Days

### What you will learn

This Using Java - for PL/SQL and Database Developers training will teach you about Oracle Database programming. Expert instructors use Java with examples and explanations of appropriate use.

### Learn To:

- Develop database Applications using Java.
- Create, load, resolve and publish Java classes in the database.
- Develop and Run Java directly in the database.
- Access and Manipulate SQL and PL/SQL Data types using JDBC and SQLJ.
- Utilize UCP for JDBC design-time and run-time requirements.
- Convert Java in the database into Stored Procedure.
- Explain the benefits of Oracle JVM (OJVM).
- List the advantage of using Stored Procedures as Database Programming Model.

### Benefits to You

Ensure fast, reliable, secure and easy to manage performance. Optimize database workloads, lower IT costs and deliver a higher quality of service by enabling consolidation onto database clouds.

### Access & Manipulate SQL Data

Upon enrolling in this course, you'll also learn to access Oracle Database using JDBC, UCP, Java stored procedures and SQLJ technologies. Instructors will highlight the benefits of accessing and manipulating SQL data using JDBC and SQLJ technologies. The advantage of Oracle JVM is also discussed to ensure understanding.

### Audience

Developer

### Related Training

#### *Required Prerequisites*

Knowledge of Oracle Database

#### *Suggested Prerequisites*

Oracle Database: Program with PL/SQL Ed 1 (KR)

## Course Objectives

Map SQL and PL/SQL Types to and from Java Types

Invoke Java in the Database

Manage Java in the Database

Use key metadata in JDBC

Manipulate Oracle SQL data types in JDBC

Use Result Sets and RowSet

Understand JDBC Quality of Services and Best Practices

Access and Manipulate Oracle SQL data using SQLJ

Develop and Run Java directly in the database

Access and Manipulate SQL and PL/SQL Data types using JDBC and SQLJ

## Course Topics

### Introduction

Describe the course objectives

Describe the course prerequisites and suggested prerequisites

Describe lesson contents and agenda

List the schemas and appendices used in this course

Identify the relevant documentation and other resources

Describe the Course Technical Environment and data

### Introduction to Java

Java and OOP Technology

Key features of Java

## **Introduction to JDBC**

JDBC Architecture

JDBC Drivers: Overview

JDBC Specification

Essential of JDBC Programming

## **Accessing and Manipulating SQL Data using JDBC**

Key Metadata in JDBC

Manipulating Oracle Data Types with JDBC

Accessing and Manipulating LOBs using JDBC

Result Set support in JDBC

Rowset

## **JDBC Quality of Services and Best Practices**

Introduction to Transaction Services

Introduction to Security Services

Best Practices and tips

## **Introduction to SQLJ Technology**

Overview of SQLJ

SQLJ Database Access

## **Universal Connection Pool**

Introduction to Universal Connection Pool (UCP)

Universal Connection Pool for JDBC Overview

UCP for JDBC design-time and run-time requirements

Basic Connection Steps

Packages of the UCP for JDBC API

Database Connections

## **Stored Procedures as Database Programming Model**

Overview of Stored Procedures

Introduction to Java Stored Procedures

Advantages of Java Stored Procedures

## **Oracle JVM**

Define Oracle JVM and its architecture

Using Java in Oracle Database

Difference between OracleJVM Architecture and JDK VM Architecture

Automated Storage Management with Garbage Collection

Dynamic Class Loading

Performance Enhancement of Oracle JVM

## **Developing and Running Java in the Database**

Creating or Loading Java in the Database

Removing Java Sources, Classes and Resources from the Database

Setting/Querying Environment Variable and System Properties

Java Compiler within the Database

Converting Java in the Database into Stored Procedure

Invoking Java in the Database

