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## Oracle® Developer 2000™: PL/SQL™ Functions, Procedures, and Packages

**Course Length:** 3 Days

### Course description

**Overview:** Students will learn to design, debug and test PL/SQL procedures, functions, packages, and triggers. Students will write code using SQL\*Plus as well as the Procedure Builder. Finally, this course will help to prepare the student for Oracle's certification exam titled Develop PL/SQL Program Units.

**Prerequisites:** To ensure your success, we recommend you first take the following course or have equivalent knowledge:

- Oracle 8i/9i: SQL, SQL\*Plus, and PL/SQL

**Delivery method:** Instructor-led, group-paced, and classroom-delivery learning model with structured hands-on activities.

**Benefits:** Students will learn how to write advanced PL/SQL codes as an Oracle Developer. This course will give the students the knowledge to write applications successfully in Oracle Applications software as well as in third party vendors' Programming languages (Note: PL/SQL is an Oracle proprietary programming language. Third party vendors' programming languages may not be entirely compatible with PL/SQL, the exception, these days is Java. PL/SQL can call Java Stored Procedures and Java can call PL/SQL stored procedures).

**Target student:** Students enrolling in this course should have Intermediate knowledge in SQL and PL/SQL. This course is intended for people who aspire to become Oracle Developers, or Oracle Operators, and support personnel.

### Performance-based objectives

Upon successful completion of this course, students will:

- Describe basic concepts of PL/SQL
- Write, debug, and test PL/SQL code using the Procedure Builder
- Use Implicit and Explicit cursors
- Create and Execute Procedures
- Create and Execute Functions
- Debug Procedures and Functions
- Create Public and Private Packages
- Create Database Triggers
- Maintain Subprograms based on Procedural and Object dependencies

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## Course content

### Lesson 1: Review of PL/SQL

- Overview of PL/SQL Blocks
- Conditional Control
- Iterative Control

### Lesson 2: Overview of Procedure Builder

- Introduction to Procedure Builder
- Object Navigator
- Program Unit Editor
- PL/SQL Interpreter
- Database Trigger Editor

### Lesson 3: Cursors

- Introduction to Cursors
- Implicit Cursors
- Explicit Cursors
- Cursor Loops
- Cursor Variables

### Lesson 4: Creating Procedures

- Overview of Procedures
- Creating Procedures
- Creating Server-Side Procedures
- Creating Client-Side Procedures
- Parameter Modes

### Lesson 5: Creating and Executing Functions

- Overview of Functions
- Creating Functions
- Creating Server-Side Functions using Procedure Builder
- Creating Client-Side Functions using Procedure Builder
- Executing Functions

### Lesson 6: Debugging Procedures and Functions

- Debugging Procedures and Functions using the Procedure Builder
- Viewing the Code of an Existing Procedure or Function
- Modifying the Code of an Existing Procedure or Function
- Dropping a Procedure or a Function

### Lesson 7: Creating Packages

- Overview of Packages
- Creating Packages
- Overloading Packages
- Oracle Supplied Packages

### Lesson 8: Database Triggers

- Introduction to Triggers
- Creating and Dropping Triggers
- Trigger Execution (Firing) Rules

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## **Lesson 9: Maintaining Subprograms**

Privileges on Subprograms

Procedural Dependencies of Subprograms

Object Dependencies of Subprograms