



NYOUG Fall 2005 Training Session
"PL/SQL Programming for the 21st Century"
Presented by Steven Feuerstein

DATE: Thursday November 17th, 2005

TIME: 9:00-4:30

LOCATION: St. John's University - 101 Murray St. New York, NY 10007 - Auditorium

SCHEDULE:

8:00-9:00 Registration and Breakfast

9:00-10:30 Training

10:30-10:45 Break

10:45-12:15 Training

12:15-1:15 Lunch - box lunch provided

1:15-2:30 Training

2:30-2:45 Break

2:45-4:30 Training

SESSION SUMMARY:

Oracle PL/SQL has been around since the early 1990s, but it has been enhanced in many fundamental and important ways since then. Many PL/SQL developers still rely too heavily on the core PL/SQL functionality found in Oracle7 and Oracle8. If you feel that you are falling behind the PL/SQL learning curve and want to make sure that you are using the latest and greatest PL/SQL has to offer, you should attend "PL/SQL Programming for the 21st Century."

This seminar showcases new features of Oracle Database 10g PL/SQL, including:

- Optimizing compiler
- Compile-time warnings
- Conditional compilation
- Nested table set operations

It will also cover key new capabilities of PL/SQL from Oracle9i Database, including:

- Table functions
- Multi-level and string-indexed collections,
- Dynamic SQL method 4 with both Native Dynamic SQL and DBMS_SQL.

Steven Feuerstein is considered one of the world's leading experts on the Oracle PL/SQL language, having written nine books on PL/SQL, including Oracle PL/SQL Programming and Oracle PL/SQL Best Practices (all from O'Reilly Media). Steven has been developing software since 1980, spent five years with Oracle (1987-1992) and serves as a Senior Technology Advisor for Quest Software. His latest projects include Qnxo, the world's first active mentoring product (www.qnxo.com) and Oracle PL/SQL Programming 2005, a conference on and celebration of the PL/SQL language (www.oracleplsqlprogramming.com).

You can reach Steven at steven@stevenfeuerstein.com.

Detailed Description of Topics to be Covered

I. Review of key new features in Oracle10g PL/SQL, from the optimizing compiler to automatic compiler warnings.

In-depth coverage of advanced features of PL/SQL collections, including:

- Use of collections with FORALL, and the new INDICES OF and VALUES OF clauses available in Oracle Database 10g.
- The BULK COLLECT mechanism for rapid retrieval of multiple rows, with an emphasis on employing the LIMIT clause.
- The SAVE EXCEPTIONS feature of FORALL, new to Oracle9i Database.
- Multi-level collections, including emulation of multi-dimensional arrays, nesting collections within objects and more.
- String-based indexing, which allows us to emulate a relational table's unique indexes for a collection, and also offers many new and interesting ways to store program data.
- The application of nested tables to table functions, and from there the interesting new capabilities inherent in PIPELINED functions.
- Oracle Database 10g MULTISSET operators for nested tables, allowing us to manipulate the contents of a nested table with set operations similar to those available in SQL.

II. Dynamic SQL (Assuming familiarity with EXECUTE IMMEDIATE, the following topics will be covered):

- Method 4 Dynamic SQL with both Native Dynamic SQL and DBMS_SQL. Method 4 is the most challenging kind of dynamic SQL to write.
- Parsing very long strings with DBMS_SQL. NDS is limited to SQL strings of no more than 32K characters. What do you do when you need more?

III. Other commonly-used or highly useful packages, including:

- UTL_FILE: Oracle enhanced UTL_FILE in a number of crucial ways in Oracle9i Release 2. You can now work with database directories instead of UTL_FILE_DIR, remove files, copy and rename files, and get attribute information about files.
- UTL_MAIL: A new package that offers improved ease of use over UTL_SMTP to send mail from within your PL/SQL code base.
- UTL_RECOMP: an upgrade to previous built-in Oracle functionality to recompile invalid program units.

IV. Useful fundamentals of PL/SQL:

- Autonomous transactions: the ability to commit or rollback changes in a single PL/SQL block without affecting the outer or main transaction.
- Invoker rights: specifying that a store program runs under the authority of the current user or invoker, rather than the definer/owner of the program