PL/SQL - OVERVIEW

The PL/SQL programming language was developed by Oracle Corporation in the late 1980s as procedural extension language for SQL and the Oracle relational database. Following are notable facts about PL/SQL:

- PL/SQL is a completely portable, high-performance transaction-processing language.

- PL/SQL provides a built-in interpreted and OS independent programming environment.

- PL/SQL can also directly be called from the command-line SQL*Plus interface.

- Direct call can also be made from external programming language calls to database.

- PL/SQL's general syntax is based on that of ADA and Pascal programming language.

- Apart from Oracle, PL/SQL is available in TimesTen in-memory database and IBM DB2.

Features of PL/SQL

PL/SQL has the following features:

- PL/SQL is tightly integrated with SQL.

- It offers extensive error checking.

- It offers numerous data types.

- It offers a variety of programming structures.

- It supports structured programming through functions and procedures.

- It supports object oriented programming.

- It supports developing web applications and server pages.

Advantages of PL/SQL

PL/SQL has the following advantages:

- SQL is the standard database language and PL/SQL is strongly integrated with SQL. PL/SQL supports both static and dynamic SQL. Static SQL supports DML operations and transaction control from PL/SQL block. Dynamic SQL is SQL allows embedding DDL statements in PL/SQL blocks.

- PL/SQL allows sending an entire block of statements to the database at one time. This reduces network traffic and provides high performance for the applications.

- PL/SQL give high productivity to programmers as it can query, transform, and update data in a database.

- PL/SQL saves time on design and debugging by strong features, such as exception handling, encapsulation, data hiding, and object-oriented data types.

- Applications written in PL/SQL are fully portable.

- PL/SQL provides high security level.

- PL/SQL provides access to predefined SQL packages.

- PL/SQL provides support for Object-Oriented Programming.

- PL/SQL provides support for Developing Web Applications and Server Pages.