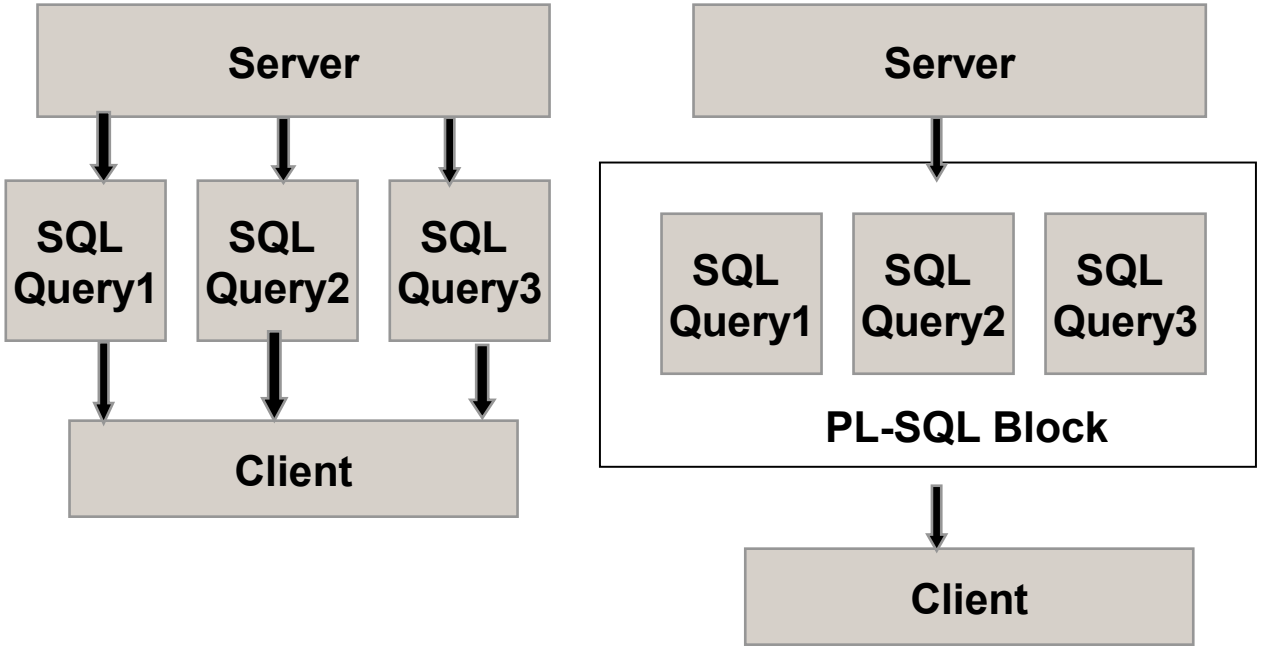
Oracle PL/SQL – Introduction

PL/SQL Overview

- PL/SQL stands for **Procedural Language** extension of SQL.
- A combination of SQL along with the procedural features of programming languages.
- Extends SQL by adding constructs found in procedural languages like procedures, loops, variables, objects etc.
- PL/SQL program can consists of SQL and PL/SQL statements in different blocks.
- A portable and high performance processing language.
- General syntax is based on that of ADA and Pascal programming language.

PL/SQL, How does it differ from SQL?



- In SQL we need three network trips between client and server for three SQL queries.
- In PL/SQL we bundle any number of queries in a block and in single network trip task is done

Main Advantages of PL/SQL

- **Better Performance** due to block structure. In PL/SQL,SQL statements can be grouped to blocks and the entire block can be sent to database at one time for execution.

- **Less network traffic and improved response time.** PL/SQL subprograms are compiled once and stored in executable form. Thus, a single call can start a large job and the work can be divided effectively.

- Supports easy and effective **exception handling** method.

- **Portability**. Applications written in PL/SQL can run on any operating system and platform where the database runs.

Main Advantages of PL/SQL

- **Integration with SQL**. Most of the SQL operations can be done using PL/SQL and also supports SQL data types.

- PL/SQL supports both **static** and **dynamic** SQL. Static SQL supports DML and transaction control operations from PL/SQL block. Dynamic SQL makes the application more flexible and allows embedding DDL statements in PL/SQL blocks and for creating run time queries.

- PL/SQL provides the ability to loop through records, manipulating them one at a time whereas SQL does not.

- PL/SQL provides access to predefined SQL packages.

- Supports object oriented programming