Abstract

Join is an operation in accessing the data from table if number of tables exceeds one.
Whenever we need the data which is not available from a single table, then it needs to
necessitate using join operation. Sometimes join is required even if there is a single table. It all
depends on the format in which we need to display the data in the user environment. In join
processes, the accessing of the data depends on the joining conditions with different operators.
Here, join condition is a must. For this purpose, generally we are using relational operators
along with logical operators. The problem presently we are facing is many of them are not
knowing exactly all types of joins, their proper syntaxes and their proper usage. Sometimes it is
very difficult for the teacher or trainer to convince the trainees, students, research scholars in
giving right practical examples while we teach SQL joins to them. Even if we use some
conventional operators, the performance of the query may results in delayed accessing time in
retrieving the data from N number of tables. This is due to lack of knowledge of the
programmers on evaluation criteria of the joined queries. Since the present tables are dealing
with millions of records, if we take these tables as example tables, then it is very difficult to give
the exact demonstration regarding the number of records to be accessed, because, many
joining concepts dealing with exact number of records which are working based on Cartesian Product. To avoid all these uncertainties, confusion, ambiguities, in this paper, it has been used with only three simple tables which are given from Oracle Corporation in user schema scott/tiger. The number of records used in these tables is very minimum and are meaningful records. After understanding the basics of all SQL joins, then it is necessary to represent the same queries in relational algebraic notations, because, those are the standard and uniform syntaxes which will be applicable in any of the database software. But the present problem is many of the software developers, specialists, programmers, and researchers are not aware of how to represent queries exactly in that syntax. In order to overcome this, the main focus is to make a familiarity in writing the SQL queries in relational algebraic format along with different types of joins. The main focus of this paper is to learn the basic fundamentals of all types of SQL joins along with algebraic notations in a very easiest, convinced and simple approach. On many stages, it is given with live examples along with SQL code and its result set by using SQLPLUS interface.

References

- Oracle® Database SQL Reference 10g Release 1 (10. 1), Documentation.
- Shah, Nilesh (2005)

Index Terms

Computer Science

Databases
Keywords

SQL Joins  Relational operators  Relational Algebraic expressions  Query evaluation  Access time

matching records

Result set.