ANSI SQL – MYSQL

Agenda

- Join and its type
- Subqueries and & Set operators

Join and its type

- A JOIN clause is used to combine rows from two or more tables, based on a related column between them.
- **Join in DBMS** is a binary operation which allows you to combine join product and selection in one single statement.
- The goal of creating a join condition is that it helps you to combine the data from two or more DBMS tables.
- The tables in DBMS are associated using the primary key and foreign keys.
- There are mainly two types of joins in DBMS:
    1. Inner Joins: Theta, Natural, EQUI
    2. Outer Join: Left, Right, Full

- (INNER) JOIN: Returns records that have matching values in both tables
- LEFT (OUTER) JOIN: Returns all records from the left table, and the matched records from the right table
- RIGHT (OUTER) JOIN: Returns all records from the right table, and the matched records from the left table
- FULL (OUTER) JOIN: Returns all records when there is a match in either left or right table

Subqueries and & Set operators

Subqueries

- In SQL a Subquery can be simply defined as a query within another query. In other words we can say that a Subquery is a query that is embedded in WHERE clause of another SQL query.

- A Subquery is a query within another SQL query and embedded within the WHERE clause.

- Syntax:

  There is not any general syntax for Subqueries. However, Subqueries are seen to be used most frequently with SELECT statement as shown below:

```
SELECT column_name
FROM table_name
WHERE column_name expression operator
   ( SELECT COLUMN_NAME  from TABLE_NAME
WHERE ... );
```

- Important rules for Subqueries:
  - A subquery can be placed in a number of SQL clauses like WHERE clause, FROM clause, HAVING clause.
  - You can use Subquery with SELECT, UPDATE, INSERT, DELETE statements along with the operators like =, <, >, >=, <=, IN, BETWEEN, etc.
  - A subquery is a query within another query. The outer query is known as the main query, and the inner query is known as a subquery.
  - Subqueries are on the right side of the comparison operator.
  - A subquery is enclosed in parentheses.
  - In the Subquery, ORDER BY command cannot be used. But GROUP BY command can be used to perform the same function as ORDER BY command.

SET Operations

- SQL supports few Set operations which can be performed on the table data. These are used to get meaningful results from data stored in the table, under different special conditions.

- SET operators are mainly used to combine the same type of data from two or more tables. Although more than one select statement will then be present, only one result set is returned.

➢Rules on Set Operations:

- The result sets of all queries must have the same number of columns.
- In every result set the data type of each column must match the data type of its corresponding column in the first result set.
- In order to sort the result, an ORDER BY clause should be part of the last statement.
- The records from the top query must match the positional ordering of the records from the bottom query.
- The column names or aliases must be found out by the first select statement.

Four Set Operators:

Operator	Returns
UNION	Combine two or more result sets into a single set, without duplicates.
UNION ALL	Combine two or more result sets into a single set, including all duplicates.
INTERSECT	Takes the data from both result sets which are in common.
EXCEPT	Takes the data from first result set, but not the second (i.e. no matching to each other)

Thanks……..