

READING MATERIAL 2

SELECT Statement

The SELECT statement is the most commonly used statement in SQL and is used to retrieve information already stored in the database. To retrieve data, you can either select all the column values or name specific columns in the SELECT clause to retrieve data.

Syntax of SELECT statement

```
SELECT [distinct] <tablename.columnname >
FROM <tablename >
[where <condition>]
[group by <columnname(s)>]
[having <condition>]
[order by <expression>] ;
```

The main components of a SELECT statement are the SELECT clause and FROM clause. In this chapter, we will use basic syntax of SELECT statement with WHERE and ORDER BY clause while GROUP BY and HAVING clause will be discussed in subsequent chapters.

A SELECT clause contains the list of columns or expressions containing data you want to see. The FROM clause tells Oracle which database table is used to retrieve the information. Rest all the clauses are optional. The end of the statement is indicated by the semicolon “;” .

The simple form of a SELECT statement is:

```
SELECT (column_name1, column_name2,..... column_nameN) FROM tablename;
```

Ques: How do you list the EMPNO and ENAME from EMP table?

If you know the column names and the table name, writing the query is very simple. Execute the query by ending the query with a semicolon. In SQL*Plus, you may write the query as follows:

SQL> SELECT empno, ename FROM emp;

OUTPUT:

EMPNO	ENAME
7369	SMITH
7499	ALLEN
7521	WARD
.....

14 rows selected.

Use of Wildcard(*) character

The asterisk (*) is used to select all columns in the table. This is very useful when we do not know the column names or when we are too lazy to type all column names.

SQL> SELECT * FROM emp;

OUTPUT:

EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPTNO
7369	SMITH	CLERK	7902	17-DEC-80	800		20
7499	ALLEN	SALESMAN	7698	20-FEB-81	1600	300	30
7521	WARD	SALESMAN	7698	22-FEB-81	1250	500	30
7566	JONES	MANAGER	7839	02-APR-81	2975		20
7654	MARTIN	SALESMAN	7698	28-SEP-81	1250	1400	30
7698	BLAKE	MANAGER	7839	01-MAY-81	2850		30
7782	CLARK	MANAGER	7839	09-JUN-81	2450		10
7788	SCOTT	ANALYST	7566	19-APR-87	3000		20
7839	KING	PRESIDENT		17-NOV-81	5000		10
7844	TURNER	SALESMAN	7698	08-SEP-81	1500	0	30
7876	ADAMS	CLERK	7788	23-MAY-87	1100		20
7900	JAMES	CLERK	7698	03-DEC-81	950		30
7902	FORD	ANALYST	7566	03-DEC-81	3000		20
7934	MILLER	CLERK	7782	23-JAN-82	1300		10

14 rows selected

The statement uses a wildcard (*) character, which indicates to Oracle that you want to view data from every column in the table.

We can also provide a column alias. The column alias name is defined next to the column name. Consider the following query, it provides an alias name for the column ENAME. Here, the column heading will be displayed as EMPLOYEE_NAME.

SQL> SELECT empno, ename employee_name FROM emp;

OUTPUT:

EMPNO	EMPLOYEE_N
7369	SMITH
7499	ALLEN
7521	WARD
.....

14 rows selected.

If you want a space in the column alias name, you must enclose it in double quotation marks. The case is preserved only when the alias name is enclosed in double quotes; otherwise, it will display it in the uppercase.

The following example demonstrates using an alias name for the ENAME column.

SQL> SELECT empno, ename "Employee Name" FROM emp;

OUTPUT:

It will display the column heading like:

EMPNO	Employee N
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Elimination of Duplication with DISTINCT Clause

The DISTINCT keyword followed by the SELECT keyword ensures that the resulting rows are unique. Uniqueness is verified according to the columns specified in query.

Syntax:

```
SQL> SELECT DISTINCT column_name(s) FROM tablename;
```

If you need to find the unique departments and salaries from EMP table then, issue the following query:

```
SQL> SELECT DISTINCT deptno, sal FROM emp;
```

OUTPUT:

DEPTNO	SAL
10	1300
10	2450
10	5000
20	800
20	1100
20	975
20	3000
30	950
30	1250
30	1500
30	1600
30	2850

12 rows selected.

****In this case the combination of deptno and sal should be unique.**