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DBMS LAB 8 - SET OPERATORS AND VIEWS

AIM :

To implement the set operations (union , union all , intersect and minus) and view concepts in SQL.

THEORY :

SQL set operators are used to combine the results obtained from two or more queries into a single result. The queries which contain two or more subqueries are known as compounded queries.
There are four major types of SQL operators, namely:

- Union
- Union all
- Intersect
- Minus

Points to remember -

- Same number of columns must be selected by all participating SELECT statements.Column names used in the display are taken from the first query.
- Data types of the column list must be compatible/implicitly convertible by oracle. Oracle will not perform implicit type conversion if corresponding columns in the component queries belong to different data type groups.For example, if a column in the first component query is of data type DATE, and the corresponding column in the second component query is of data type CHAR,Oracle will not perform implicit conversion, but raise ORA-01790 error.
- Positional ordering must be used to sort the result set. Individual result set ordering is not allowed with Set operators. ORDER BY can appear once at the end of the query. For example,

TYPES OF SET OPERATORS :

1. Union Set Operator

The UNION set operator is used to combine the results obtained from two or more SELECT statements

2. Union All Set Operator

The UNION set operator is used to combine all the results obtained from two or more SELECT statements. Unlike the Union operator, it considers duplicate values and includes them in the final result.

3. Intersect Set Operator

The intersect set operator is used to combine all the results of two SELECT statements. But returns only those records that are common to both the SELECT statements.

4. Minus Set Operator

The MINUS set operator is used to combine all the results of two or more SELECT statements. But returns only those records that are present exclusively in the first table.

The generic syntax for working with SQL set operators is as follows:

Syntax:

```
SELECT column_name FROM table_name_1
SET OPERATOR
SELECT column_name FROM table_name_2
SET OPERATOR
SELECT column_name FROM table_name_3
```

Parameters:

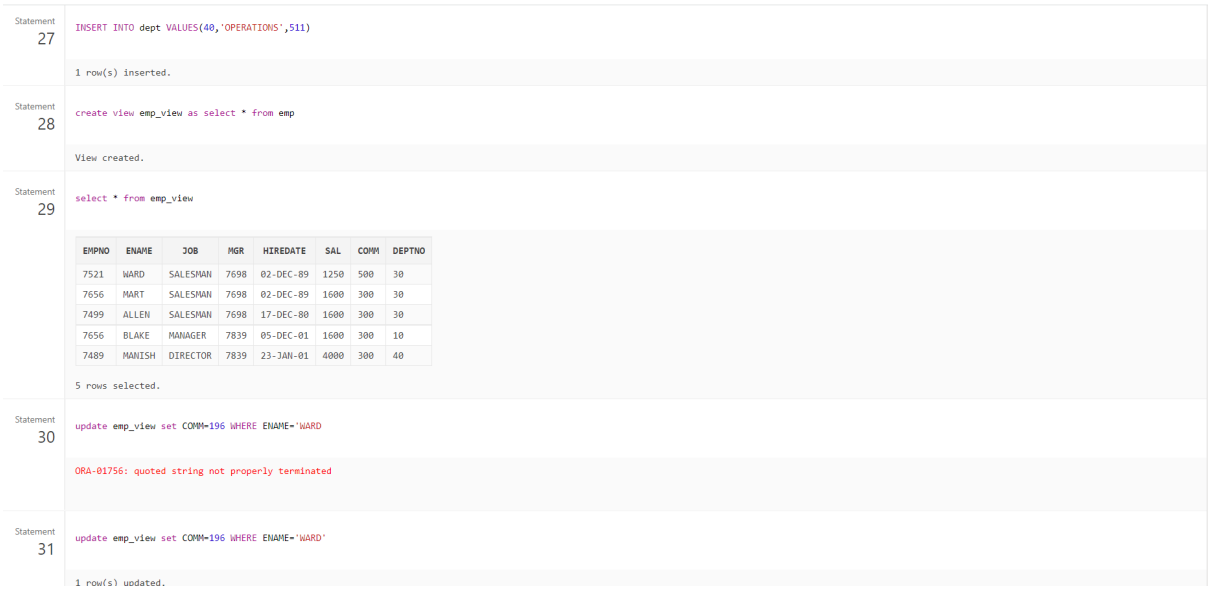
The different parameters used in the syntax are :

- SET OPERATOR: Mention the type of set operation you want to perform from { Union, Union all, Intersect, Minus}
- column_name: Mention the column name on which you want to perform the set operation and want in the result set
- FROM table_name_1: Mention the first table name from which the column has to be fetched
- FROM table_name_2: Mention the second table name from which the column has to be fetched

ORACLE LIVE SQL LINK :

https://livesql.oracle.com/apex/livesql/s/m6mdqmhdsoa76nkf1r4bss9w4

SCREENSHOTS :



Statement 27

```
INSERT INTO dept VALUES(40,'OPERATIONS',511)
```

```
1 row(s) inserted.
```

Statement 28

```
create view emp_view as select * from emp
```

```
View created.
```

Statement 29

```
select * from emp_view
```

EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPTNO
7521	WARD	SALESMAN	7698	02-DEC-89	1250	500	30
7656	MART	SALESMAN	7698	02-DEC-89	1600	300	30
7499	ALLEN	SALESMAN	7698	17-DEC-80	1600	300	30
7656	BLAKE	MANAGER	7839	05-DEC-01	1600	300	10
7489	MANISH	DIRECTOR	7839	23-JAN-01	4000	300	40

```
5 rows selected.
```

Statement 30

```
update emp_view set COMM=196 WHERE ENAME='WARD
```

```
ORA-01756: quoted string not properly terminated
```

Statement 31

```
update emp_view set COMM=196 WHERE ENAME='WARD'
```

```
1 row(s) updated.
```

Statement 31

```
update emp_view set COMM=196 WHERE ENAME='WARD'
```

```
1 row(s) updated.
```

Statement 32

```
delete emp_view where deptno=10
```

```
1 row(s) deleted.
```

Statement 33

```
select * from emp_view
```

EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPTNO
7521	WARD	SALESMAN	7698	02-DEC-89	1250	196	30
7656	MART	SALESMAN	7698	02-DEC-89	1600	300	30
7499	ALLEN	SALESMAN	7698	17-DEC-80	1600	300	30
7489	MANISH	DIRECTOR	7839	23-JAN-01	4000	300	40

```
4 rows selected.
```

Statement 34

```
create view a_view as select ename,job,hiredate,dname from emp,dept where emp.deptno=dept.deptno order by ename,dname asc
```

```
View created.
```

Statement 35

```
select * from a_view
```

ENAME	JOB	HIREDATE	DNAME
ALLEN	SALESMAN	17-DEC-80	SALES
MANISH	DIRECTOR	23-JAN-01	OPERATIONS

RESULT :

Thus we have successfully implemented set operators and view concepts in SQL.