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CSE A1 SECTION
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DBMS LAB 6 - NESTED QUERIES

AIM :

To execute nested queries in SQL

THEORY :

In nested queries, a query is written inside a query. The result of the inner query is used in the execution of the outer query.

There are mainly two types of nested queries:

Independent Nested Queries: In independent nested queries, query execution starts from innermost query to outermost queries. The execution of the inner query is independent of the outer query, but the result of the inner query is used in the execution of the outer query. Various operators like IN, NOT IN, ANY, ALL etc are used in writing independent nested queries.

Correlated Nested Queries: In correlated nested queries, the output of the inner query depends on the row which is being currently executed in the outer query.

GUIDELINES FOR NESTED QUERIES :

- Enclose subqueries in parentheses.
- Place subqueries on the right side of the comparison operator.
- Do not add an ORDER BY clause to a subquery.
- Use single-row operators with single-row subqueries.
- Use multiple-row operators with multiple-row subqueries

ORACLE LIVE SQL LINK :

https://livesql.oracle.com/apex/livesql/s/m3s69jf248xae9mkzku7mp0f9

SCREENSHOTS :

Statement 22

```
select * from xyz
```

ENAME	SAL	JOB	EMPNO	DEPTNO
tsmjod	68000	Developer	7	-
person2	7500	manager	7876	-
person4	59570	devops	8176	2
person4	59570	devops	8176	2
person1	6900	manager	7369	-
jack	80000	Backend	7	-
verma	38000	manager	120	-
chacha	70000	Frontend	6	-
don	59950	hr	7566	-
person3	59000	devops	8976	1

10 rows selected.

Statement 23

```
select deptno,sal from xyz where sal in (select min(sal) as sal from xyz where deptno=2)
```

DEPTNO	SAL
2	59570
2	59570

2 rows selected.

Statement 24

```
insert into xyz values('zod',5550,'CLERK',311,66)
```

1 row(s) inserted.

Statement 26

```
select empno,ename,job from xyz where job!='CLERK' and sal > ANY (select sal from xyz where job='CLERK')
```

EMPNO	ENAME	JOB
7	jack	Backend
6	chacha	Frontend
7	tsmjod	Developer
7566	don	hr
8176	person4	devops
8176	person4	devops
8976	person3	devops
120	verma	manager
7876	person2	manager
7369	person1	manager

10 rows selected.

Statement 27

```
select empno,ename,job from xyz where sal > (select avg(sal) from xyz)
```

EMPNO	ENAME	JOB
7	tsmjod	Developer
8176	person4	devops
8176	person4	devops
7	jack	Backend
6	chacha	Frontend
7566	don	hr
8976	person3	devops

7 rows selected.

Statement 37

```
select ename,deptno,commission from xyz
where (sal,commission) IN (select sal,commission from xyz where deptno=30)
```

ENAME	DEPTNO	COMMISSION
people678	5	240
people678	30	240
people99	30	249

3 rows selected.

Statement 38

```
insert into xyz values('SCOTT',6569,'manager',69,020,269)
```

1 row(s) inserted.

Statement 39

```
insert into xyz values('WARD',6549,'devops',67,030,249)
```

1 row(s) inserted.

Statement 40

```
select ename,job,sal from xyz where sal IN (select sal from xyz where ename = 'SCOTT' or ename = 'WARD')
```

ENAME	JOB	SAL
WARD	devops	6549
SCOTT	manager	6569

2 rows selected.

Statement 41

```
insert into xyz values('FORD',6009,'devops',65,025,200)
```

Statement 43

```
select ename,job,sal from xyz where (sal,job) IN (select sal,job from xyz where ename = 'FORD')
```

ENAME	JOB	SAL
CHARLIE	devops	6009
FORD	devops	6009

2 rows selected.

Statement 44

```
insert into xyz values('JONES',6079,'devops',58,020,149)
```

1 row(s) inserted.

Statement 45

```
select ename,job,deptno,sal from xyz where job IN (select job from xyz where ename = 'JONES' ) and sal > (select sal from xyz where ename='FORD')
```

ENAME	JOB	DEPTNO	SAL
person4	devops	2	59570
person4	devops	2	59570
WARD	devops	30	6549
JONES	devops	20	6079
person3	devops	1	59000

5 rows selected.

Statement 46

```
alter table xyz add department varchar2(10)
```

Table altered.

RESULT :

Thus we have successfully implemented nested queries in SQL