

Experiment-9

AIM : Examples on SUB/SUMMARY Queries Using IN, ANY, SOME, ALL , EXISTS Operators

SUB/SUMMARY QUERIES :

1. IN :

The IN operator allows you to specify multiple values in a WHERE clause . The IN operator is a shorthand for multiple OR conditions.

Syntax :

```
SELECT column_names FROM table_name
WHERE column_name IN (value1 , value 2 ,value3 , .....);
```

Example :

```
SELECT Fname,Lname as Name from Employee_91 where Ssn in(select Essn from
Works_On_91 where Pno IN (select Pnumber from Project_91 where Dnum=4));
```

Output :

	Fname	Name
▶	Franklin	Wong
	Ahmad	Jabbar
	Alicia	Zelaya
	Jennifer	Wallace

Example :

```
SELECT fname,lname from employee_91 where dno in ( SELECT Pnumber from
PROJECT_91 where Dnum=5);
```

Output :

	fname	lname
▶	James	Bong

2. ANY :

The ANY operator returns true if any of the subquery values meet the condition.

Syntax :

```
SELECT column_names FROM table_name WHERE column_name operator
ANY (SELECT column_name FROM table_name WHERE condition);
```

Example :

```
SELECT fname,lname FROM employee_91 WHERE ssn = ANY (SELECT ssn
FROM employee_91 WHERE dno=4 );
```

Output :

	fname	lname
▶	Jennifer	Wallace
	Ahmad	Jabbar
	Alicia	Zelaya

Example :

```
SELECT dlocation FROM dept_locations_91 WHERE dnumber= ANY (SELECT
dnumber FROM department_91 WHERE Mgr_ssn="333445555" );
```

Output:

	dlocation
▶	Bellaire
	Houston
	Sugarland

3. ALL:

The ALL operator returns true if all of the subquery values meet the condition.

Syntax :

```
SELECT column_name FROM table_name WHERE column_name operator
ALL(SELECT column_name FROM table_name WHERE condition);
```

Example :

```
SELECT fname,lname FROM employee_91 WHERE Super_ssn = ALL (select
mgr_ssn from department_91 where dnumber=1);
```

Output:

	fname	lname
▶	Franklin	Wong
	Jennifer	Wallace

Example :

```
SELECT fname,lname FROM employee_91 WHERE ssn = ALL (select mgr_ssn
from department_91 where dnumber=1);
```

Output:

	fname	lname
▶	James	Bong

4. SOME :

SOME compare a value to each value in a list or results from a query and evaluate to true if the result of an inner query contains at least one row

Syntax :

```
SELECT column_name FROM table_name WHERE expression operator SOME
(SELECT column_name FROM table_name WHERE condition);
```

Example :

```
SELECT fname,lname from employee_91 WHERE ssn = Some(Select essn from
works_on_91);
```

Output:

	fname	lname
▶	Franklin	Wong
	Joyce	English
	Ramesh	Narayan
	James	Bong
	Jennifer	Wallace
	Ahmad	Jabbar
	Alicia	Zelaya

Example :

```
SELECT essn,pno from works_on_91 WHERE essn = Some(Select essn from dependent_91);
```

Output:

	essn	pno
▶	123456789	1
	123456789	2
	333445555	2
	333445555	3
	333445555	10
	333445555	20
	987654321	20
	987654321	30
*	NULL	NULL

5. EXISTS :

The EXISTS operator is used to test for the existence of any record in a subquery. The EXISTS operator returns true if the subquery returns one or more records.

Syntax :

```
SELECT column_name FROM table_name WHERE EXISTS (SELECT
column_name   FROM table_name WHERE condition);
```

Example:

```
SELECT fname,lname FROM employee_91 WHERE EXISTS (SELECT essn
FROM works_on_91 WHERE ssn = essn AND Pno=1);
```

Output:

	fname	lname
▶	Joyce	English

Example :

```
SELECT fname,lname FROM employee_91 WHERE EXISTS (SELECT essn
FROM dependent_91 WHERE ssn = essn AND relationship='spouse');
```

Output:

	fname	lname
▶	Franklin	Wong
	Jennifer	Wallace

6. NOT EXISTS :

The NOT EXISTS operator returns true if the underlying subquery returns no record. However, if a single record is matched by the inner subquery, the NOT EXISTS operator will return false, and the subquery execution can be stopped.

Example :

```
SELECT fname, lname FROM employee_91 WHERE NOT EXISTS (SELECT essn  
FROM works_on_91 WHERE ssn = essn AND Pno=1);
```

Output:

	fname	lname
▶	Franklin	Wong
	Ramesh	Narayan
	James	Bong
	Jennifer	Wallace
	Ahmad	Jabbar
	Alicia	Zelaya

Example :

```
SELECT fname, lname FROM employee_91 WHERE NOT EXISTS (SELECT essn  
FROM dependent_91 WHERE ssn = essn AND relationship='spouse');
```

Output:

	fname	lname
▶	Joyce	English
	Ramesh	Narayan
	James	Bong
	Ahmad	Jabbar
	Alicia	Zelaya