



## **SWE1004 - (L 9 + L10)**

### **Lab Sheet 7 (II)**

## **Subqueries**

(Set Membership, Set operations, Set Comparison, Test for empty relations)

### **Table instances**

SQL> select \* from stu\_21mia1127;

```
SQL> select *
2  from stu_21mia1127;
```

REGNO	NAME	CGPA
101	sai	7.3
102	jai	8.2
103		8.9
104	raj	9.9
106	david	9.5

SQL> select \* from stu\_hobby\_21mia1127;

```
SQL> SELECT *
2  from stu_hobby_21mia1127;
```

REGNO	HOBBY
101	reading
102	playing
103	singing
104	
105	

### **SQL Subqueries:**

1. Set Membership - in, not in
2. Set Comparison - some, all
3. Test for empty relations - exists, not exists
4. Set operations - union, intersect, minus

### **Membership - in**

- 1) Q. list the student details whose hobby is 'playing'

```
SQL> select * from stu_21mia1127 where regno in(select regno from stu_hobby_21mia1127 where hobby='playing');
```

REGNO	NAME	CGPA
102	jai	8.2

### Membership - not in

- 2) Q. list the student details whose hobby is not 'playing'

```
SQL> select * from stu_21mia1127 where regno not in(select regno from stu_hobby_21mia1127 where hobby='playing')
2 ;
```

REGNO	NAME	CGPA
106	david	9.5
103		8.9
101	sai	7.3
104	raj	9.9

### Union:

- 3) Q. List the student details who has academic or hobby information

```
SQL> select regno from stu_21mia1127 union select regno from stu_hobby_21mia1127;
```

REGNO
101
102
103
104
105
106

### Intersection:

- 4) Q. List the student details who has academic and hobby information

```
SQL> select regno from stu_21mia1127 intersect select regno from stu_hobby_21mia1127;
```

REGNO
101
102
103
104

### Set Difference:

- 5) Q. List the student details who has academic but not hobby information

```
SQL> select regno from stu_21mia1127 minus select regno from stu_hobby_21mia1127;
```

REGNO
106

### Set Difference:

- 6) Q. List the student details who has hobby but not academic information

```
SQL> select regno from stu_21mia1127 minus select regno from stu_hobby_21mia1127;

      REGNO
-----
      106
```

- 7) Q. List the student details who have scored more cgpa greater than atleast one student

```
SQL> select * from stu_21mia1127 where cgpa>any(select cgpa from stu_21mia1127);

      REGNO NAME          CGPA
-----
      102 jai             8.2
      103             8.9
      104 raj             9.9
      106 david           9.5
```

- 8) Q. List the student details who have scored more cgpa greater than all the students

```
SQL> select * from stu_21mia1127 where cgpa>all(select cgpa from stu_21mia1127);

no rows selected
```

- 9) Q. List the student details who have scored maximum cgpa

```
SQL> select * from stu_21mia1127 where cgpa>=all(select cgpa from stu_21mia1127);

      REGNO NAME          CGPA
-----
      104 raj             9.9
```

### Test for Empty relations – exists, not exists

- 10) Q. list the details if there exists a regno 104

```
SQL> select * from stu_21mia1127 where exists(select regno from stu_21mia1127 where regno=104);

      REGNO NAME          CGPA
-----
      101 sai             7.3
      102 jai             8.2
      103             8.9
      104 raj             9.9
      106 david           9.5
```

- 11) Q. list the details if there exists a regno 105

```
SQL> select * from stu_21mia1127 where exists(select regno from stu_21mia1127 where regno=105);

no rows selected
```

12) Q. list the details if there does not exists a regno 105

```
SQL> select * from stu_21mia1127 where not exists(select regno from stu_21mia1127 where regno=105);
```

REGNO	NAME	CGPA
101	sai	7.3
102	jai	8.2
103		8.9
104	raj	9.9
106	david	9.5

13) Q. list the details if there exists a cgpa 9

```
SQL> select * from stu_21mia1127 where exists(select regno from stu_21mia1127 where cgpa=9);
no rows selected
```

### Subqueries with update operation:

14) Q. update the cgpa of all students, if he has a hobby;

```
SQL> update stu_21mia1127 set cgpa=cgpa+0.1 where regno in(select regno from stu_hobby_21mia1127);
4 rows updated.
```

15) Q. delete the student academic details with no hobby

```
SQL> delete from stu_21mia1127 where regno not in(select regno from stu_hobby_21mia1127);
1 row deleted.
```

\*\*\*\*\*