DBMS Lab Assignment 5

Team 4

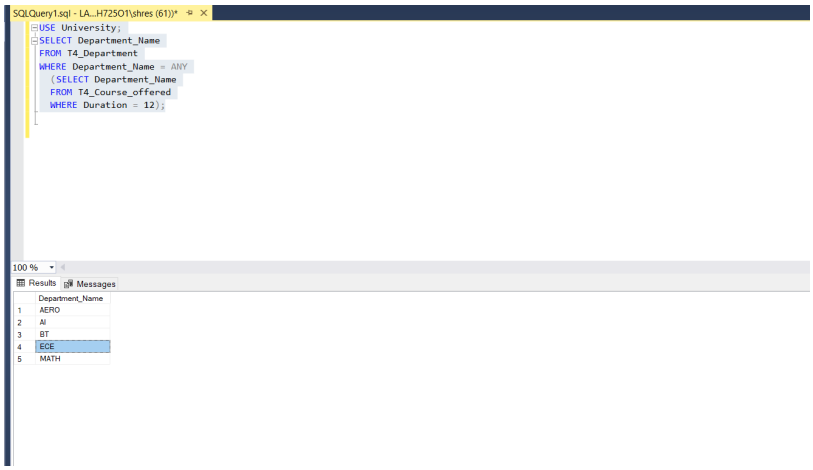
1.Illustrate logical ANY, ALL and LIKE operators. One query explaining the difference between ANY and ALL.

For ANY Operator:

Query:

```
USE University;
SELECT Department_Name
FROM T4_Department
WHERE Department_Name = ANY
  (SELECT Department_Name
  FROM T4_Course_offered
  WHERE Duration = 12);
```

OUTPUT:



Query:

USE University;

SELECT FirstName

FROM T4_Faculty

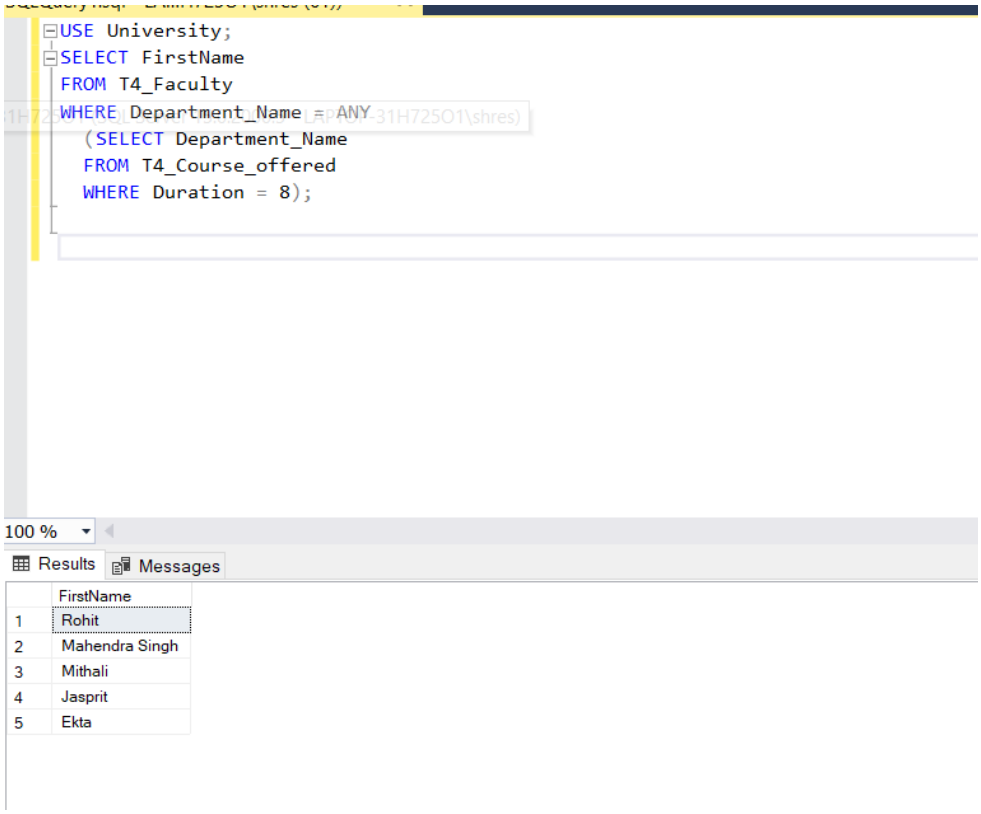
WHERE Department_Name = ANY

(SELECT Department_Name

FROM T4_Course_offered

WHERE Duration = 8);

Output:



Query:

USE University;

SELECT FirstName

FROM T4_Faculty

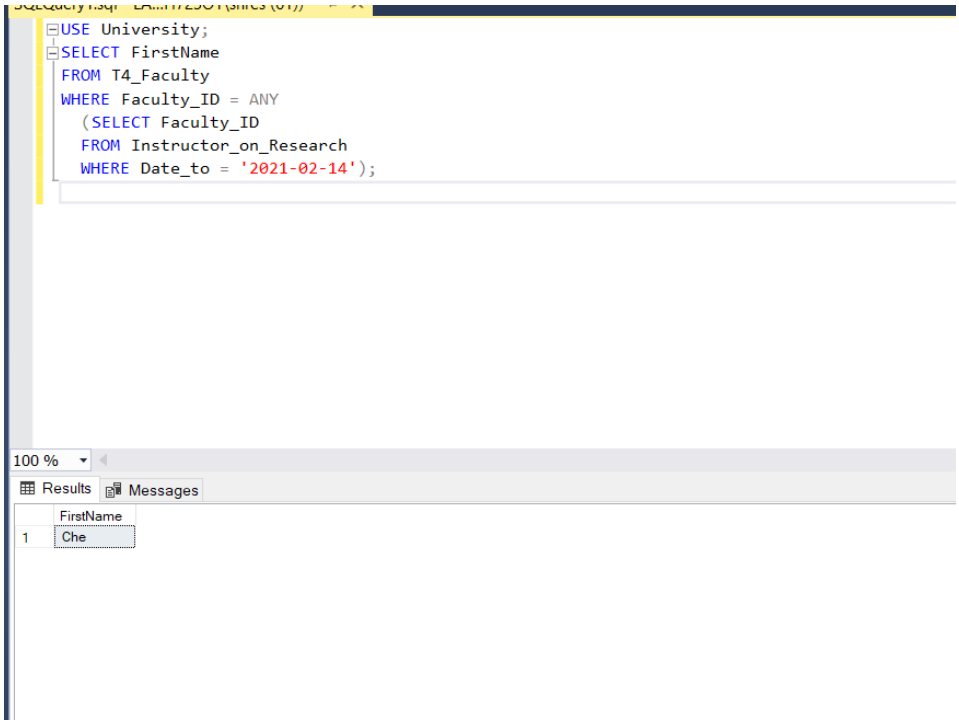
WHERE Faculty_ID = ANY

(SELECT Faculty_ID

FROM Instructor_on_Research

WHERE Date_to = '2021-02-14');

Output:



For ALL operator

USE University;

SELECT Department_Name

FROM T4_Department

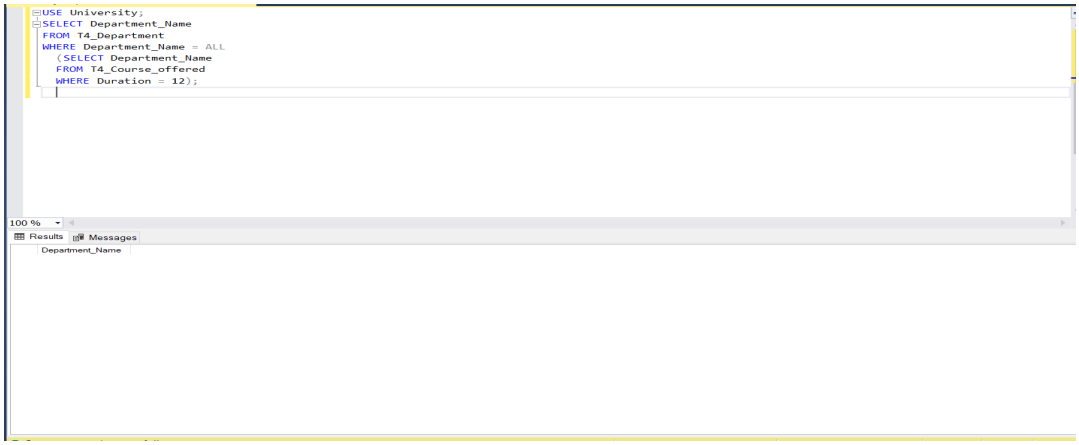
WHERE Department_Name = ALL

(SELECT Department_Name

FROM T4_Course_offered

WHERE Duration = 12);

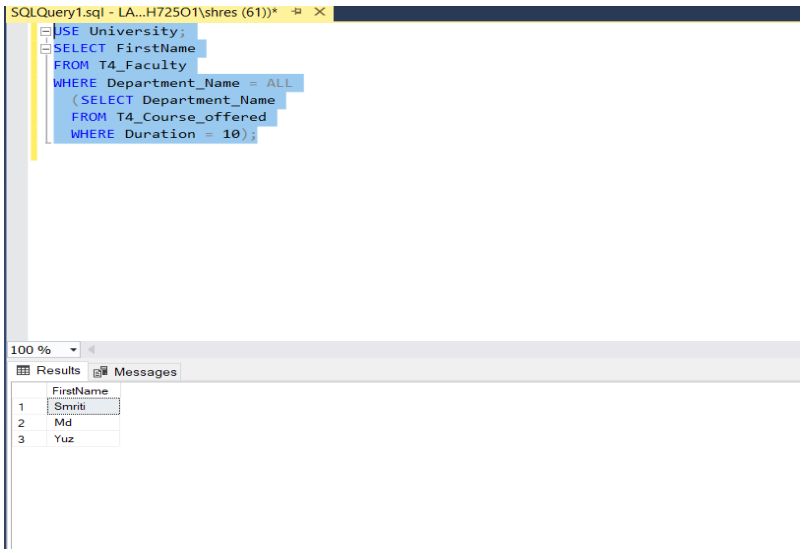
Output:



Query :

```
USE University;
SELECT FirstName
FROM T4_Faculty
WHERE Department_Name = ALL
  (SELECT Department_Name
  FROM T4_Course_offered
  WHERE Duration = 10);
```

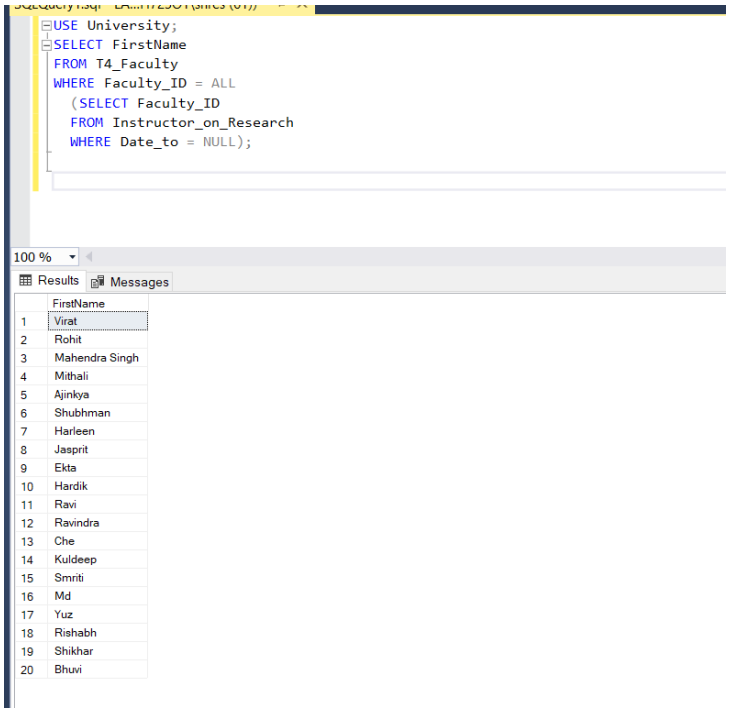
Output:



Query:

```
USE University;

SELECT FirstName

FROM T4_Faculty

WHERE Faculty_ID = ALL

  (SELECT Faculty_ID

  FROM Instructor_on_Research

  WHERE Date_to = NULL);
```

Output:



For LIKE Operator :

Query:

```
USE University;

SELECT FirstName

FROM T4_Faculty

WHERE FirstName LIKE 'm%';
```

Output:

```
USE University;
SELECT FirstName
FROM T4_Faculty
WHERE FirstName LIKE 'm%';
```

100 %

Results | Messages

	FirstName
1	Mahendra Singh
2	Mithali
3	Md

Query:

USE University;

SELECT FirstName

FROM T4_Faculty

WHERE FirstName LIKE '%t';

Output:

```
USE University;
SELECT FirstName
FROM T4_Faculty
WHERE FirstName LIKE '%t';
```

100 %

Results | Messages

	FirstName
1	Virat
2	Rohit
3	Jasprit

Query :

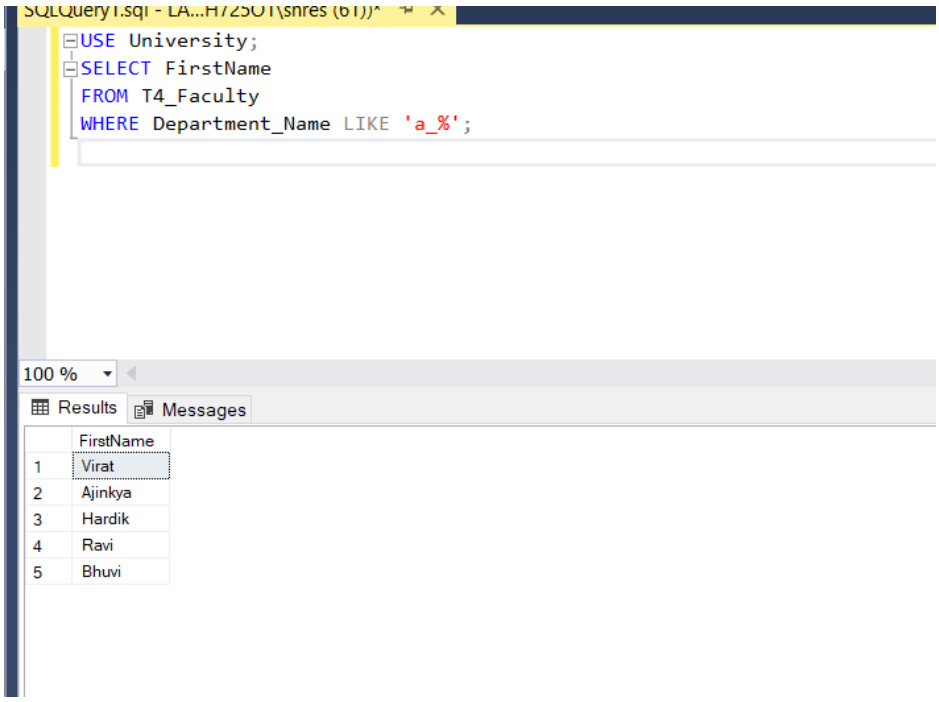
USE University;

SELECT FirstName

FROM T4_Faculty

WHERE Department_Name LIKE 'a_%';

Output:



Difference between ANY and ALL operator:

From the above queries of ANY and ALL it is clear that :

- ALL returns TRUE if ALL of the subquery values meet the condition.
- ANY returns TRUE if ANY of the subquery values meet the condition.

2. Query for each Aggregate function.

Query:

/* creating new table with Salary values for Faculty for aggregate functions computations */

```
CREATE TABLE T4_Faculty_Salary
(
	Faculty_ID INT PRIMARY KEY FOREIGN KEY REFERENCES T4_Faculty(Faculty_ID) NOT NULL ,
	Salary INT
);

INSERT INTO T4_Faculty_Salary
VALUES
(100, 120000),
(101, 100000),
(102, 125000),
(103, 100000),
(104, 90000),
(105, 100000),
(106, 80000),
(107, 90000),
(108, 70000),
(109, 75000),
(110, 85000),
(111, 90000),
(112, 100000),
(113, 75000),
(114, 95000),
(115, 75000),
(116, NULL),
(117, 85000),
```

(118, 90000),

(119, 90000),

(120, 95000)

;

i) COUNT commands

/* number of records in table */

SELECT COUNT(*)

FROM T4_Faculty_Salary;

Output:

```
/* number of records in table */

SELECT COUNT(*)
FROM T4_Faculty_Salary;
```

100 %

Results | Messages

	(No column name)
1	21

/* number of values in Salary column */

SELECT COUNT(Salary)

FROM T4_Faculty_Salary;

Output:

```
/* number of values in Salary column */

SELECT COUNT(Salary)
FROM T4_Faculty_Salary;
```

100 %

Results | Messages

	(No column name)
1	20

/* number of distinct Salary values */

SELECT COUNT(DISTINCT Salary)

FROM T4_Faculty_Salary;

Output:

```
/* number of distinct Salary values */

SELECT COUNT(DISTINCT Salary)
FROM T4_Faculty_Salary;
```

00 %

Results | Messages

	(No column name)
1	9

ii) SUM commands

/* Sum of all salaries*/

SELECT SUM(Salary)

FROM T4_Faculty_Salary;

Output:

```sql
/* Sum of all salaries*/
SELECT SUM(Salary)
FROM T4_Faculty_Salary;
```

.00 %

Results | Messages

	(No column name)
1	1830000

/* Sum of distinct salaries*/

SELECT SUM(DISTINCT Salary)

FROM T4_Faculty_Salary;

Output:

```sql
/* Sum of distinct salaries*/
SELECT SUM(DISTINCT Salary)
FROM T4_Faculty_Salary;
```

00 %

Results | Messages

	(No column name)
1	840000

iii) AVG commands

SELECT AVG(Salary)

FROM T4_Faculty_Salary;

Output:

```
/* average of all salaries*/
SELECT AVG(Salary)
FROM T4_Faculty_Salary;
```

100 %

Results | Messages

	(No column name)
1	91500

/* average of specified salary */

SELECT AVG(Salary)

FROM T4_Faculty_Salary

WHERE Salary>90000;

Output:

```
/* average of specified salary */

SELECT AVG(Salary)
FROM T4_Faculty_Salary
WHERE Salary>90000;
```

00 %

Results | Messages

	(No column name)
1	104375

iv) MAX command

SELECT MAX(Salary)

FROM T4_Faculty_Salary;

Output:

```
SELECT MAX(Salary)
FROM T4_Faculty_Salary;
```

100 %

Results | Messages

	(No column name)
1	125000

v) MIN command

SELECT MIN(Salary)

FROM T4_Faculty_Salary;

Output:

```
SELECT MIN(Salary)
FROM T4_Faculty_Salary;
```

100 %

Results | Messages

	(No column name)
1	70000

3.Illustrate the usage of order by, group by and having clause .

Solution:

a)Usage of ORDER BY:

Query:

Use University;

SELECT * FROM T4_Student

ORDER BY Date_of_birth DESC;

Output:

SQLQuery2.sql - lo...4D3ELOL\DELL (67))* | SQLQuery1.sql - lo...4D3ELOL\DE

```sql
Use University;
SELECT * FROM T4_Student
ORDER BY Date_of_birth DESC;
```

110 %

Results | Messages

	Student_ID	first_Name	last_Name	Phone_num	Date_of_birth	Gender
1	13	Sam	Curran	202	1998-06-03	M
2	5	Josh	Philippe	101	1997-06-01	M
3	10	Ashleigh	Gardner	166	1997-04-15	F
4	19	Amy	Jones	208	1993-06-13	F
5	2	Pat	Cummins	300	1993-05-08	M
6	17	Nat	Sciver	206	1992-08-20	F
7	7	Meg	Lanning	165	1992-03-25	F
8	20	Danni	Wyatt	209	1991-04-22	F
9	11	Joe	Root	200	1990-12-30	M
10	16	Heather	Knight	205	1990-12-26	F
11	8	Ellyse	Perry	168	1990-11-03	F
12	14	Jos	Buttler	203	1990-09-08	M
13	6	Alyssa	Healy	166	1990-03-24	F
14	4	Mitchell	Starc	185	1990-01-30	M
15	1	Steve	Smith	490	1989-06-02	M
16	18	Sarah	Taylor	207	1989-05-20	F
17	9	Rachel	Haynes	170	1986-12-26	F
18	3	David	Warner	250	1986-10-27	M
19	12	Eoin	Morgan	201	1986-09-10	M
20	15	Stuart	Broad	204	1986-06-24	M

Query:

```sql
Use University;

SELECT * FROM T4_Student

ORDER BY first_Name DESC,Student_ID ASC;
```

Output:

SQLQuery2.sql - lo...4D3ELOL\DELL (67))* | SQLQuery1.sql - lo...4D3ELOL\DEL

```sql
Use University;
SELECT * FROM T4_Student
ORDER BY first_Name DESC,Student_ID ASC;
```

110 %

Results | Messages

	Student_ID	first_Name	last_Name	Phone_num	Date_of_birth	Gender
1	15	Stuart	Broad	204	1986-06-24	M
2	1	Steve	Smith	490	1989-06-02	M
3	18	Sarah	Taylor	207	1989-05-20	F
4	13	Sam	Curran	202	1998-06-03	M
5	9	Rachel	Haynes	170	1986-12-26	F
6	2	Pat	Cummins	300	1993-05-08	M
7	17	Nat	Sciver	206	1992-08-20	F
8	4	Mitchell	Starc	185	1990-01-30	M
9	7	Meg	Lanning	165	1992-03-25	F
10	5	Josh	Philippe	101	1997-06-01	M
11	14	Jos	Buttler	203	1990-09-08	M
12	11	Joe	Root	200	1990-12-30	M
13	16	Heather	Knight	205	1990-12-26	F
14	12	Eoin	Morgan	201	1986-09-10	M
15	8	Ellyse	Perry	168	1990-11-03	F
16	3	David	Warner	250	1986-10-27	M
17	20	Danni	Wyatt	209	1991-04-22	F
18	10	Ashleigh	Gardner	166	1997-04-15	F
19	19	Amy	Jones	208	1993-06-13	F
20	6	Alyssa	Healy	166	1990-03-24	F

b)Usage of GROUP BY and having clause:

Query:

```
Use University;

SELECT Count(Faculty_ID) , Department_Name

FROM T4_Faculty

GROUP BY Department_Name

HAVING Count(Faculty_ID)>1;
```

Output:

SQLQuery2.sql - lo...4D3ELOL\DELL (67))* | SQLQuery1.sql - lo...4D3ELOL\DELL

```
Use University;
SELECT Count(Faculty_ID) , Department_Name
FROM T4_Faculty
GROUP BY Department_Name
HAVING Count(Faculty_ID)>1;
```

110 %

Results | Messages

	(No column name)	Department_Name
1	2	AERO
2	3	AI
3	2	BT
4	3	CSE
5	3	CVE
6	3	ECE
7	2	ME

Query:

```
Use University;

SELECT Count(Course_name) As Number_of_Courses , Department_Name

FROM T4_Course_offered

GROUP BY Department_Name

HAVING Count(Course_name)>0

ORDER BY Count(Course_name) ASC;
```

Output:

SQLQuery2.sql - lo...4D3ELOL\DELL (67))* | SQLQuery1.sql - lo...4D3ELOL\DELL (60))*

```
Use University;
SELECT Count(Course_name) As Number_of_Courses , Department_Name
FROM T4_Course_offered
GROUP BY Department_Name
HAVING Count(Course_name)>0
ORDER BY Count(Course_name) ASC;
```

110 %

Results | Messages

	Number_of_Courses	Department_Name
1	1	AERO
2	1	CSE
3	1	CVE
4	1	HSE
5	1	MATH
6	1	ME
7	2	ECE
8	2	AI
9	2	BT

4. Use Aggregate function with group by and having

a)

Query:

```
SELECT Faculty_ID, AVG(Salary)
FROM T4_Faculty_Salary
GROUP BY Faculty_ID
HAVING AVG(Salary)>80000
```

Output:

Results | Messages

	Faculty_ID	(No column name)
1	100	120000
2	101	100000
3	102	125000
4	103	100000
5	104	90000
6	105	100000
7	107	90000
8	110	85000
9	111	90000
10	112	100000
11	114	95000
12	117	85000
13	118	90000
14	119	90000

b)

Query:

```
SELECT Faculty_ID,SUM(Salary)
FROM T4_Faculty_Salary
GROUP BY Faculty_ID
```

HAVING SUM(Salary)>100000

Output:

Results | Messages

	Faculty_ID	(No column name)
1	100	120000
2	102	125000

c)

Query:

SELECT Faculty_ID,MAX(Salary)

FROM T4_Faculty_Salary

GROUP BY Faculty_ID

HAVING Faculty_ID>110

Output:

Results | Messages

	Faculty_ID	(No column name)
1	111	90000
2	112	100000
3	113	75000
4	114	95000
5	115	75000
6	116	NULL
7	117	85000
8	118	90000
9	119	90000

d)

Query:

SELECT Faculty_ID,MIN(Salary)

FROM T4_Faculty_Salary

GROUP BY Faculty_ID,Salary

HAVING Salary<100000

Output:

Results | Messages

	Faculty_ID	(No column name)
1	104	90000
2	106	80000
3	107	90000
4	108	70000
5	109	75000
6	110	85000
7	111	90000
8	113	75000
9	114	95000
10	115	75000
11	117	85000
12	118	90000
13	119	90000

e)

Query:

```
SELECT Faculty_ID,COUNT(Salary)
FROM T4_Faculty_Salary
GROUP BY Faculty_ID,Salary
HAVING COUNT(Salary)<1
```

Output:

Results | Messages

	Faculty_ID	(No column name)
1	116	0

5. Write at least 3 nested queries using order by, group by and having clause.

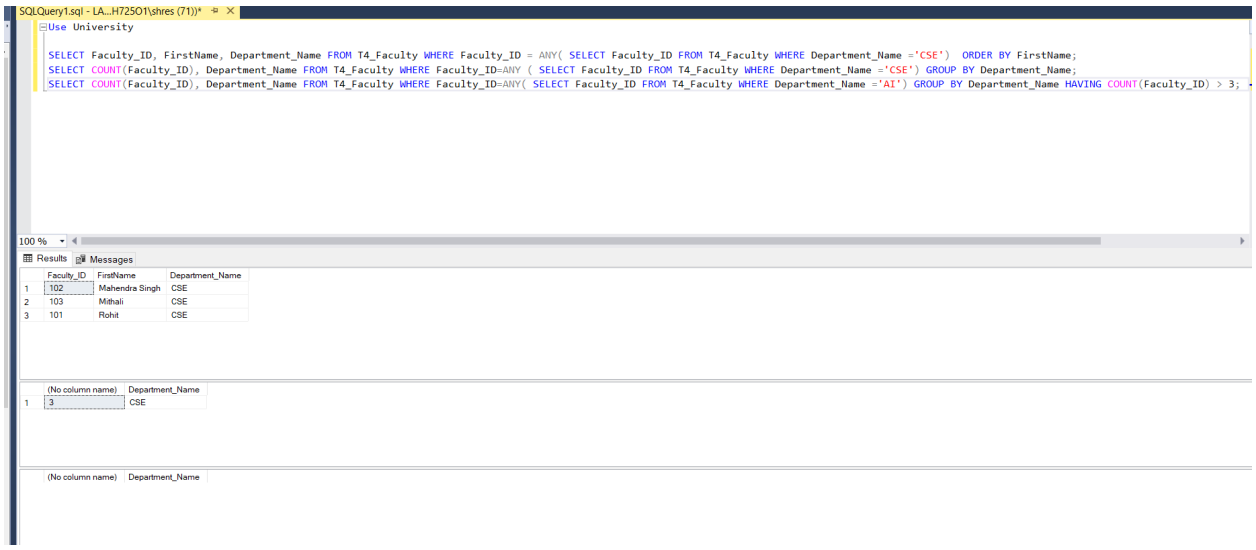
QUERY:

SELECT Faculty_ID, FirstName, Department_Name FROM T4_Faculty WHERE Faculty_ID = ANY(SELECT Faculty_ID FROM T4_Faculty WHERE Department_Name ="CSE") ORDER BY FirstName;

SELECT COUNT(Faculty_ID), Department_Name FROM T4_Faculty WHERE Faculty_ID=ANY (SELECT Faculty_ID FROM T4_Faculty WHERE Department_Name ="CSE") GROUP BY Department_Name;

SELECT COUNT(Faculty_ID), Department_Name FROM T4_Faculty WHERE Faculty_ID=ANY(SELECT Faculty_ID FROM T4_Faculty WHERE Department_Name ="CSE") GROUP BY Department_Name HAVING COUNT(Faculty_ID) > 3;

OUTPUT:



6.Illustrate the Usage of Except, Exists, Not Exists, Union, Intersect

a) EXCEPT QUERY

SELECT

Studeny_ID

FROM T4_Student

EXCEPT

SELECT Student_ID FROM Course_reg_student;

OUTPUT

```
SELECT
      Student_ID

      FROM T4_Student
EXCEPT
SELECT Student_ID FROM Course_reg_student;
```

100 %

Results | Messages

	Student_ID
1	3
2	4
3	6
4	8
5	9
6	11
7	14
8	15
9	17
10	18
11	20

b) EXIST QUERY

```
SELECT
        Faculty_ID,
        Department_Name,
        FirstName,
        LastName,
        Phone
FROM
        T4_Faculty
WHERE
EXISTS( SELECT Department_Name FROM T4_Course_offered
WHERE
T4_Faculty.Faculty_ID = T4_Course_offered.Faculty_ID);
```

OUTPUT

```sql
SELECT
     Faculty_ID,
     Department_Name,
     FirstName,
     LastName,
     Phone
FROM
    T4_Faculty
    WHERE
EXISTS(
     SELECT  Department_Name FROM T4_Course_offered
     WHERE
     T4_Faculty.Faculty_ID = T4_Course_offered.Faculty_ID);
```

100 %

Results | Messages

	Faculty_ID	Department_Name	FirstName	LastName	Phone
1	100	AI	Virat	Kohli	51188
2	102	CSE	Mahendra Singh	Dhoni	70781
3	104	AI	Ajinkya	Rahane	60688
4	105	ECE	Shubhman	Gill	70895
5	106	ECE	Harleen	Deol	66666
6	107	BT	Jasprit	Bumrah	99999
7	108	BT	Ekta	Bisht	54545
8	110	AERO	Ravi	Ashwin	11116
9	111	ME	Ravindra	Jadeja	33890
10	112	MATH	Che	Pujara	80806
11	114	CVE	Smriti	Mandhana	11112
12	118	HSE	Shikhar	Dhawan	11114

c) NOT EXISTS QUERY

```sql
SELECT
        Student1.Student_id,
        Student1.first_Name,
        Student1.last_Name
FROM T4_Student   AS  Student1
WHERE NOT EXISTS(SELECT * FROM T4_Student AS Student2
                WHERE Student1.Student_ID = Student2.Stduent_ID
                 AND GENDER IN ('M')   ) ;
```

OUTPUT

```sql
SELECT
        Student1.Student_ID,
        Student1.first_Name,
        Student1.last_Name
FROM T4_Student AS Student1

 WHERE NOT EXISTS(SELECT * FROM T4_Student AS Student2
               WHERE Student1.Student_ID = Student2.Student_ID
               AND Gender in ('M')
               );
```

100 %

Results | Messages

	Student_ID	first_Name	last_Name
1	6	Alyssa	Healy
2	7	Meg	Lanning
3	8	Ellyse	Perry
4	9	Rachel	Haynes
5	10	Ashleigh	Gardner
6	16	Heather	Knight
7	17	Nat	Sciver
8	18	Sarah	Taylor
9	19	Amy	Jones
10	20	Danni	Wyatt

d) UNION QUERY

```sql
SELECT
        Student_ID,
        first_Name,
        last_Name
FROM T4_Student
UNION
SELECT    Faculty_ID,
FirstName,
```

LastName

FROM T4_Faculty ;

OUTPUT

```
SELECT
        Student_ID,
        first_Name,
        last_Name
FROM T4_Student
UNION
 SELECT
        Faculty_ID,
        FirstName,
        LastName
FROM T4_Faculty ;
```

100 %

Results | Messages

	Student_ID	first_Name	last_Name
22	101	Rohit	Sharma
23	102	Mahendr...	Dhoni
24	103	Mithali	Raj
25	104	Ajinkya	Rahane
26	105	Shubhman	Gill
27	106	Harleen	Deol
28	107	Jasprit	Bumrah
29	108	Ekta	Bisht
30	109	Hardik	Pandya
31	110	Ravi	Ashwin
32	111	Ravindra	Jadeja
33	112	Che	Pujara
34	113	Kuldeep	Yadav
35	114	Smriti	Mandhana
36	115	Md	Siraj
37	116	Yuz	Chahal
38	117	Rishabh	Pant
39	118	Shikhar	Dhawan
40	119	Bhuvi	Kumar

Query executed successfully.

e) INTERSECT QUERY

SELECT Faculty_ID,

Department_Name,

FROM T4_Faculty

INTERSECT

SELECT Faculty_ID,

Department_Name

FROM T4_Course_offered ;

OUTPUT

```
SELECT
       Faculty_ID ,
       Department_Name
FROM  T4_Faculty
INTERSECT
 SELECT
        Faculty_ID,
        Department_Name
FROM T4_Course_offered;
```

100 %

Results | Messages

	Faculty_ID	Department_Name
1	100	AI
2	102	CSE
3	104	AI
4	105	ECE
5	106	ECE
6	107	BT
7	108	BT
8	110	AERO
9	111	ME
10	112	MATH
11	114	CVE
12	118	HSE

7. INNER JOIN, LEFT OUTER JOIN, RIGHT OUTER JOIN- 3 queries for each instance

and

8. Use all the above conditions in JOIN as well.

INNER JOIN

Query:

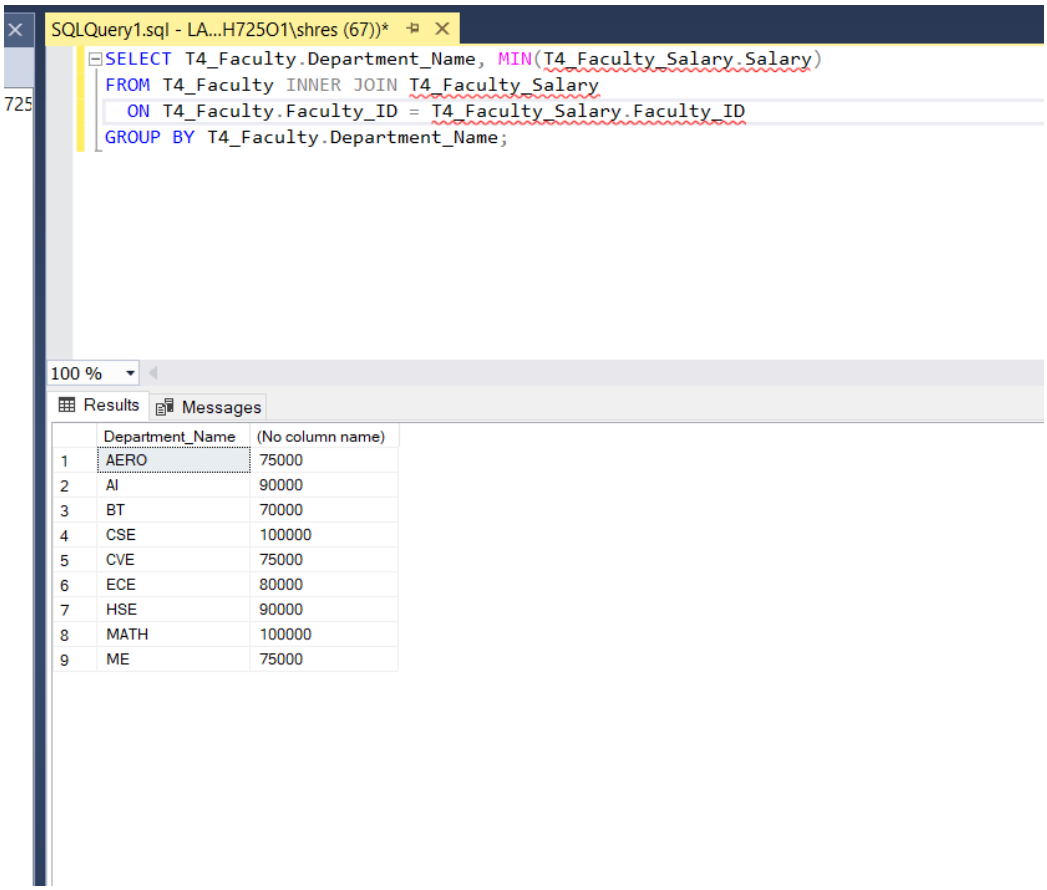
SELECT T4_Faculty.Department_Name, MIN(T4_Faculty_Salary.Salary)

FROM T4_Faculty INNER JOIN T4_Faculty_Salary

ON T4_Faculty.Faculty_ID = T4_Faculty_Salary.Faculty_ID

GROUP BY T4_Faculty.Department_Name;

Output:



	Department_Name	(No column name)
1	AERO	75000
2	AI	90000
3	BT	70000
4	CSE	100000
5	CVE	75000
6	ECE	80000
7	HSE	90000
8	MATH	100000
9	ME	75000

Query:

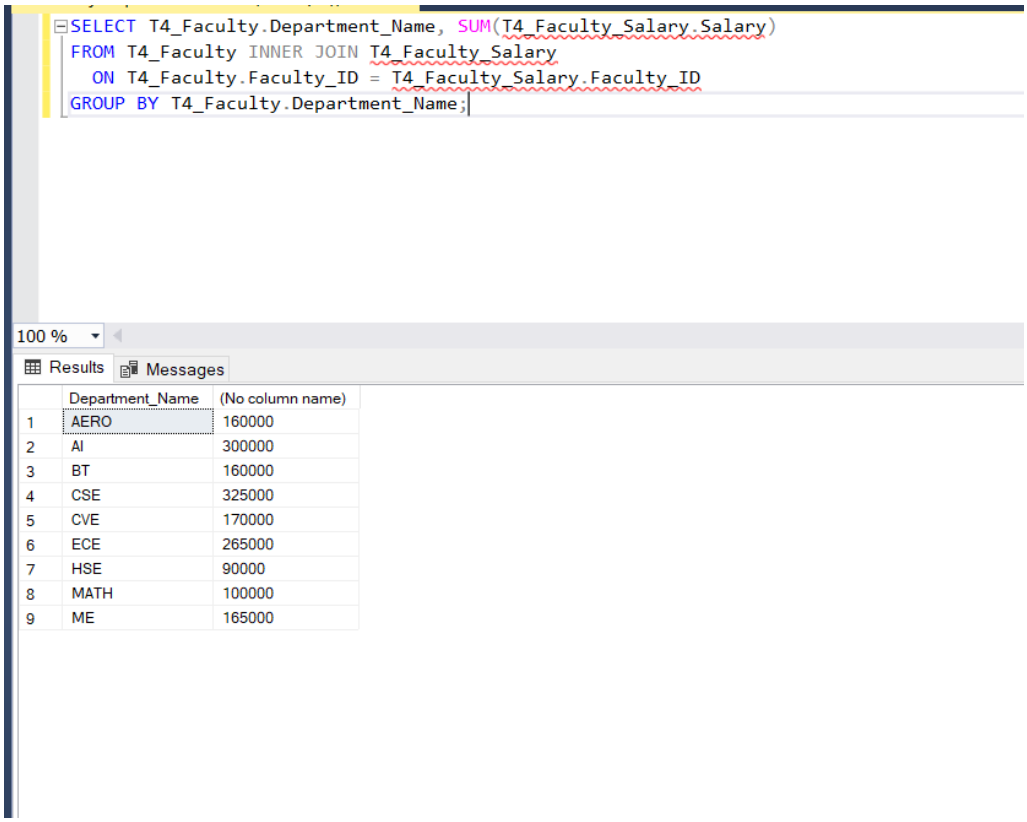
SELECT T4_Faculty.Department_Name, SUM(T4_Faculty_Salary.Salary)

FROM T4_Faculty INNER JOIN T4_Faculty_Salary

ON T4_Faculty.Faculty_ID = T4_Faculty_Salary.Faculty_ID

GROUP BY T4_Faculty.Department_Name;

Output:



```
SELECT T4_Faculty.Department_Name, SUM(T4_Faculty_Salary.Salary)
FROM T4_Faculty INNER JOIN T4_Faculty_Salary
  ON T4_Faculty.Faculty_ID = T4_Faculty_Salary.Faculty_ID
GROUP BY T4_Faculty.Department_Name;
```

100 %

Results | Messages

	Department_Name	(No column name)
1	AERO	160000
2	AI	300000
3	BT	160000
4	CSE	325000
5	CVE	170000
6	ECE	265000
7	HSE	90000
8	MATH	100000
9	ME	165000

Query:

SELECT T4_Faculty.Department_Name

FROM T4_Faculty INNER JOIN T4_Faculty_Salary

on T4_Faculty.Faculty_ID = ANY

(SELECT Faculty_ID from T4_Faculty where T4_Faculty.Faculty_ID = T4_Faculty_Salary.Faculty_ID);

OUTPUT:

```
SELECT T4_Faculty.Department_Name
FROM T4_Faculty INNER JOIN T4_Faculty_Salary
 on T4_Faculty.Faculty_ID = ANY
  (SELECT Faculty_ID from T4_Faculty where T4_Faculty.Faculty_ID = T4_Faculty_Salary.Faculty_ID);
```

100 %

Results | Messages

	Department_Name
1	AI
2	CSE
3	CSE
4	CSE
5	AI
6	ECE
7	ECE
8	BT
9	BT
10	AERO
11	AERO
12	ME
13	MATH
14	ME
15	CVE
16	CVE
17	CVE
18	ECE
19	HSE
20	AI

Left Outer Join

Query:

```
SELECT T4_Faculty.Department_Name, SUM(T4_Faculty_Salary.Salary)
FROM T4_Faculty LEFT OUTER JOIN T4_Faculty_Salary
  ON T4_Faculty.Faculty_ID = T4_Faculty_Salary.Faculty_ID
GROUP BY T4_Faculty.Department_Name;
```

Output:

```sql
SELECT T4_Faculty.Department_Name, SUM(T4_Faculty_Salary.Salary)
FROM T4_Faculty LEFT OUTER JOIN T4_Faculty_Salary
  ON T4_Faculty.Faculty_ID = T4_Faculty_Salary.Faculty_ID
GROUP BY T4_Faculty.Department_Name;
```

100 %

Results | Messages

	Department_Name	(No column name)
1	AERO	160000
2	AI	300000
3	BT	160000
4	CSE	325000
5	CVE	170000
6	ECE	265000
7	HSE	90000
8	MATH	100000
9	ME	165000

Query:

SELECT T4_Faculty.Department_Name

FROM T4_Faculty LEFT OUTER JOIN T4_Faculty_Salary

on T4_Faculty.Faculty_ID = ALL

(SELECT Faculty_ID from T4_Faculty where T4_Faculty.Faculty_ID = T4_Faculty_Salary.Faculty_ID);

Output:

SQLQuery1.sql - LA...H725O1\shres (67))*

```sql
SELECT T4_Faculty.Department_Name
FROM T4_Faculty LEFT OUTER JOIN T4_Faculty_Salary
 on T4_Faculty.Faculty_ID = ALL
  (SELECT Faculty_ID from T4_Faculty where T4_Faculty.Faculty_ID = T4_Faculty_Salary.Faculty_ID);
```

100 %

Results | Messages

	Department_Name
1	AI
2	CSE
3	CSE
4	CSE
5	AI
6	ECE
7	ECE
8	BT
9	BT
10	AERO
11	AERO
12	ME
13	MATH
14	ME
15	CVE
16	CVE
17	CVE
18	ECE
19	HSE
20	AI

Query:

SELECT T4_Faculty.Faculty_ID

FROM T4_Faculty LEFT OUTER JOIN T4_Course_offered

on T4_Course_offered.Course_name like '%a'

Output

```
SELECT T4_Faculty.Faculty_ID
FROM T4_Faculty LEFT OUTER JOIN T4_Course_offered
 on T4_Course_offered.Course_name like  '%a'
```

100 %

Results | Messages

	Faculty_ID
1	100
2	101
3	102
4	103
5	104
6	105
7	106
8	107
9	108
10	109
11	110
12	111
13	112
14	113
15	114
16	115
17	116
18	117
19	118
20	119

RIght Outer Join

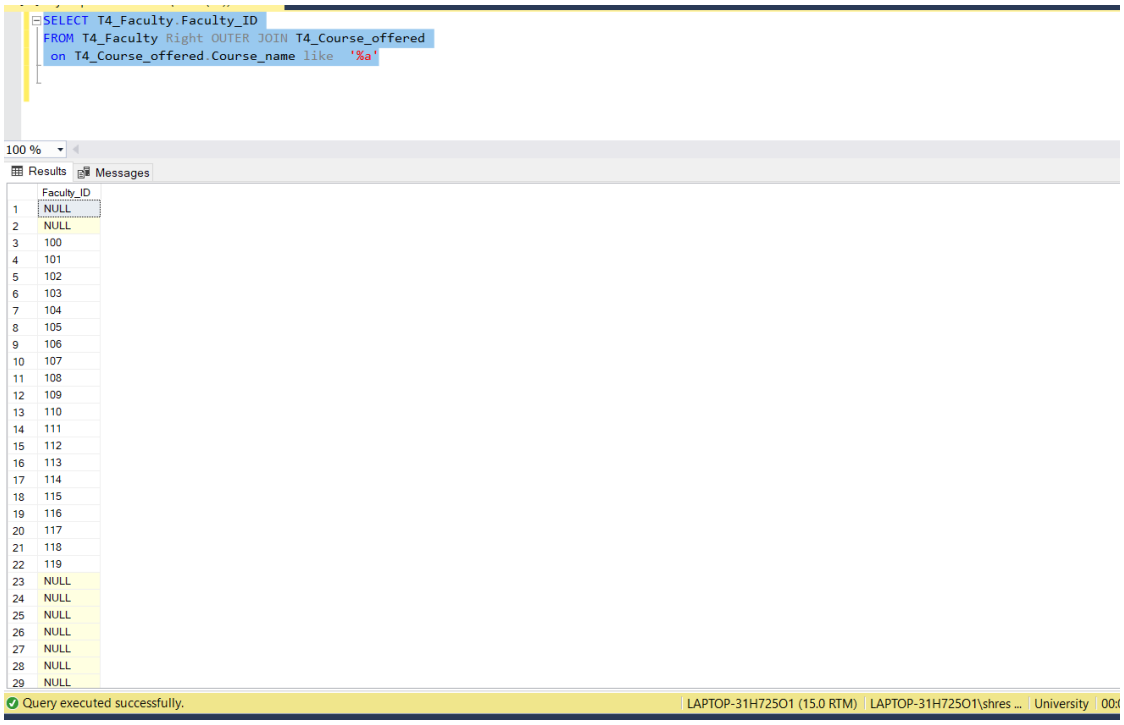
Query:

SELECT T4_Faculty.Faculty_ID

FROM T4_Faculty Right OUTER JOIN T4_Course_offered

on T4_Course_offered.Course_name like '%a'

OUTPUT:



```
SELECT T4_Faculty.Faculty_ID
FROM T4_Faculty Right OUTER JOIN T4_Course_offered
 on T4_Course_offered.Course_name like  '%a'
```

100 %

Results | Messages

	Faculty_ID
1	NULL
2	NULL
3	100
4	101
5	102
6	103
7	104
8	105
9	106
10	107
11	108
12	109
13	110
14	111
15	112
16	113
17	114
18	115
19	116
20	117
21	118
22	119
23	NULL
24	NULL
25	NULL
26	NULL
27	NULL
28	NULL
29	NULL

Query executed successfully. | LAPTOP-31H725O1 (15.0 RTM) | LAPTOP-31H725O1\shres ... | University | 00:

Query:

SELECT T4_Faculty.Department_Name

FROM T4_Faculty Right OUTER JOIN T4_Faculty_Salary

on T4_Faculty.Faculty_ID = ALL

(SELECT Faculty_ID from T4_Faculty where T4_Faculty.Faculty_ID = T4_Faculty_Salary.Faculty_ID);

OUTPUT :

SQLQuery1.sql - LA...H725O1\shres (67))*

```sql
SELECT T4_Faculty.Department_Name
FROM T4_Faculty Right OUTER JOIN T4_Faculty_Salary
 on T4_Faculty.Faculty_ID = ALL
  (SELECT Faculty_ID from T4_Faculty where T4_Faculty.Faculty_ID = T4_Faculty_Salary.Faculty_ID);
```

100 %

Results | Messages

	Department_Name
1	AI
2	CSE
3	CSE
4	CSE
5	AI
6	ECE
7	ECE
8	BT
9	BT
10	AERO
11	AERO
12	ME
13	MATH
14	ME
15	CVE
16	CVE
17	CVE
18	ECE
19	HSE
20	AI

Query :

SELECT T4_Faculty.Department_Name, MIN(T4_Faculty_Salary.Salary)

FROM T4_Faculty Right OUTER JOIN T4_Faculty_Salary

ON T4_Faculty.Faculty_ID = T4_Faculty_Salary.Faculty_ID

GROUP BY T4_Faculty.Department_Name;

OUTPUT:

SQLQuery1.sql - LA...H725O1\shres (67))*

```sql
SELECT T4_Faculty.Department_Name, MIN(T4_Faculty_Salary.Salary)
FROM T4_Faculty Right OUTER JOIN T4_Faculty_Salary
  ON T4_Faculty.Faculty_ID = T4_Faculty_Salary.Faculty_ID
GROUP BY T4_Faculty.Department_Name;
```

100 %

Results | Messages

	Department_Name	(No column name)
1	AERO	75000
2	AI	90000
3	BT	70000
4	CSE	100000
5	CVE	75000
6	ECE	80000
7	HSE	90000
8	MATH	100000
9	ME	75000