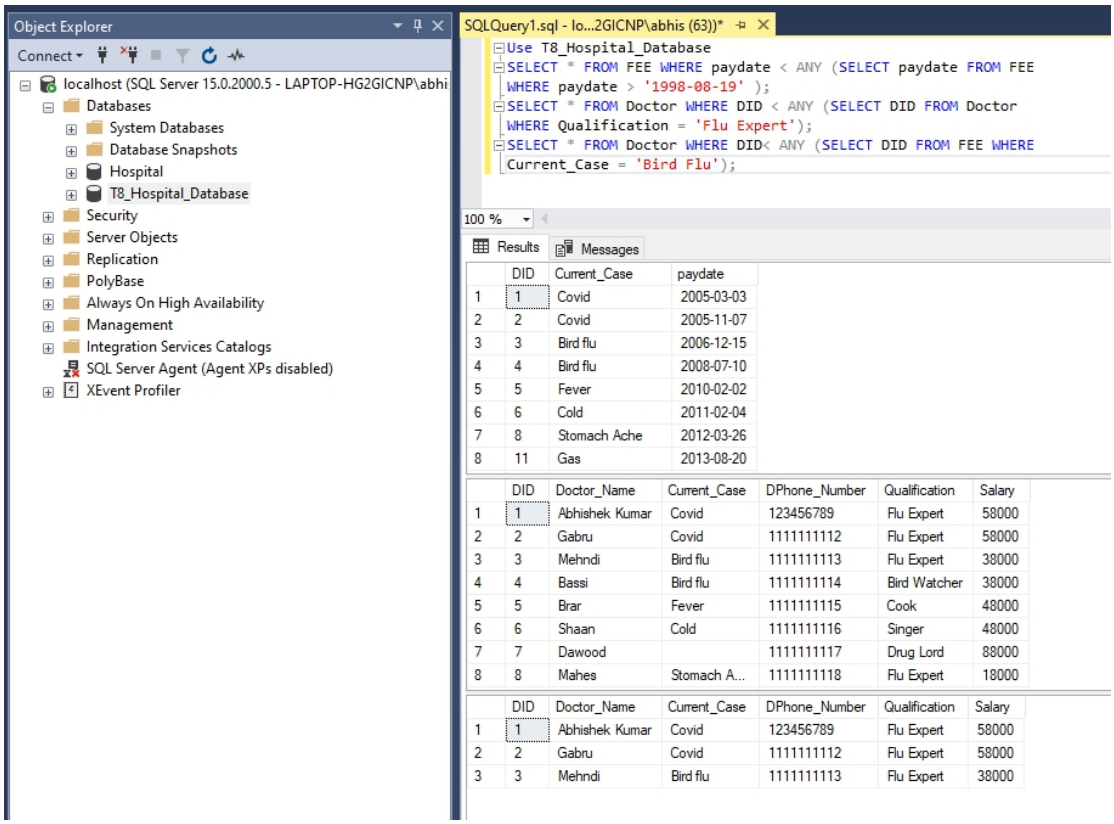
DBMS LAB ASSIGNMENT 5

Name : Abhisek Rana

Reg No. : 19BCS003

1. Illustrate logical ANY, ALL and LIKE operator- the queries should be relevant to your respective databases 3 queries for each operator. One query explaining the difference between ANY and ALL



	DID	Current_Case	paydate
1	1	Covid	2005-03-03
2	2	Covid	2005-11-07
3	3	Bird flu	2006-12-15
4	4	Bird flu	2008-07-10
5	5	Fever	2010-02-02
6	6	Cold	2011-02-04
7	8	Stomach Ache	2012-03-26
8	11	Gas	2013-08-20

	DID	Doctor_Name	Current_Case	DPhone_Number	Qualification	Salary
1	1	Abhishek Kumar	Covid	123456789	Flu Expert	58000
2	2	Gabru	Covid	1111111112	Flu Expert	58000
3	3	Mehndi	Bird flu	1111111113	Flu Expert	38000
4	4	Bassi	Bird flu	1111111114	Bird Watcher	38000
5	5	Brar	Fever	1111111115	Cook	48000
6	6	Shaan	Cold	1111111116	Singer	48000
7	7	Dawood		1111111117	Drug Lord	88000
8	8	Mahes	Stomach A...	1111111118	Flu Expert	18000

	DID	Doctor_Name	Current_Case	DPhone_Number	Qualification	Salary
1	1	Abhishek Kumar	Covid	123456789	Flu Expert	58000
2	2	Gabru	Covid	1111111112	Flu Expert	58000
3	3	Mehndi	Bird flu	1111111113	Flu Expert	38000

SQLQuery1.sql - lo...2GICNP\abhis (63))*

```
Use T8_Hospital_Database
SELECT * FROM FEE WHERE paydate < ALL (SELECT paydate FROM FEE
WHERE paydate > '1998-08-19' );
SELECT * FROM Doctor WHERE DID < ALL (SELECT DID FROM Doctor
WHERE Qualification = 'Flu Expert');
SELECT * FROM Doctor WHERE DID< ALL (SELECT DID FROM FEE WHERE
Current_Case = 'Bird Flu');
```

100 %

Results | Messages

DID	Current_Case	paydate

DID	Doctor_Name	Current_Case	DPhone_Number	Qualification	Salary

	DID	Doctor_Name	Current_Case	DPhone_Number	Qualification	Salary
1	1	Abhishek Kumar	Covid	123456789	Flu Expert	58000
2	2	Gabru	Covid	1111111112	Flu Expert	58000

SQLQuery1.sql - lo...2GICNP\abhis (63))*

```
Use T8_Hospital_Database
SELECT Doctor_Name FROM Doctor where Doctor_Name like 'a%';
SELECT Doctor_Name FROM Doctor where Doctor_Name like '%a';
SELECT Doctor_Name FROM Doctor where Doctor_Name like '%pe%';
```

100 %

Results | Messages

	Doctor_Name
1	Abhishek Kumar

	Doctor_Name
1	Sweta
2	Reva

	Doctor_Name
1	Pewds

Difference in ALL and ANY :

SQLQuery1.sql - lo...2GICNP\abhis (63))*

```
Use T8_Hospital_Database
SELECT * FROM Doctor WHERE DID< ANY (SELECT DID FROM Doctor WHERE DID<5);

SELECT * FROM Doctor WHERE DID< ALL (SELECT DID FROM Doctor WHERE DID<5);
```

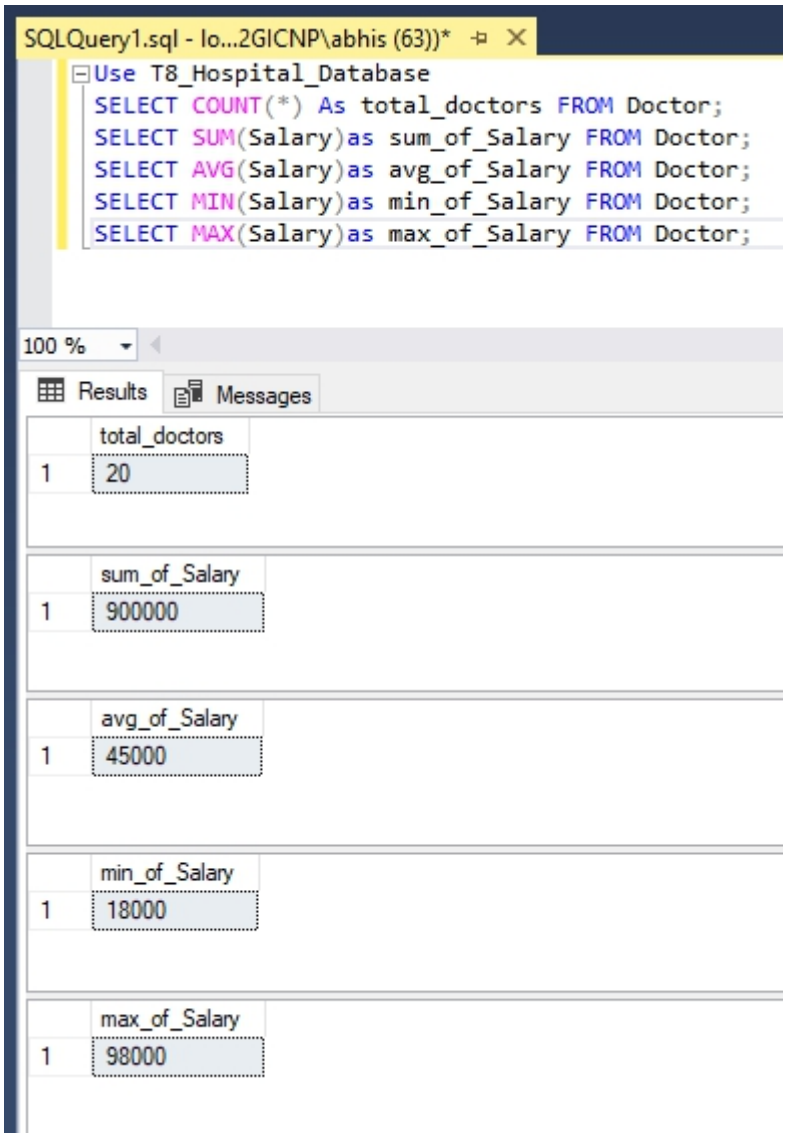
100 %

Results | Messages

	DID	Doctor_Name	Current_Case	DPhone_Number	Qualification	Salary
1	1	Abhishek Kumar	Covid	123456789	Flu Expert	58000
2	2	Gabru	Covid	1111111112	Flu Expert	58000
3	3	Mehndi	Bird flu	1111111113	Flu Expert	38000

	DID	Doctor_Name	Current_Case	DPhone_Number	Qualification	Salary

2. One query for each Aggregate function.



3. Illustrate the usage of order by, group by and having clause (2 queries for each case)

SQLQuery1.sql - lo...2GICNP\abhis (63))*

```
Use T8_Hospital_Database
SELECT Doctor_Name FROM Doctor order by DID;
SELECT * FROM FEE order by paydate;
SELECT DID FROM Doctor group by DID having DID < 3 ;
SELECT DID FROM Doctor group by DID having DID > 25 ;
```

100 %

Results | Messages

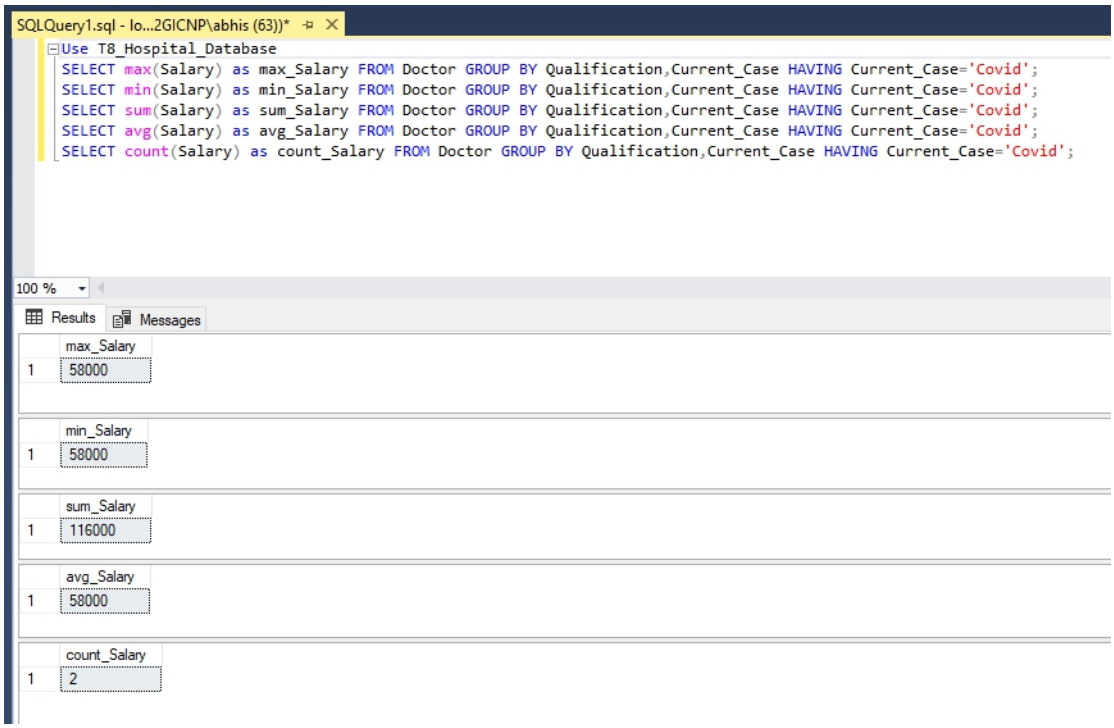
	Doctor_Name
1	Abhishek Kumar
2	Gabru
3	Mehndi
4	Bassi
5	Brar
6	Shaan
7	Dawood
8	Mahes
9	Bhangar
10	Bhau
11	Shankar
12	Lakshman

	DID	Current_Case	paydate
1	9		NULL
2	10		NULL
3	16		NULL
4	17		NULL
5	18		NULL
6	7		NULL
7	20		NULL
8	1	Covid	2005-03-03
9	2	Covid	2005-11-07
10	3	Bird flu	2006-12-15
11	4	Bird flu	2008-07-10
12	5	Fever	2010-02-02

	DID
1	1
2	2

	DID

4. Use Aggregate function with group by and having



```
Use T8_Hospital_Database
SELECT max(Salary) as max_Salary FROM Doctor GROUP BY Qualification,Current_Case HAVING Current_Case='Covid';
SELECT min(Salary) as min_Salary FROM Doctor GROUP BY Qualification,Current_Case HAVING Current_Case='Covid';
SELECT sum(Salary) as sum_Salary FROM Doctor GROUP BY Qualification,Current_Case HAVING Current_Case='Covid';
SELECT avg(Salary) as avg_Salary FROM Doctor GROUP BY Qualification,Current_Case HAVING Current_Case='Covid';
SELECT count(Salary) as count_Salary FROM Doctor GROUP BY Qualification,Current_Case HAVING Current_Case='Covid';
```

	max_Salary
1	58000

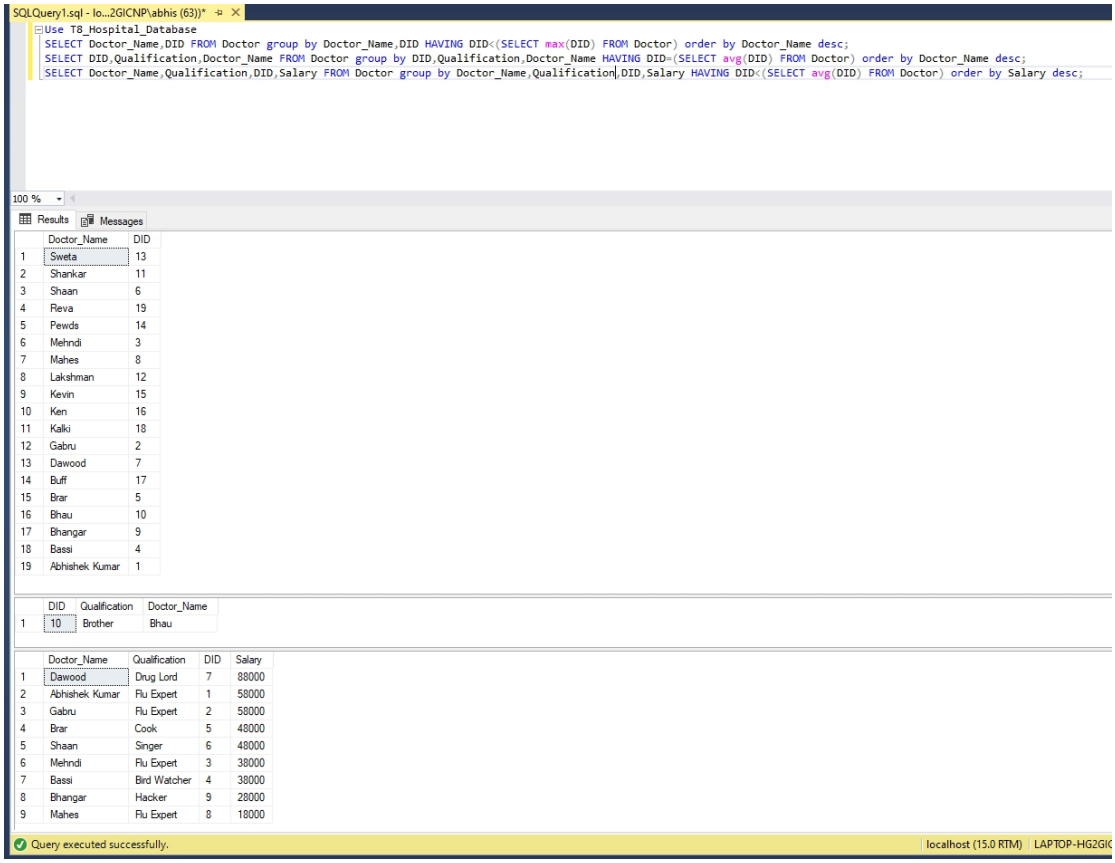
	min_Salary
1	58000

	sum_Salary
1	116000

	avg_Salary
1	58000

	count_Salary
1	2

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



```
Use T8_Hospital_Database
SELECT Doctor_Name,DID FROM Doctor group by Doctor_Name,DID HAVING DID<(SELECT max(DID) FROM Doctor) order by Doctor_Name desc;
SELECT DID,Qualification,Doctor_Name FROM Doctor group by DID,Qualification,Doctor_Name HAVING DID=(SELECT avg(DID) FROM Doctor) order by Doctor_Name desc;
SELECT Doctor_Name,Qualification,DID,Salary FROM Doctor group by Doctor_Name,Qualification,DID,Salary HAVING DID<(SELECT avg(DID) FROM Doctor) order by Salary desc;
```

	Doctor_Name	DID
1	Sweta	13
2	Shankar	11
3	Shaan	6
4	Reva	19
5	Pewds	14
6	Mehndi	3
7	Mahes	8
8	Lakshman	12
9	Kevin	15
10	Ken	16
11	Kalki	18
12	Gabru	2
13	Dawood	7
14	Buff	17
15	Brar	5
16	Bhau	10
17	Bhangar	9
18	Bassi	4
19	Abhishek Kumar	1

	DID	Qualification	Doctor_Name
1	10	Brother	Bhau

	Doctor_Name	Qualification	DID	Salary
1	Dawood	Drug Lord	7	88000
2	Abhishek Kumar	Flu Expert	1	58000
3	Gabru	Flu Expert	2	58000
4	Brar	Cook	5	48000
5	Shaan	Singer	6	48000
6	Mehndi	Flu Expert	3	38000
7	Bassi	Bird Watcher	4	38000
8	Bhangar	Hacker	9	28000
9	Mahes	Flu Expert	8	18000

Query executed successfully.

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

SQLQuery1.sql - Io...2GICNP\abhis (63))*

```
Use T8_Hospital_Database
SELECT Doctor_Name FROM Doctor except select Doctor_Name from
Doctor where Qualification='Bird Flu';
SELECT * FROM FEE where exists(select DID from Doctor where DID<5);
SELECT * FROM FEE where not exists(select DID from Doctor where
DID>27);
SELECT DID FROM Doctor union select DID from FEE;
SELECT DID FROM Doctor intersect select DID from FEE;
```

100 %

Results | Messages

	Doctor_Name
1	Abhishek Kumar
2	Bassi
3	Bhangar
4	Bhau

	DID	Current_Case	paydate
1	1	Covid	2005-03-03
2	2	Covid	2005-11-07
3	3	Bird flu	2006-12-15
4	4	Bird flu	2008-07-10
5	5	Fever	2010-02-02

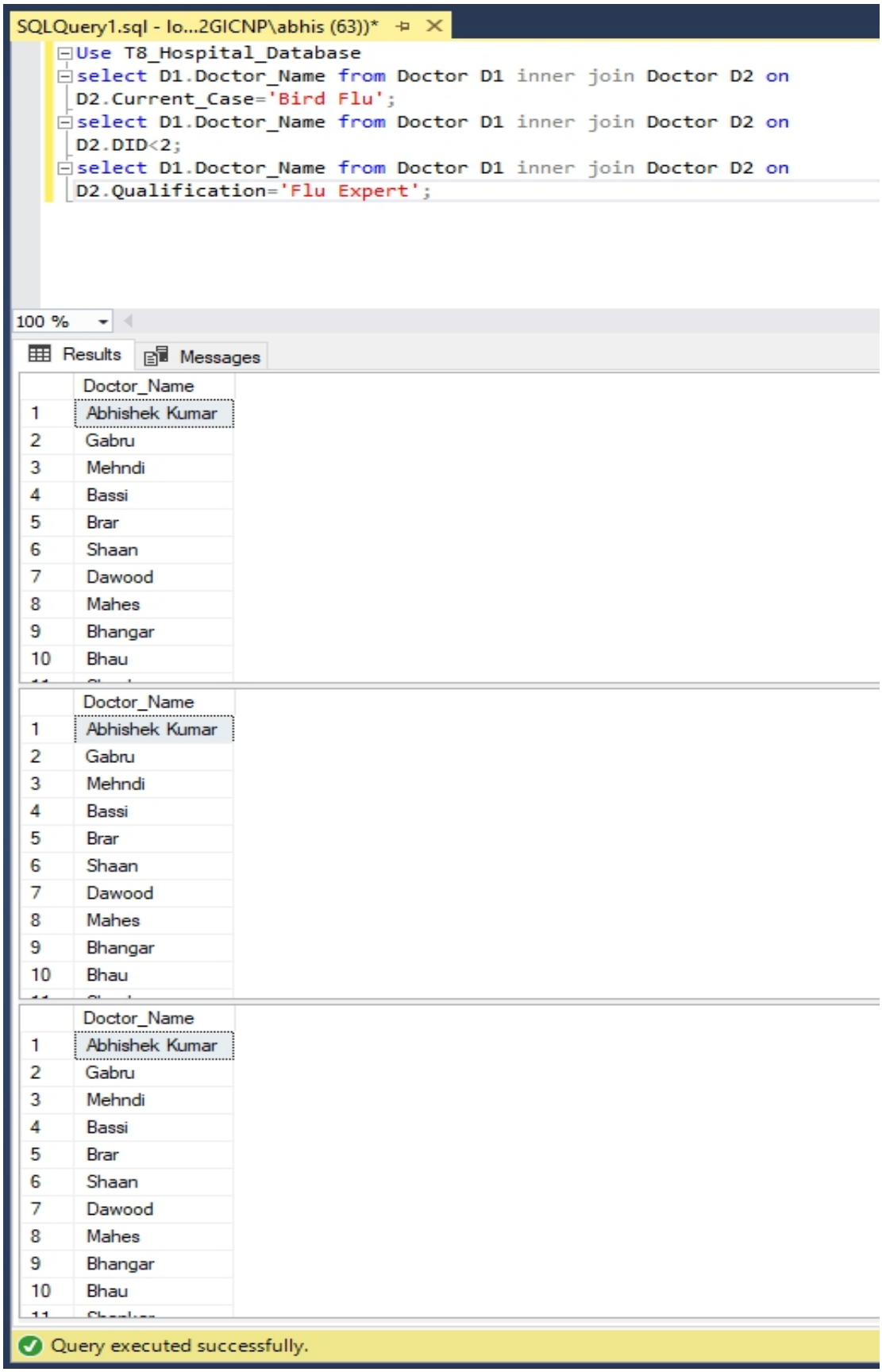
	DID	Current_Case	paydate
1	1	Covid	2005-03-03
2	2	Covid	2005-11-07
3	3	Bird flu	2006-12-15
4	4	Bird flu	2008-07-10
5	5	Fever	2010-02-02
6	6	Cold	2011-02-04

	DID
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8

	DID
1	1
2	2
3	3
4	4
5	5
6	6

Query executed successfully.

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



SQLQuery1.sql - lo...2GICNP\abhis (63))*

```
Use T8_Hospital_Database
select D1.Doctor_Name from Doctor D1 left join Doctor D2 on
D2.Current_Case='Bird Flu';
select D1.Doctor_Name from Doctor D1 left join Doctor D2 on D2.DID<2;
select D1.Doctor_Name from Doctor D1 left join Doctor D2 on
D2.Qualification='Flu Expert';
```

100 %

Results | Messages

	Doctor_Name
1	Abhishek Kumar
2	Abhishek Kumar
3	Gabru
4	Gabru
5	Mehndi
6	Mehndi
7	Bassi
8	Bassi
9	Brar
10	Brar

	Doctor_Name
1	Abhishek Kumar
2	Gabru
3	Mehndi
4	Bassi
5	Brar
6	Shaan
7	Dawood
8	Mahes
9	Bhangar
10	Bhau

	Doctor_Name
1	Abhishek Kumar
2	Abhishek Kumar
3	Abhishek Kumar
4	Abhishek Kumar
5	Abhishek Kumar
6	Gabru
7	Gabru
8	Gabru
9	Gabru
10	Gabru

Query executed successfully.

SQLQuery1.sql - lo...2GICNP\abhis (63))*

```
Use T8_Hospital_Database
select D1.Doctor_Name from Doctor D1 right join Doctor D2 on
D2.Current_Case='Bird Flu';
select D1.Doctor_Name from Doctor D1 right join Doctor D2 on
D2.DID<2;
select D1.Doctor_Name from Doctor D1 right join Doctor D2 on
D2.Qualification='Flu Expert';
```

100 %

Results | Messages

	Doctor_Name
1	NULL
2	NULL
3	Abhishek Kumar
4	Gabru
5	Mehndi
6	Bassi
7	Brar
8	Shaan
9	Dawood
10	Mahes

	Doctor_Name
1	Abhishek Kumar
2	Gabru
3	Mehndi
4	Bassi
5	Brar
6	Shaan
7	Dawood
8	Mahes
9	Bhangar
10	Bhau

	Doctor_Name
1	Abhishek Kumar
2	Gabru
3	Mehndi
4	Bassi
5	Brar
6	Shaan
7	Dawood
8	Mahes
9	Bhangar
10	Bhau

Query executed successfully.

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

SQLQuery1.sql - lo...2GICNP\abhis (63))*

```sql
Use T8_Hospital_Database
select D1.Doctor_Name from Doctor D1 join Doctor D2 on
D2.Current_Case='Bird Flu';
select D1.Doctor_Name from Doctor D1 join Doctor D2 on D2.DID<2;
select D1.Doctor_Name from Doctor D1 join Doctor D2 on
D2.Qualification='Flu Expert';
```

100 %

Results | Messages

	Doctor_Name
1	Abhishek Kumar
2	Gabru
3	Mehndi
4	Bassi
5	Brar
6	Shaan
7	Dawood
8	Mahes
9	Bhangar
10	Bhau

	Doctor_Name
1	Abhishek Kumar
2	Gabru
3	Mehndi
4	Bassi
5	Brar
6	Shaan
7	Dawood
8	Mahes
9	Bhangar
10	Bhau

	Doctor_Name
1	Abhishek Kumar
2	Gabru
3	Mehndi
4	Bassi
5	Brar
6	Shaan
7	Dawood
8	Mahes
9	Bhangar
10	Bhau

Query executed successfully.