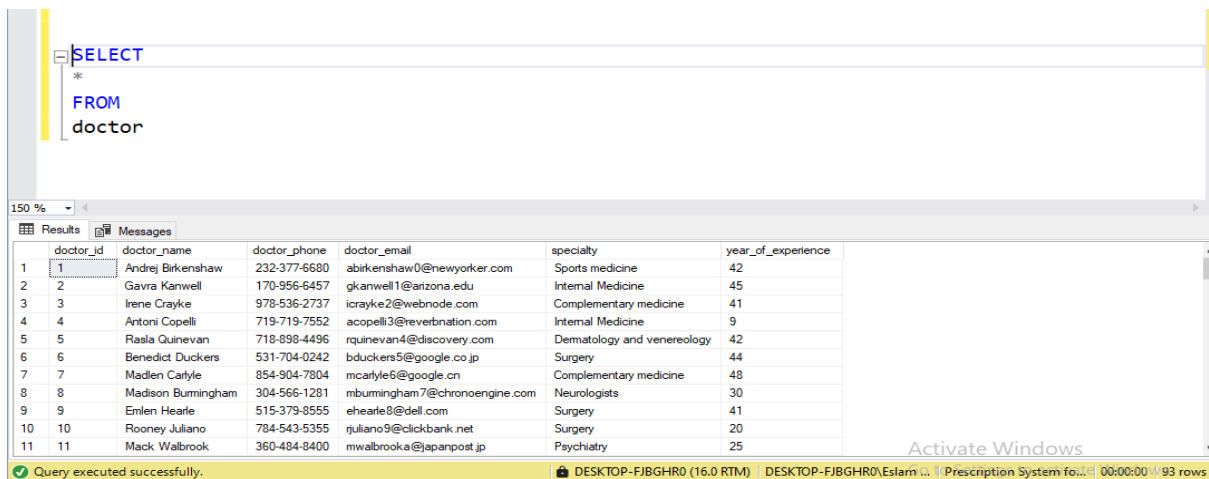


1. **SELECT:** Retrieve all columns from the Doctor table.

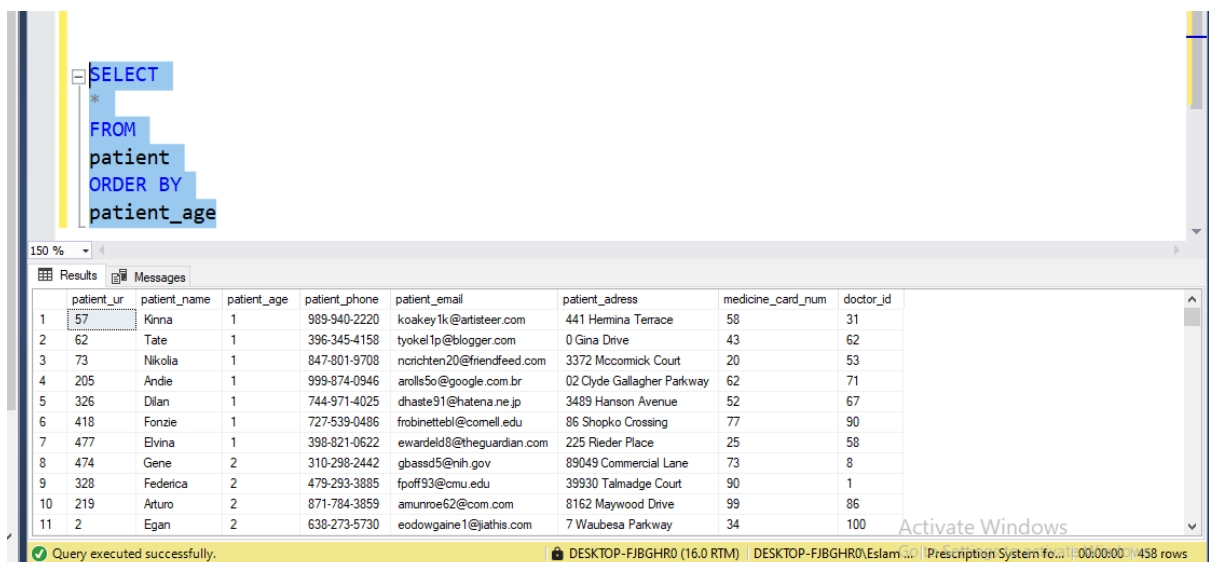


```
SELECT
*
FROM
doctor
```

	doctor_id	doctor_name	doctor_phone	doctor_email	specialty	year_of_experience
1	1	Andrej Birkenshaw	232-377-6680	abirkenshaw0@newyorker.com	Sports medicine	42
2	2	Gavra Kanwell	170-956-6457	gkanwell1@arizona.edu	Internal Medicine	45
3	3	Irene Crayke	978-536-2737	icrayke2@webnode.com	Complementary medicine	41
4	4	Antoni Copelli	719-719-7552	acopelli3@reverbnation.com	Internal Medicine	9
5	5	Rasla Quinevan	718-898-4496	rquinevan4@discovery.com	Dematology and venereology	42
6	6	Benedict Duckers	531-704-0242	bduckers5@google.co.jp	Surgery	44
7	7	Madlen Carlyle	854-904-7804	mcarlyle6@google.cn	Complementary medicine	48
8	8	Madison Bumingham	304-566-1281	mbumingham7@chronoengine.com	Neurologists	30
9	9	Emilen Hearle	515-379-8555	ehearle8@dell.com	Surgery	41
10	10	Rooney Juliano	784-543-5355	rjuliano9@clickbank.net	Surgery	20
11	11	Mack Walbrook	360-484-8400	mwalbrook0@japanpost.jp	Psychiatry	25

Query executed successfully.

2. **ORDER BY:** List patients in the Patient table in ascending order of their ages.



```
SELECT
*
FROM
patient
ORDER BY
patient_age
```

	patient_id	patient_name	patient_age	patient_phone	patient_email	patient_address	medicine_card_num	doctor_id
1	57	Kinna	1	989-940-2220	koakey1k@artisteer.com	441 Hemina Terrace	58	31
2	62	Tate	1	396-345-4158	tyokel1p@blogger.com	0 Gina Drive	43	62
3	73	Nikolla	1	847-801-9708	nrichten20@friendfeed.com	3372 Mccormick Court	20	53
4	205	Andie	1	999-874-0946	arolls5o@google.com.br	02 Clyde Gallagher Parkway	62	71
5	326	Dilan	1	744-971-4025	dhaste91@hatena.ne.jp	3489 Hanson Avenue	52	67
6	418	Fonzie	1	727-539-0486	frobinettebl@comell.edu	86 Shopko Crossing	77	90
7	477	Elvina	1	398-821-0622	ewardeld8@theguardian.com	225 Rieder Place	25	58
8	474	Gene	2	310-298-2442	gbassd5@nih.gov	89049 Commercial Lane	73	8
9	328	Federica	2	479-293-3885	fpoff93@cmu.edu	39930 Talmadge Court	90	1
10	219	Arturo	2	871-784-3859	amunroe62@com.com	8162 Maywood Drive	99	86
11	2	Egan	2	638-273-5730	eodowgaine1@jathis.com	7 Waubesa Parkway	34	100

Query executed successfully.

3. **OFFSET FETCH:** Retrieve the first 10 patients from the Patient table, starting from the 5th record.

SQL Query:

```
SELECT
*
FROM
patient
ORDER BY
patient_ur
OFFSET 5 ROWS
FETCH NEXT 10 ROWS ONLY;
```

Results:

	patient_ur	patient_name	patient_age	patient_phone	patient_email	patient_adress	medicine_card_num	doctor_id
1	6	Arlie	12	716-754-9020	aghent5@ucla.edu	8112 Chinook Alley	89	51
2	7	Arlie	23	535-864-3872	ajeal6@fc2.com	54310 Everett Parkway	60	25
3	9	Kassie	9	821-327-4468	kdangerfield8@mayoclinic.com	160 Oxford Trail	27	78
4	11	Cass	32	531-456-8136	cpezeya@amazon.co.uk	907 Carpenter Trail	57	28
5	12	Crista	89	953-939-7487	cyakuninb@economist.com	05269 Crowley Alley	95	98
6	14	Muire	43	555-333-9236	mbrained@yandex.ru	26491 Mandrake Circle	88	13
7	15	Agatha	78	209-613-6274	aeatese@weibo.com	7217 Hooker Lane	14	92
8	16	Inger	28	160-184-0498	ipassmanf@weebly.com	007 Waxwing Trail	28	68
9	17	Derek	25	636-208-6060	dbutsong@census.gov	605 Darwin Alley	89	55
10	18	Elyn	98	902-409-9721	ecuttonh@github.com	5 Crowley Terrace	35	85

Query executed successfully.

#### 4. SELECT TOP: Retrieve the top 5 doctors from the Doctor table.

SQL Query:

```
SELECT TOP(5)
*
FROM
doctor
```

Results:

	doctor_id	doctor_name	doctor_phone	doctor_email	specialty	year_of_experience
1	1	Andrej Birkenshaw	232-377-6680	abirkenshaw0@newyorker.com	Sports medicine	42
2	2	Gavra Karwell	170-956-6457	gkanwell1@arizona.edu	Internal Medicine	45
3	3	Irene Crayke	978-536-2737	icrayke2@webnode.com	Complementary medicine	41
4	4	Antoni Copelli	719-719-7552	acopelli3@reverbnation.com	Internal Medicine	9
5	5	Rasla Quinevan	718-898-4496	rquinevan4@discovery.com	Dermatology and venereology	42

Query executed successfully.

#### 5. SELECT DISTINCT: Get a list of unique address from the Patient table.

SQL Query:

```
SELECT distinct
patient_adress
FROM
patient
```

Results:

	patient_adress
1	0 East Parkway
2	0 Gina Drive
3	0 Logan Park
4	0 Mandrake Circle
5	0 Mayfield Center
6	0 Prentice Avenue
7	0 Randy Road
8	0 Sachtyen Trail
9	0 Stang Place
10	00 Grover Center
11	0014 Little Fleur Junction

Query executed successfully.

#### 6. WHERE: Retrieve patients from the Patient table who are aged 25.

SQL Query Editor:

```
SELECT
*
FROM
patient
WHERE
patient_age=25
```

Results:

patient_id	patient_name	patient_age	patient_phone	patient_email	patient_address	medicine_card_num	doctor_id
17	Derek	25	636-208-6060	dbutsong@census.gov	605 Darwin Alley	89	55
191	Carl	25	295-848-9356	croas5a@infoseek.co.jp	8865 Scofield Trail	44	85
389	Erasmus	25	393-120-6018	erosenbargas@dyndns.org	72929 Fremont Parkway	94	88
460	Bettine	25	937-432-0577	bmaffin@t.co	86772 Straubel Park	80	71

Query executed successfully. DESKTOP-FJBGHR0 (16.0 RTM) DESKTOP-FJBGHR0\Eslam ... Prescription System fo... 00:00:00 4 rows

7. **NULL**: Retrieve patients from the Patient table whose email is not provided.

SQL Query Editor:

```
SELECT
patient_email
FROM
patient
where
patient_email is NULL
```

Results:

patient_email
---------------

8. **AND**: Retrieve doctors from the Doctor table who have experience greater than 5 years and specialize in 'Cardiology'.

SQL Query Editor:

```
SELECT
*
FROM
doctor
WHERE
year_of_experience > 4 AND specialty = 'Cardiology'
```

Results:

doctor_id	doctor_name	doctor_phone	doctor_email	specialty	year_of_experience
-----------	-------------	--------------	--------------	-----------	--------------------

Query executed successfully. DESKTOP-FJBGHR0 (16.0 RTM) DESKTOP-FJBGHR0\Eslam ... Prescription System fo... 00:00:00 0 rows

**9.IN:** Retrieve doctors from the Doctor table whose speciality is either 'Dermatology' or 'Oncology'.

```
SELECT
FROM
doctor
WHERE
specialty In ('Dermatology', 'Oncology')
```

doctor_id	doctor_name	doctor_phone	doctor_email	specialty	year_of_experience
1	Dr. McClinton	806-870-6234	dmclinden1p@blinklist.com	Psychiatry	28

Query executed successfully. 0 rows

**10.IN:** Retrieve doctors from the Doctor table whose speciality is either 'Dermatology' or 'Oncology'.

```
SELECT
FROM
patient
WHERE
patient_age BETWEEN 18 AND 30
```

patient_id	patient_name	patient_age	patient_phone	patient_email	patient_address	medicine_card_num	doctor_id
1	Augustus	18	239-161-6106	acoston0@reuters.com	71 Moninger Court	19	50
7	Atine	23	535-864-3872	ajeal6@ic2.com	54310 Everett Parkway	60	25
16	Inger	28	160-184-0498	icesmarf@weebly.com	007 Waxwing Trail	28	68
17	Derek	25	636-208-6060	dbutson@icensus.gov	605 Darwin Alley	89	55
19	Genie	27	532-216-6813	granchetti@511a	2221 Mayer Lane	3	7
25	Nevin	20	766-296-6121	nsawdono@friendfeed.com	97 Esker Drive	11	91
45	Bram	22	118-145-1465	beales18@bluehost.com	8 Rockefeller Trail	16	44
63	Margaret	26	889-387-4045	mhazlewood1q@businessweek.com	3 Mantowish Plaza	26	21
80	Geoffry	29	729-250-5656	goerman27@vernet.net	74 Northwestern Circle	59	47
82	Netty	27	849-978-8188	ngeertz29@angelfire.com	5595 1st Lane	66	67
84	Dory	26	867-568-2560	ditcomb2v@fast.fm	82 Clowe Drive	68	9

Query executed successfully. 32 rows

**11. LIKE:** Retrieve doctors from the Doctor table whose names start with 'Dr.'

```
SELECT
FROM
doctor
WHERE
doctor_name like 'Dr%'
```

doctor_id	doctor_name	doctor_phone	doctor_email	specialty	year_of_experience
62	Dr. McClinton	806-870-6234	dmclinden1p@blinklist.com	Psychiatry	28

Query executed successfully. 1 rows

**12. Column & Table Aliases:** Select the name and email of doctors, aliasing them as 'DoctorName' and 'DoctorEmail'

```
SELECT
doctor_name AS 'DoctorName',
doctor_email AS 'DoctorEmail'
FROM
doctor
```

	DoctorName	DoctorEmail
1	Andrej Birkenshaw	abirkenshaw0@newyorker.com
2	Gavra Kanwell	gkanwell1@arizona.edu
3	Irene Crayke	icrayke2@webnode.com
4	Antoni Copelli	acopelli3@evernation.com
5	Rasla Quinevan	rquinevan4@discovery.com
6	Benedict Duckers	bduckers5@google.co.jp
7	Madlen Carlyle	mcarlyle6@google.cn
8	Madison Birmingham	mbirmingham7@chronoengine.com
9	Emilen Hearle	ehearle8@dell.com
10	Rooney Juliano	rjuliano9@clickbank.net
11	Mack Walbrook	mwalbrook0@japanpost.jp

Query executed successfully.

### 13.Joins: Retrieve all prescriptions with corresponding patient names

```
SELECT
prescription_id , patient_name
FROM
prescription o JOIN patient i
on
o.patient_ur=i.patient_ur
```

	prescription_id	patient_name
1	288	Augustus
2	384	Augustus
3	858	Augustus
4	1318	Augustus
5	179	Egan
6	824	Egan
7	763	Clarabelle
8	564	Clarabelle
9	943	Clarabelle
10	1094	Clarabelle
11	978	Emma

Query executed successfully.

### 14. GROUP BY: Retrieve the count of patients grouped by their cities

```
SELECT
patient_address,
COUNT(patient_ur)
FROM
patient
GROUP BY
patient_address
```

patient_address	(No column name)
0 East Parkway	1
0 Gina Drive	1
0 Logan Park	1
0 Mandrake Circle	1
0 Mayfield Center	1
0 Prentice Avenue	1
0 Randy Road	1
0 Sachjen Trail	1
0 Stang Place	1
00 Grover Center	1
0014 Little Fleur Junction	1

Query executed successfully.

### 15. HAVING: Retrieve cities with more than 3 patients.

```
SELECT
patient_address,
COUNT(patient_ur)
FROM
patient
GROUP BY
patient_address
HAVING
COUNT(patient_ur)=3
```

Results Messages

patient_address	(No column name)
-----------------	------------------

Query executed successfully.

DESKTOP-FJBGHR0 (16.0 RTM) | DESKTOP-FJBGHR0\Eslam... | Prescription System fo... | 00:00:00 | 0 rows

Ln 5 Col 1 Ch 1 INS

17. **CUBE:** Retrieve counts of patients considering all possible combinations of city and age

```
SELECT
patient_address,
patient_age,
COUNT(*) AS patient_count
FROM
patient
GROUP BY
CUBE (patient_address, patient_age)
ORDER BY
patient_address,
patient_age;
```

Results Messages

	patient_address	patient_age	patient_count
1	NULL	NULL	458
2	NULL	1	7
3	NULL	2	4
4	NULL	3	5
5	NULL	4	4
6	NULL	5	8
7	NULL	6	3
8	NULL	7	5
9	NULL	8	8
10	NULL	9	5
11	NULL	10	5

Query executed successfully.

DESKTOP-FJBGHR0 (16.0 RTM) | DESKTOP-FJBGHR0\Eslam... | Prescription System fo... | 00:00:00 | 1,017 rows

18. **ROLLUP:** Retrieve counts of patients rolled up by city

```
SQLQuery1.sql - DE...\\Eslam Ayman (55)*
SELECT
    patient_address,
    COUNT(*) AS patient_count
FROM
    patient
GROUP BY
    ROLLUP (patient_address)
ORDER BY
    patient_address;
```

136 %

	patient_address	patient_count
1	NULL	458
2	0 East Parkway	1
3	0 Gina Drive	1
4	0 Logan Park	1
5	0 Mandrake Circle	1
6	0 Mayfield Center	1
7	0 Prentice Avenue	1
8	0 Randy Road	1
9	0 Sachjen Trail	1
10	0 Stang Place	1
11	00 Grover Center	1

Query executed successfully.

19. **UNION:** Retrieve a combined list of doctors and patients

```
SQLQuery1.sql - DE...\\Eslam Ayman (55)*
SELECT
    doctor_id AS id,
    doctor_name
FROM
    doctor
UNION
SELECT
    patient_ur AS id,
    patient_name
FROM
    patient;
```

113 %

	id	doctor_name
1	1	Andrej Birkenshaw
2	1	Augustus
3	2	Egan
4	2	Gavra Kanwell
5	3	Clarabelle
6	3	Irene Crayke
7	4	Antoni Copelli
8	4	Emma
9	5	Oralie
10	5	Rasla Guinevan
11	6	Arlie

20. **Common Table Expression (CTE):** Retrieve patients along with their doctors using a CTE

```
WITH CTE(Patient, Doctor) AS(
    SELECT
        patient_name, doctor_name
    FROM
        patient i JOIN doctor o
    ON
        i.doctor_id=o.doctor_id
)
SELECT
    *
FROM
    CTE
```

113 %

	Patient	Doctor
1	Augustus	Wallie Whorlow
2	Egan	Jed Linnitt
3	Clarabelle	Viva Leser
4	Emma	Fredek Minnette
5	Oralie	Nolan Bashford
6	Arlie	Letty Fletcher
7	Arline	Wilt Lillegard
8	Kassie	Shanta Lancashire
9	Cass	Jervis Nouch
10	Crista	Lori Yegorov
11	Muire	Tomasine MacLeesse

Query executed successfully.

21. **INSERT:** Insert a new doctor into the Doctor table

```
INSERT INTO doctor (doctor_name,doctor_phone,doctor_email,specialty,year_of_experience)
VALUES ('ESLAM', '55.22.1541', 'EA@YAHOO.COM', 'EASA', 15);
```

150 %  
Messages  
(1 row affected)  
Completion time: 2024-07-06T18:56:45.2658162+03:00

## 22. INSERT Multiple Rows: Insert multiple patients into the Patient table

```
INSERT INTO patient
(patient_name,patient_age,patient_phone,patient_adress,medicine_card_num,doctor_id)
VALUES ('ESLAM', 30, '54165.652.658125', 'sohag', 15, 59),
('ahmed', 45, '5846.51.561', 'cairo', 15, 5);
```

## 24. UPDATE: Update the phone number of a doctor

```
UPDATE doctor
SET doctor_phone='1557.3215.3264'
```

150 %  
Messages  
(94 rows affected)  
Completion time: 2024-07-06T19:23:41.7897580+03:00

## 26. DELETE: Delete a patient from the Patient table

```
DELETE
FROM patient
```

TOP-FJBGHRD (SQL Server 16.0)  
atabases  
System Databases  
Database Snapshots  
BikeStores  
Company  
CompanyDB  
Prescription System for Barw  
Database Diagrams  
Tables  
Custom Tables

## 28. View: Create a view that combines patient and doctor information for easy access



```
CREATE VIEW patient_info
AS
select
patient_name ,doctor_name
from
patient i join doctor o
on
i.doctor_id=o.doctor_id
```

150 %

Messages

Commands completed successfully.

Completion time: 2024-07-06T19:30:39.4035266+03:00

150 %

Activate Windows

Query executed successfully. DESKTOP-FJBGHR0 (16.0 RTM) DESKTOP-FJBGHR0\Eslam ... Prescription System fo... 00:00:00 0 rows

29. **Index:** Create an index on the 'phone' column of the Patient table to improve search performance

```
CREATE INDEX d
ON doctor(doctor_phone);
```

150 %

Messages

Commands completed successfully.

Completion time: 2024-07-06T19:34:21.6237536+03:00

### 30. Backup: Perform a backup of the entire database to ensure data safety

