

Some queries:

1. What is the total number of users and categorize them by roles?

```
SELECT r_name AS Role, r_description AS Description,  
(SELECT COUNT(*)  
FROM Access  
WHERE Access.r_id = Roles.r_id) AS Total  
FROM Roles
```

	Role	Description	Total
1	General User	Has no special permissions	50
2	Seller	Can sell company products	5
3	Driver	Can drive company vehicles	10
4	Doctor	Can provide medical treatment	10

2. Find users whose age is greater than or equal to 40 and lives in New York?

```
SELECT *  
FROM [User]  
WHERE [u_age] >= 40 AND [u_address] LIKE '%NY%';
```

	u_id	u_name	u_age	u_email	u_address	u_gender	u_mobile
1	13	Steven Chen	41	schen@gmail.com	456 Pine St, NY	Male	555-555-3210
2	37	William Turner	44	wtuner@hotmail.com	234 Cedar Ave, NY	Male	555-999-0000

3. Select the name and email of the user with a specific mobile number 555-987-6543?

```
SELECT [u_name], [u_email]  
FROM [User] WHERE [u_mobile] = '555-987-6543';
```

	u_name	u_email
1	Emily Davis	edavis@yahoo.com

4. Select all doctors who have a rating greater than or equal to 4.5 and is available also sort them according to their rating.

```
SELECT *  
FROM Doctor  
WHERE d_rating >= 4.5 and d_status = 'Available'  
order by d_rating desc;
```

	d_id	d_speciality	d_status	d_location	d_cost	d_days	d_startTime	d_endTime	d_rating
1	46	Family medicine	Available	Phoenix	400	Mon-Thu	08:00:00	16:00:00	4.90
2	43	Dermatologist	Available	Chicago	150	Mon-Sun	10:00:00	18:00:00	4.70
3	48	Pediatrician	Available	San Diego	280	Tue-Sun	10:00:00	18:00:00	4.60
4	41	Cardiologist	Available	New York	250	Mon-Sat	09:00:00	17:00:00	4.50

5. Select the name and specialties of doctors who work on Monday to Thursday and have a cost less than or equal to 500.

```
SELECT u_name as Name ,d_speciality as Speciality
from [User], [Doctor]
where [Doctor].d_id = [User].u_id
and [Doctor].d_days LIKE '%Mon-Thu%' AND [Doctor].d_cost <= 500;
```

	Name	Speciality
1	Madison Lee	Family medicine
2	William Taylor	Pediatrician

6. Select the doctor ID, name, and cost for doctors whose cost is less than the average cost of all doctors.

```
SELECT d_id, u_name, d_cost
FROM Doctor ,[User]
WHERE [Doctor].d_id = [User].u_id
and d_cost < (SELECT AVG(d_cost) FROM Doctor);
```

	d_id	u_name	d_cost
1	41	Mark Williams	250
2	42	Sarah Davis	200
3	43	Christopher Brown	150
4	47	Jason Kim	220
5	48	Julia Rodriguez	280

7. Select the number of doctors who are 'Dermatologist'.

```
SELECT COUNT(*) AS num_doctors
FROM Doctor
WHERE d_speciality = 'Dermatologist';
```

	num_doctors
1	2

8. What is the average rating of all appointments made by male patients?

```
SELECT AVG(indv_rating) as Average_rating
FROM Appointment
WHERE u_id IN (
    SELECT u_id FROM [User]
    WHERE u_gender = 'Male'
);
```

Results		Messages	
	Average_rating		
1	4.353333		

9. How many times online appointment happened?

```
select count(app_type) as Total
from Appointment
where app_type = 'Online'
```

Results		Messages	
	Total		
1	16		

10. Show all the doctor names and their appointment count and sort them in descending order?

```
select u_name as DocName, count(d_id) as AppointmentCount
from Appointment, [User]
where [Appointment].d_id = [User].u_id
group by d_id,u_name
order by AppointmentCount desc
```

Results			Messages	
	DocName	AppointmentCount		
1	Mark Williams	5		
2	Ethan Johnson	5		
3	Sarah Davis	4		
4	Jason Kim	4		
5	Olivia Hernandez	4		
6	Christopher Brown	3		
7	Madison Lee	3		
8	Julia Rodriguez	2		

11. Find hospital details if they have ICU available and sort them by cost?

```
Select * from Hospital
where h_icuStatus = 'Available'
order by h_cost
```

	Results	Messages							
	h_id	h_name	h_location	h_phone	h_icuStatus	h_bloodGroup1	h_bloodGroup2	h_bloodGroup3	h_cost
1	101	St. Mary Hospital	New York City	555-123-4567	Available	A+	B-	O+	500
2	110	Mercy Hospital	Chicago	555-012-3456	Available	O+	A-	B-	600
3	112	University of Colorado Hospital	Aurora	555-234-5078	Available	O+	B+	O-	800
4	104	Massachusetts General Hospital	Boston	555-456-7890	Available	AB+	B+	O+	800
5	103	Johns Hopkins Hospital	Baltimore	555-345-6789	Available	A+	A-	AB-	1000
6	113	Duke University Hospital	Durham	555-345-6089	Available	B-	O+	AB+	1000
7	115	UCSF Medical Center	San Francisco	555-567-8001	Available	A+	AB+	O-	1100
8	107	Stanford Hospital	Stanford	555-789-0123	Available	AB-	O+	A-	1100
9	106	Mayo Clinic	Rochester	555-678-9012	Available	A+	B+	O-	1200

12. Find hospital details where O+ blood is available?

```
select * from Hospital
where h_bloodGroup1 = 'O+' or h_bloodGroup2 = 'O+' or h_bloodGroup3 = 'O+'
```

	Results	Messages							
	h_id	h_name	h_location	h_phone	h_icuStatus	h_bloodGroup1	h_bloodGroup2	h_bloodGroup3	h_cost
1	101	St. Mary Hospital	New York City	555-123-4567	Available	A+	B-	O+	500
2	104	Massachusetts General Hospital	Boston	555-456-7890	Available	AB+	B+	O+	800
3	105	Cleveland Clinic	Cleveland	555-567-8901	Not Available	O+	O-	B-	900
4	107	Stanford Hospital	Stanford	555-789-0123	Available	AB-	O+	A-	1100
5	109	Texas Medical Center	Houston	555-901-2345	Not Available	O+	AB+	O-	950
6	110	Mercy Hospital	Chicago	555-012-3456	Available	O+	A-	B-	600
7	112	University of Colorado Hospital	Aurora	555-234-5078	Available	O+	B+	O-	800
8	113	Duke University Hospital	Durham	555-345-6089	Available	B-	O+	AB+	1000

13. Which hospital holds how many users/patients?

```
select h_name as HospitalName, count(Admit.h_id) as UserCount
from Admit, Hospital
where Admit.h_id = Hospital.h_id
group by h_name, Admit.h_id
```

	Results	Messages		
	HospitalName	UserCount		
1	St. Mary Hospital	3		
2	Mount Sinai Hospital	3		
3	Johns Hopkins Hospital	3		
4	Massachusetts General Hospital	3		
5	Cleveland Clinic	3		
6	Mayo Clinic	3		
7	Stanford Hospital	3		
8	UCLA Medical Center	3		
9	Texas Medical Center	3		
10	Mercy Hospital	3		

14. Find all the ambulances in San Francisco?

```
Select * from Ambulance
where a_location like '%SF%';
```

	a_id	a_type	a_cost	a_location	a_status	a_number	driver_id
1	1	Type A	50	123 Main St, SF	Available	SF-111	31
2	10	Type C	100	777 Valencia St, SF	Available	SF-444	40
3	4	Type A	50	111 Market St, SF	Available	SF-222	34
4	8	Type B	75	555 Montgomery St, SF	Available	SF-333	38

15. Find out the names of the sellers and count of the products they sell?

```
select u_name, count(acc_id) as ProductCount
from [Medical Accessories], [User]
where seller_id = [User].u_id
group by u_name, seller_id
```

	u_name	ProductCount
1	Christina Brown	4
2	Brandon Davis	4
3	Hannah Chen	4
4	Andrew Kim	4
5	Lauren Wilson	4

16. What distinct type of products are available to purchase?

```
select distinct(acc_type)
from [Medical Accessories]
```

	acc_type
1	Emergency
2	Equipment
3	Medicine
4	Mobility aid
5	Protection

17. What products does 'Christina Brown' sell?

```
select acc_name
from [Medical Accessories]
where seller_id in
(select u_id from [User]
where u_name = 'Christina Brown')
```

	acc_name
1	Surgical gloves
2	Crutches
3	Paracetamol
4	Thermometer

18. Show the total cost of all purchases made?

```
SELECT SUM(totalCost) AS total_cost
FROM Buys;
```

109 %

Results	Messages
1	total_cost 39730

19. Show the name of the user and total number of medical accessories purchased by them?

```
SELECT u_name, SUM(quantity) AS total_quantity
FROM Buys, [User]
where [User].u_id = Buys.u_id
GROUP BY u_name;
```

	u_name	total_quantity
1	Amanda Johnson	2
2	Ashley Davis	3
3	Daniel Kim	1
4	David Brown	1
5	Emily Davis	2
6	Eric Rodriguez	2
7	Jennifer Kim	3
8	Jessica Chen	5
9	John Smith	2
10	Julie Lee	2
11	Karen Johnson	3
12	Kevin Chen	4
13	Linda Wilson	4
14	Megan Davis	1
15	Michael Lee	4
16	Paul Brown	5
17	Robert Rodriguez	4
18	Sarah Johnson	1
19	Steven Chen	2
20	William Kim	3