-- Hospital Data Analysis using SQL--

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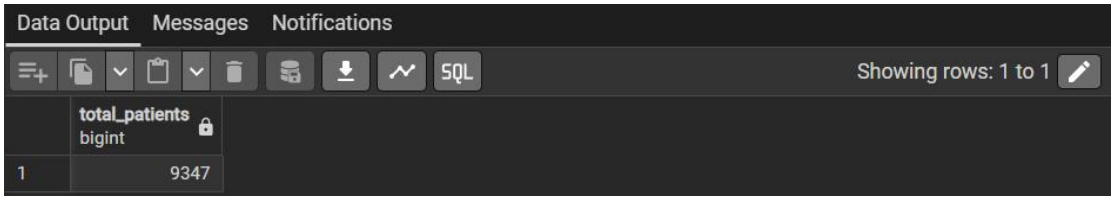
1. Total Number Of Patients

Write an SQL query to find the total number of patients across all hospitals.

Answer:

```
Select Sum(Patients_count) As Total_Patients
from Hospital_records;
```

Output:



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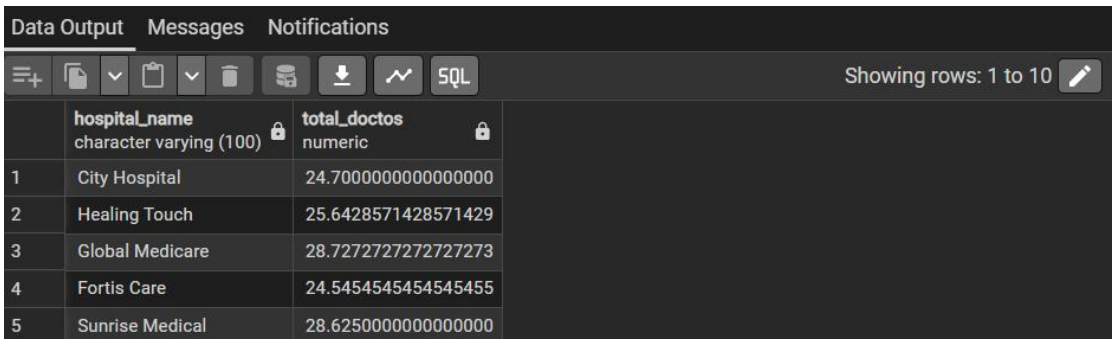
2. Average Number of Doctors per Hospital

Retrieve the average count of doctors available in each hospital.

Answer:

```
Select hospital_name,
AVG(doctors_count) As Total_Doctos
From hospital_records
Group By hospital_name;
```

Output:



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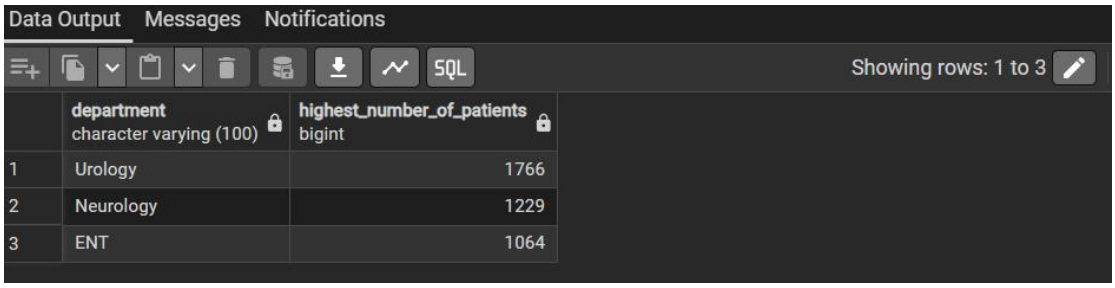
3. Top 3 Departments with the Highest Number of Patients

Find the top 3 hospital departments that have the highest number of patients.

Answer:

```
Select department,
sum(patients_count) As Highest_number_of_patients
from hospital_records
Group BY department
Order by Highest_number_of_patients
Desc limit 3;
```

Output:



	department character varying (100)	highest_number_of_patients bigint
1	Urology	1766
2	Neurology	1229
3	ENT	1064

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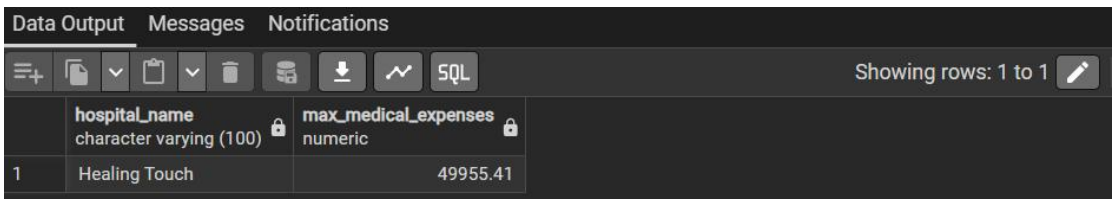
4. Hospital with the Maximum Medical Expenses

Identify the hospital that recorded the highest medical expenses.

Answer:

```
Select hospital_name,
MAX(medical_expenses) AS MAX_medical_expenses
From hospital_records
Group by hospital_name
order by  MAX_medical_expenses DESC limit 1;
```

Output:



	hospital_name character varying (100)	max_medical_expenses numeric
1	Healing Touch	49955.41

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5. Daily Average Medical Expenses

Calculate the average medical expenses per day for each hospital.

Answer:

```
Select hospital_name,admission_date,
Avg(medical_expenses) AS avg_daily_expenses
From hospital_records
Group by hospital_name,admission_date
order by admission_date;
```

Output:

Data Output | Messages | Notifications

Showing rows: 1 to 98

	hospital_name character varying (100)	admission_date date	avg_daily_expenses numeric
1	Apollo Health	2023-01-11	22456.610000000000
2	Global Medicare	2023-01-16	17999.480000000000000
3	Metro Hospital	2023-01-18	35570.840000000000
4	Global Medicare	2023-01-18	46741.910000000000
5	Wellness Clinic	2023-01-20	26646.520000000000

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6. Longest Hospital Stay

Find the patient with the longest stay by calculating the difference between Discharge Date and Admission Date.

Answer:

```
Select hospital_name,
(discharge_date - admission_date) AS stay_days
From hospital_records
Order by stay_days
Desc limit 1;
```

Output:

Data Output | Messages | Notifications

Showing rows: 1 to 1

	hospital_name character varying (100)	stay_days integer
1	Apollo Health	15

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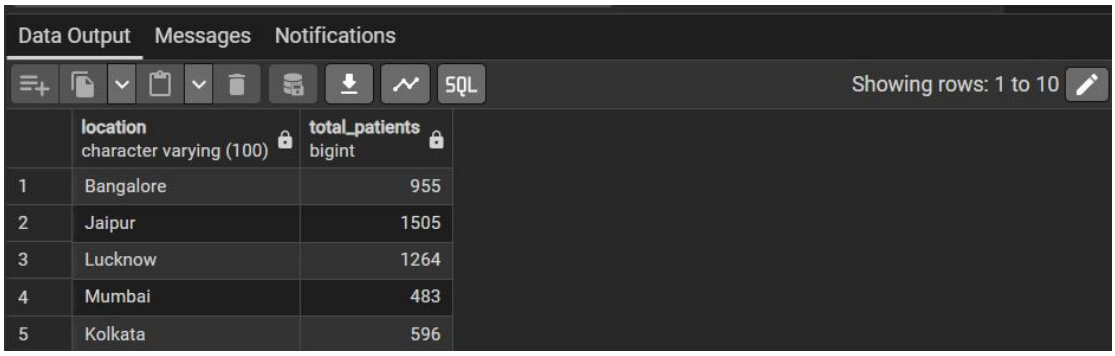
7. Total Patients Treated Per City

Count the total number of patients treated in each city.

Answer:

```
SELECT location,
SUM(patients_count) AS total_patients
FROM hospital_records
GROUP BY location;
```

Output:



	location character varying (100)	total_patients bigint
1	Bangalore	955
2	Jaipur	1505
3	Lucknow	1264
4	Mumbai	483
5	Kolkata	596

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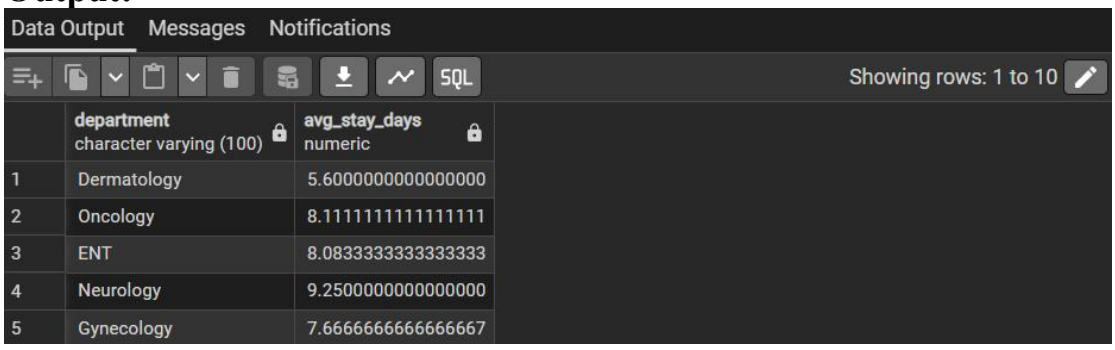
8. Average Length of Stay Per Department

Calculate the average number of days patients spend in each department.

Answer:

```
SELECT department,
AVG(discharge_date - admission_date) AS avg_stay_days
FROM hospital_records
GROUP BY department;
```

Output:



	department character varying (100)	avg_stay_days numeric
1	Dermatology	5.6000000000000000
2	Oncology	8.1111111111111111
3	ENT	8.0833333333333333
4	Neurology	9.2500000000000000
5	Gynecology	7.6666666666666667

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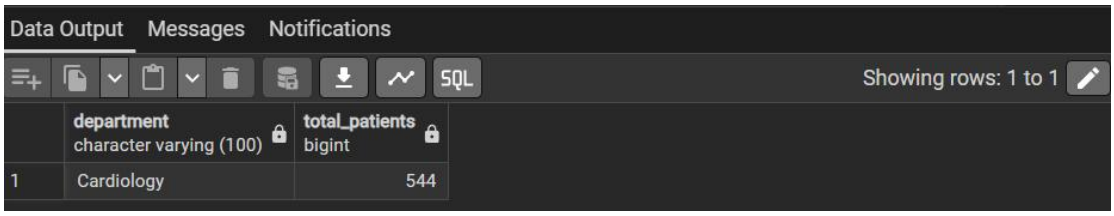
9. Identify the Department with the Lowest Number of Patients

Find the department with the least number of patients

Answer:

```
SELECT department,
SUM(patients_count) AS total_patients
FROM hospital_records
GROUP BY department
ORDER BY total_patients ASC
LIMIT 1;
```

Output:



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10. Monthly Medical Expenses Report

Group the data by month and calculate the total medical expenses for each month.

Answer:

```
SELECT TO_CHAR(admission_date, 'YYYY-MM') AS month,
SUM(medical_expenses) AS total_expenses
FROM hospital_records
GROUP BY month
ORDER BY month;
```

Output: