## **INTERNSHIP**

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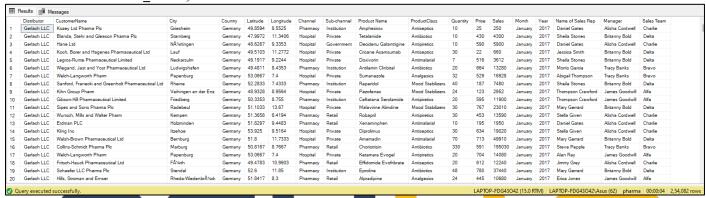
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**SQL INTERNSHIP** 

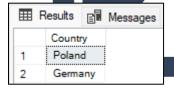
## Pharma Data SQL ASSESSMENT

1. Retrieve all columns for all records in the dataset.

select \* from Pharma\_data ;

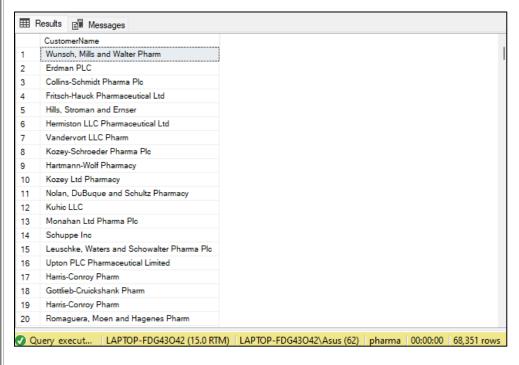


2. How many unique countries are represented in the dataset?



3. Select the names of all the customers on the 'Retail' channel.

SELECT CustomerName FROM Pharma\_data WHERE [Sub-channel]='Retail';



4. Find the total quantity sold for the 'Antibiotics' product class.

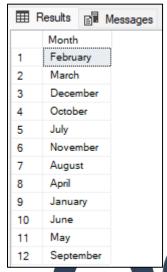
SELECT COUNT(Quantity) as TotalQuantity FROM Pharma\_data Where ProductClass = 'Antibiotics';

TotalQuantity

1 36979

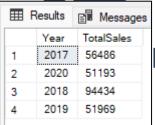
5. List all the distinct months present in the dataset.

SELECT DISTINCT Month FROM Pharma\_data;



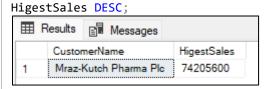
6. Calculate the total sales for each year.

SELECT Year, COUNT(Sales) AS TotalSales fr Pharma\_data Group by year;



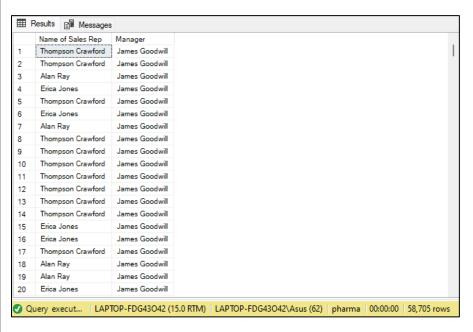
7. Find the customer with the highest sales value.

SELECT TOP 1 CustomerName, MAX(Sales) AS HigestSales FROM Pharma\_data GROUP by CustomerName ORDER BY



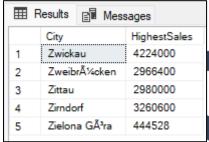
8. Get the names of all employees who are Sales Reps and are managed by 'James Goodwill'.

SELECT [Name of Sales Rep], Manager from Pharma\_data Where Manager= 'James Goodwill';



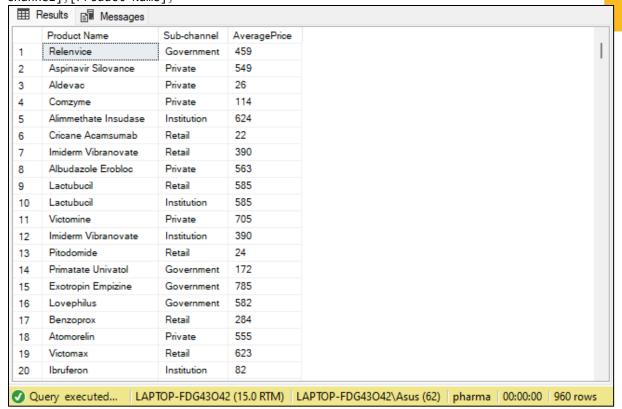
9. Retrieve the top 5 cities with the highest sales.

SELECT TOP 5 City, MAX(Sales) AS HighestSales From Pharma\_data GROUP BY City Order by City DESC;



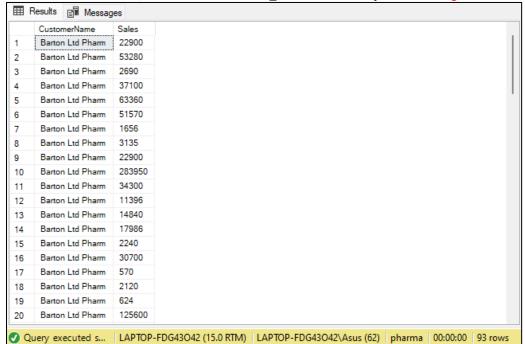
10. Calculate the average price of products in each sub-channel.

SELECT [Product Name], [Sub-channel] AVG(Price) AS AveragePrice FROM Pharma\_data GROUP BY [Sub-channel], [Product Name];



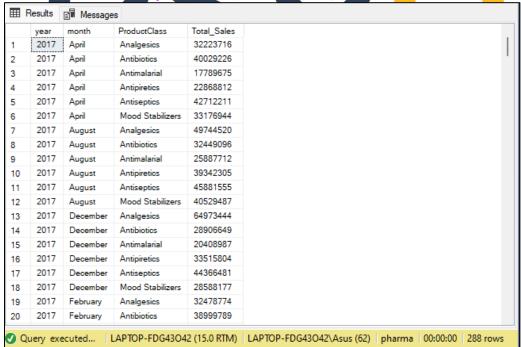
11. Retrieve all sales made by employees from 'Rendsburg' in the year 2018.

SELECT CustomerName, Sales from Pharma\_data WHERE City='Rendsburg' AND Year = '2018'



12. Calculate the total sales for each product class, for each month, and order the results by year, month, and product class.

SELECT year, month, ProductClass, SUM(Sales) AS Total\_Sales FROM Pharma\_data GROUP BY year, month ProductClass;



13. Find the top 3 sales reps with the highest sales in 2019.

SELECT TOP 3 [Name of Sales Rep], MAX(Sales) AS Highest\_Sale FROM Pharma\_data WHERE Year= 2019 GROUP BY [Name of Sales Rep] ORDER BY MAX(Sales) DESC;



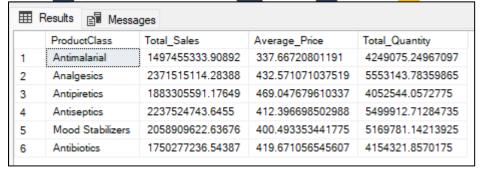
14. Calculate the monthly total sales for each sub-channel, and then calculate the average monthly sales for each sub-channel over the years.

SELECT DISTINCT Month ,Year, [Sub-channel], SUM(Sales) AS Total\_Sales, AVG(Sales) AS Average\_Sales FROM Pharma\_data GROUP BY Month ,Year, [Sub-channel];

	Month	Year	Sub-channel	Total_Sales	Average_Sales		
1	December	2017	Retail	55237346	51768.8341143393		
2	June	2017	Private	48940376	46832.8956937799		
3	September	2017	Institution	68683137	60460.5079225352		
4	June	2018	Institution	95817660	53232.0333333333		
5	May	2019	Government	45567465.178759	36337.6915301108		
6	December	2018	Institution	48866889	32599.6591060707		
7	January	2018	Private	75149489	38050.3741772152		
8	June	2019	Government	63581492.5	51818.6572942135		
9	January	2017	Government	38865698	36187.800744879		
10	August	2020	Institution	47677122	44851.4788334901		
11	August	2020	Retail	61283220	49223.4698795181		
12	October	2019	Retail	53570722	47240.4955908289		
13	July	2019	Retail	50703986	39033.0916089299		
14	October	2020	Government	46367808	49327.4553191489		
15	December	2020	Retail	115246585	93544.3060064935		
16	June	2020	Retail	66904989	57134.9180187874		
17	June	2020	Private	52747206	52484.7820895522		
18	September	2019	Private	64026373	68258.3933901919		
19	November	2019	Institution	55498928	55890.1591137966		
20	October	2017	Private	50216498	51084.9420142421		

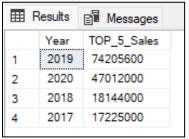
15. Create a summary report that includes the total sales, average price, and total quantity sold for each product class.

SELECT ProductClass, SUM(Sales) Total\_Sales, AVG(Price) AS Average\_Price, SUM(Quantity) AS Total\_Quantity = AVG(Price) AS Average\_Price = SUM(Quantity) AS Total\_Quantity = AVG(Price) AS Average\_Price = SUM(Quantity) AS Total\_Quantity = AVG(Price) AS Average\_Price = SUM(Quantity) AS Total\_Quantity = AVG(Price) AVG(Price) AS Average\_Price = SUM(Quantity) AS Total\_Quantity = AVG(Price) AVG(Price)



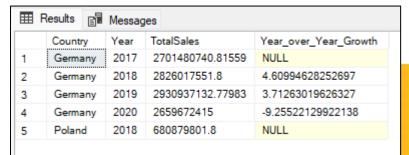
16. Find the top 5 customers with the highest sales for each year.

SELECT TOP 5 Year , MAX(Sales) AS TOP\_5\_Sales FROM Pharma\_data GROUP BY Year ORDER BY TOP\_5\_Sales DESC;



17. Calculate the year-over-year growth in sales for each country.

```
WITH SalesWithPreviousYear AS (
SELECT
Country,
SUM(Sales) AS TotalSales,
LAG(SUM(Sales)) OVER (PARTITION BY Country ORDER BY Year) AS PreviousYearSales
FROM
Pharma_data
GROUP BY
Country, Year
SELECT
Country,
Year,
TotalSales,
CASE
WHEN PreviousYearSales IS NOT NULL THEN ((TotalSales - PreviousYearSales) / PreviousYearSales) * 100
ELSE NULL
END AS Year_over_Year_Growth
FROM
SalesWithPreviousYear;
```



18. List the months with the lowest sales for each year

SELECT Month, MIN(Sales) No LowestSales FROM Pharma\_data GROUP BY Mont



19. Calculate the total sales for each sub-channel in each country, and then find the country with the highest total sales for each sub-channel.

```
WITH SubchannelSales AS (
SELECT
Country,
[Sub-channel],
SUM(Sales) AS TotalSales
```

```
FROM
Pharma_data
GROUP BY
Country, [Sub-channel]
RankedSubchannelSales AS (
SELECT
Country,
[Sub-channel],
TotalSales,
ROW_NUMBER() OVER (PARTITION BY [Sub-channel] ORDER BY TotalSales DESC) AS SalesRank
FROM
SubchannelSales
SELECT
Country,
[Sub-channel],
TotalSales
FROM
RankedSubchannelSales
WHERE
SalesRank = 1;
Results 📳 Messages
```

