

--- 3Signet Week 8 Task: SQL Data Analysis

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---Tasks:

---1. Sales Performance Analysis

- --- a. What are the total sales for each product?(Identify the top selling products)

```
SELECT "Product Name", SUM(Sales) as TotalSales
```

```
From Pharm_sales
```

```
Group by "Product Name"
```

```
order by TotalSales DESC;
```

- --- b. How do sales vary by month within a specific year? ( analyse monthly sales trend)

```
SELECT Month AS Month, SUM (Sales) as MonthlySales
```

```
FROM Pharm_sales
```

```
where Year= 2017
```

```
group by Month
```

```
Order by MonthlySales DESC
```

```
SELECT Month AS Month, SUM (Sales) as MonthlySales
```

```
FROM Pharm_sales
```

```
where Year= 2018
```

```
group by Month
```

```
Order by MonthlySales DESC
```

```
SELECT Month AS Month, SUM (Sales) as MonthlySales
```

```
FROM Pharm_sales
```

```
where Year= 2019
```

group by Month

Order by MonthlySales DESC

SELECT Month AS Month, SUM (Sales) as MonthlySales

FROM Pharm\_sales

where Year= 2020

group by Month

Order by MonthlySales DESC

---2. Sales by Location

- --- a. Which cities have the highest total; sales? (Identify top cities by sales volume)

select City, sum(Sales) as TotalSales

frOM Pharm\_sales

group by City

order by TotalSales DESC;

- --- b.How do sales compare across different countries? (Analyze sales performance by country)

SELECT Country, SUM(Sales) as TotalSales

from Pharm\_sales

Group by Country

Order by TotalSales DESC;

---3. Customer Segmentation

- --- a. What is the total sales by customer type (e.g., Hospitals, Pharmacies)?

SELECT Channel, SUM(Sales) AS TotalSales

FROM Pharm\_sales

GROUP BY Channel

ORDER BY TotalSales DESC;

----b. How do sales differ across various sectors (e.g., Government vs. Private buyers)?

SELECT "Sub-channel", sum (Sales) as TotalSales

from Pharm\_sales

group by "Sub-channel"

order by TotalSales DESC;

----b. How do sales differ across various sectors (e.g., Government vs. Private buyers)?

---4. Product Analysis

----a. What are the top-selling products within each drug class?

SELECT "Product Class", "Product Name", SUM(Sales) AS TotalSales

FROM Pharm\_sales

WHERE "Product Class" = 'Analgesics'

GROUP BY "Product Class", "Product Name"

ORDER BY TotalSales DESC

LIMIT 10;

SELECT "Product Class", "Product Name", SUM(Sales) AS TotalSales

FROM Pharm\_sales

WHERE "Product Class" = 'Antibiotics'

GROUP BY "Product Class", "Product Name"

ORDER BY TotalSales DESC

LIMIT 10;

```
SELECT "Product Class", "Product Name", SUM(Sales) AS TotalSales
FROM Pharm_sales
WHERE "Product Class" = 'Antimalarial'
GROUP BY "Product Class", "Product Name"
ORDER BY TotalSales DESC
LIMIT 10;
```

```
SELECT "Product Class", "Product Name", SUM(Sales) AS TotalSales
FROM Pharm_sales
WHERE "Product Class" = 'Antipiretics'
GROUP BY "Product Class", "Product Name"
ORDER BY TotalSales DESC
LIMIT 10;
```

```
SELECT "Product Class", "Product Name", SUM(Sales) AS TotalSales
FROM Pharm_sales
WHERE "Product Class" = 'Mood Stabilizers'
GROUP BY "Product Class", "Product Name"
ORDER BY TotalSales DESC
LIMIT 10;
```

--- b. What is the average price for each class of drugs? (Analyze pricing by product class)

```
SELECT "Product Class", AVG(Price) AS AveragePrice
```

```
FROM Pharm_sales  
  
GROUP BY "Product Class";  
  
ORDER BY AveragePrice DESC
```

#### ---5. Sales Representative Performance

- --- a. Who are the top-performing sales representatives based on total sales?

```
SELECT "Name of Sales Rep", SUM(Sales) as Totalsales  
  
from Pharm_sales  
  
group by "Name of Sales Rep"  
  
Order by Totalsales desc;
```

- --- b. How does sales performance vary across different sales teams?

```
SELECT "Sales Team", SUM(Sales) AS TotalSales  
  
FROM Pharm_sales  
  
GROUP BY "Sales Team"  
  
ORDER BY TotalSales DESC;
```

#### ---6. Time Series Analysis

- --- a. What is the year-over-year growth in total sales? (Measure growth trends over the years)

```
select Year, sum(Sales) as YearlySales  
  
from Pharm_sales  
  
group by Year  
  
order by Year;
```

- --- b. Which months consistently have the highest sales volume? (Identify seasonal sales patterns)

```
select Month, sum(Sales) as MonthlySales
```

```
from Pharm_sales
```

```
Group by Month
```

```
oRDER BY MonthlySales DESC;
```