



Pharmacy Analytics [P1] (CVS Health)

QUESTION

CVS Health is trying to better understand its pharmacy sales, and how well different products are selling. Each drug can only be produced by one manufacturer.

Write a query to find the top 3 most profitable drugs sold, and how much profit they made. Assume that there are no ties in the profits. Display the result from the highest to the lowest total profit.

Definition:

- **cogs** stands for Cost of Goods Sold which is the direct cost associated with producing the drug.
- Total Profit = Total Sales - Cost of Goods Sold

pharmacy_sales Table:

Column Name	Type
product_id	integer
units_sold	integer
total_sales	decimal
cogs	decimal
manufacturer	varchar
drug	varchar

pharmacy_sales Example Input:

product_id	units_sold	total_sales	cogs	manufacturer	drug
9	37410	293452.54	208876.01	Eli Lilly	Zyprexa
34	94698	600997.19	521182.16	AstraZeneca	Surmontil
61	77023	500101.61	419174.97	Biogen	Varicose Relief
136	144814	1084258	1006447.73	Biogen	Burkhart

Step 1: Identify the problem of the case

Write a query to learn about the three most profitable pharmaceuticals and how much money they make. Assume there is no profit restriction. Results are displayed from greatest to lowest overall profit. with the following definition: Total Profit = Total Revenue - Cost of Goods Sold, where cogs

stands for Cost of Goods Sold, which is the direct cost of manufacturing the medicine. The findings are shown in the table below.

Column Name	Type
drug	varchar
profit	decimal

Step 2 : Analyze and solve problems

Total Profit = Total Revenue - Cost of Goods Sold

We calculate the profit of each drug through the above formula: because each drug has many records, we need the total Revenue and COGs of each drug then take R - C to make profit. Sort the results in descending order of profit. and take the highest 3 records.

```
SELECT drug
      , SUM(total_sales) - SUM(cogs) total_profit
FROM pharmacy_sales
GROUP BY drug
ORDER BY total_profit DESC
LIMIT 3
```

The final output:

drug	total_profit
Humira	81515652.55
Keytruda	11622022.02
Dupixent	11217052.34