# Day 14

📌 **Cards Issued Difference**

Your team at JPMorgan Chase is soon launching a new credit card, and to gain some context, you are analyzing how many credit cards were issued each month.

Write a query that outputs the name of each credit card and the difference in issued amount between the month with the most cards issued, and the least cards issued. Order the results according to the biggest difference.

```
SELECT
  card_name,
  MAX(issued_amount) - MIN(issued_amount) AS difference
FROM monthly_cards_issued
GROUP BY card_name
ORDER BY difference DESC;
```

📌 **Compressed Mean**

You are trying to find the mean number of items bought per order on Alibaba, rounded to 1 decimal place.

However, instead of doing analytics on all Alibaba orders, you have access to a summary table, which describes how many items were in an order (`item_count`), and the number of orders that had that many items (`order_occurrences`).

```
SELECT
ROUND(
    SUM(item_count::decimal * order_occurrences) / SUM(order_occurrences), 1)  AS mean
FROM items_per_order;SELECT
ROUND(
    SUM(item_count::decimal * order_occurrences) / SUM(order_occurrences), 1)  AS mean
FROM items_per_order;
```

📌 **Pharmacy Analytics (Part 1)**

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

```
SELECT
  drug,
  total_sales-cogs as total_profit
FROM pharmacy_sales
ORDER BY total_profit DESC
LIMIT 3;
```

## 📌 Pharmacy Analytics (Part 2)

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 out which manufacturer is associated with the drugs that were not profitable and how much money CVS lost on these drugs.

Output the manufacturer, number of drugs and total losses. Total losses should be in absolute value. Display the results with the highest losses on top.

```
SELECT
    manufacturer,
    COUNT(drug) as drug_count,
    sum(cogs - total_sales) as total_loss
FROM pharmacy_sales
where cogs > total_sales
GROUP BY manufacturer
ORDER BY total_loss DESC;
```

### 📌 Pharmacy Analytics (Part 3)

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 total sales of drugs for each manufacturer. Round your answer to the closest million, and report your results in descending order of total sales.

Because this data is being directly fed into a dashboard which is being seen by business stakeholders, format your result like this: "$36 million".

```
SELECT
  manufacturer,
  concat('$', ROUND(SUM(total_sales)/1000000), ' million') as sales_million
FROM pharmacy_sales
GROUP BY manufacturer
ORDER BY SUM(total_sales) DESC;
```