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Card Launch Success (JPMorgan Chase)

QUESTION

Your team at JPMorgan Chase is soon launching a new credit card. You are asked to estimate how many cards you'll issue in the first month.

Before you can answer this question, you want to first get some perspective on how well new credit card launches typically do in their first month.

Write a query that outputs the name of the credit card, and how many cards were issued in its launch month. The launch month is the earliest record in the `monthly_cards_issued` table for a given card. Order the results starting from the biggest issued amount.

`monthly_cards_issued` Table:

Column Name	Type
issue_month	integer
issue_year	integer
card_name	string
issued_amount	integer

`monthly_cards_issued` Example Input:

issue_month	issue_year	card_name	issued_amount
1	2021	Chase Sapphire Reserve	170000
2	2021	Chase Sapphire Reserve	175000
3	2021	Chase Sapphire Reserve	180000
3	2021	Chase Freedom Flex	65000
4	2021	Chase Freedom Flex	70000

Step 1: Identify the problem of the case

Step 2 : Analyze and solve problems

First to find out the launch month of each card we use the `RANK()` function with `issue_year` and `issue_month`.

```
SELECT *
, RANK() OVER(
    PARTITION BY card_name
    ORDER BY issue_year, issue_month
) rank_time
FROM monthly_cards_issued
```

Then get the request values from case: `card_name` and `issued_amount` from the newly created view.

```
SELECT card_name , issued_amount
FROM (
SELECT *
, RANK() OVER(
PARTITION BY card_name
ORDER BY issue_year, issue_month
) rank_time
FROM monthly_cards_issued
) sub
WHERE rank_time = 1
ORDER BY issued_amount DESC
```

OUTPUT:

card_name	issued_amount
Chase Sapphire Reserve	150000
Chase Freedom Flex	55000

OTHER SOLUTION:

```
WITH card_launch AS (
SELECT
card_name,
issued_amount,
MAKE_DATE(issue_year, issue_month, 1) AS issue_date,
MIN(MAKE_DATE(issue_year, issue_month, 1)) OVER (
PARTITION BY card_name) AS launch_date
FROM monthly_cards_issued
)

SELECT card_name, issued_amount
FROM card_launch
WHERE issue_date = launch_date
ORDER BY issued_amount DESC;
```