

# Day 03

## Product Line Revenue

As a business analyst on the revenue forecasting team at NVIDIA, you are given a table of NVIDIA transactions in 2021.

Write a query to summarize the total sales revenue for each product line. The product line with the highest revenue should be at the top of the results.

```
SELECT
    product.product_line,
    SUM(amount) AS total_revenue
FROM transactions
INNER JOIN product_info AS product
    ON transactions.product_id = product.product_id
GROUP BY product.product_line
ORDER BY total_revenue DESC;
```

## Solution #2: Using Window function

Here, we use a window function and a `DISTINCT` clause instead of `GROUP BY`.

```
SELECT
    DISTINCT product.product_line,
    SUM(amount) OVER (
        PARTITION BY product.product_line) AS total_revenue
FROM transactions
INNER JOIN product_info AS product
    ON transactions.product_id = product.product_id
ORDER BY total_revenue DESC;
```

## Trade In Payouts

Apple has a trade-in program where their customers can return the old iPhone device to Apple and Apple gives the customers the trade-in value (known as payout) of the device in cash.

For each store, write a query of the total revenue from the trade-in. Order the result by the descending order.

```
SELECT
    transactions.store_id,
    SUM(payouts.payout_amount) AS total_payout
FROM trade_in_transactions AS transactions
INNER JOIN trade_in_payouts AS payouts
    ON transactions.model_id = payouts.model_id
GROUP BY transactions.store_id
ORDER BY total_payout DESC;
```