PROJECT: ANALYZING MOTORCYCLE PART SALES

You're working for a company that sells motorcycle parts, and they've asked for some help in analyzing their sales data!

They operate three warehouses in the area, selling both retail and wholesale. They offer a variety of parts and accept credit cards, cash, and bank transfer as payment methods. However, each payment type incurs a different fee.

The board of directors wants to gain a better understanding of wholesale revenue by product line, and how this varies month-to-month and across warehouses. You have been tasked with calculating net revenue for each product line and grouping results by month and warehouse. The results should be filtered so that only `"Wholesale"` orders are included.

They have provided you with access to their database, which contains the following table called `sales`:

Sales

Column	Data type	Description
`order_number`	`VARCHAR`	Unique order number.
`date`	`DATE`	Date of the order, from June to August 2021.
`warehouse`	`VARCHAR`	The warehouse that the order was made from— `North`, `Central`, or `West`.
`client_type`	`VARCHAR`	Whether the order was `Retail` or `Wholesale`.
`product_line`	`VARCHAR`	Type of product ordered.
`quantity`	`INT`	Number of products ordered.
`unit_price`	`FLOAT`	Price per product (dollars).
`total`	`FLOAT`	Total price of the order (dollars).
`payment`	`VARCHAR`	Payment method— `Credit card`, `Transfer`, or `Cash`.
`payment_fee`	`FLOAT`	Percentage of `total` charged as a result of the `payment` method.

Your query output should be presented in the following format:

`product_line`	`month`	`warehouse`	`net_revenue`
product_one	---	---	---
product_one	---	---	---
product_one	---	---	---
product_one	---	---	---
product_one	---	---	---
product_one	---	---	---
product_two	---	---	---

product_line	month	warehouse	net_revenue
...	...	...	...

Projects Data DataFrame as df

```
SELECT *
FROM sales;
```

	orde...	date	w	clie...	product_line		u...
0	N1	2021-06-01T00:00:00.000	North	Retail	Braking system	9	19.29
1	N2	2021-06-01T00:00:00.000	North	Retail	Suspension & traction	8	32.93
2	N3	2021-06-01T00:00:00.000	North	Wholesale	Frame & body	16	37.84
3	N4	2021-06-01T00:00:00.000	North	Wholesale	Suspension & traction	40	37.37
4	N5	2021-06-01T00:00:00.000	North	Retail	Frame & body	6	45.44
5	N6	2021-06-02T00:00:00.000	North	Retail	Frame & body	1	40.41
6	N7	2021-06-02T00:00:00.000	North	Retail	Miscellaneous	6	20.28
7	N8	2021-06-03T00:00:00.000	North	Retail	Electrical system	9	20.5
8	N9	2021-06-03T00:00:00.000	North	Retail	Suspension & traction	5	36.18
9	N10	2021-06-03T00:00:00.000	North	Retail	Electrical system	5	28.33
10	N11	2021-06-04T00:00:00.000	North	Retail	Suspension & traction	10	30.92
11	N12	2021-06-04T00:00:00.000	North	Retail	Electrical system	5	20.16
12	N13	2021-06-05T00:00:00.000	North	Wholesale	Electrical system	28	29.12
13	N14	2021-06-05T00:00:00.000	North	Retail	Electrical system	7	32.31
14	N15	2021-06-05T00:00:00.000	North	Wholesale	Suspension & traction	16	36.79
15	N16	2021-06-05T00:00:00.000	North	Retail	Suspension & traction	5	32.15

Rows: 1,000 Expand

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```sql
-- Start coding here
SELECT product_line,
    CASE WHEN EXTRACT(MONTH FROM date) = 6 THEN 'June'
     WHEN EXTRACT(MONTH FROM date) = 7 THEN 'July'
     WHEN EXTRACT(MONTH FROM date) = 8 THEN 'August'
    END AS month,
    warehouse,
    SUM(total) - SUM(payment_fee) AS net_revenue
FROM sales
    WHERE client_type = 'Wholesale'
    GROUP BY product_line, month, warehouse
    ORDER BY net_revenue DESC;
```

	product_line		w	net...
0	Engine	August	Central	9528.71
1	Frame & body	August	Central	8657.99
2	Suspension & traction	June	North	8065.74
3	Frame & body	August	North	7898.89
4	Engine	June	Central	6548.85
5	Suspension & traction	July	Central	6456.72
6	Frame & body	July	North	6154.61
7	Electrical system	July	Central	5577.62
8	Suspension & traction	August	Central	5416.7
9	Frame & body	June	Central	5111.34
10	Suspension & traction	August	North	4923.69
11	Frame & body	June	North	4910.12
12	Electrical system	August	North	4721.12
13	Braking system	July	Central	3778.65
14	Suspension & traction	July	North	3714.28
15	Braking system	June	Central	3684.89

Rows: 48 Expand