DESCRIPTION

Table: Sales

+-------------+-------+

| Column Name | Type |

+-------------+-------+

| sale_id | int |

| product_id | int |

| year | int |

| quantity | int |

| price | int |

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(sale_id, year) is the primary key (combination of columns with unique values) of this table.

product_id is a foreign key (reference column) to Product table.

Each row records a sale of a product in a given year.

A product may have multiple sales entries in the same year.

Note that the per-unit price.

Write a solution to find all sales that occurred in the **first year** each product was sold.

- For each product_id, identify the earliest year it appears in the Sales table.
- Return **all** sales entries for that product in that year.

Return a table with the following columns: **product_id**, **first_year**, **quantity,** and **price**.
Return the result in any order.

Example 1:

Input:

Sales table:

+---------+------------+------+----------+-------+

| sale_id | product_id | year | quantity | price |

+---------+------------+------+----------+-------+

| 1 | 100 | 2008 | 10 | 5000 |

| 2 | 100 | 2009 | 12 | 5000 |

| 7 | 200 | 2011 | 15 | 9000 |

+---------+------------+------+----------+-------+

Output:

+------------+------------+----------+-------+

| product_id | first_year | quantity | price |

+------------+------------+----------+-------+

| 100 | 2008 | 10 | 5000 |

| 200 | 2011 | 15 | 9000 |

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SOLUTION

MySQL:

- Select `product_id, year as first_year, quantity and price`
- Define the condition of the product by using WHERE and IN
- In a subquery, select product_id and the earliest year using MIN() and GROUP BY

```
SELECT product_id, year first_year, quantity, price
FROM Sales
WHERE (product_id, year) IN
(SELECT product_id, MIN(year)
FROM Sales
GROUP BY product_id)
```

PostgreSQL:

- Same approach as above

```
SELECT product_id, year first_year, quantity, price
FROM Sales s
WHERE (product_id, year) IN (SELECT product_id, MIN(year) first_year
FROM Sales
GROUP BY 1)
```