

GROUP BY Syntax

```
SELECT [columns to return]
FROM [table]
WHERE [conditional filter statements]
GROUP BY [columns to group on]
HAVING [conditional filter statements that are run after grouping]
ORDER BY [columns to sort on]
```

Question: Get a list of the customers who made purchases on each market date.

```
SELECT
    market_date,
    customer_id
FROM farmers_market.customer_purchases
GROUP BY market_date, customer_id
ORDER BY market_date, customer_id
```

Aggregate functions - SUM() and COUNT()

Question: Count the number of purchases each customer made per market date.

```
SELECT
    market_date,
    customer_id,
    COUNT(*) AS num_purchases
FROM farmers_market.customer_purchases
GROUP BY market_date, customer_id
ORDER BY market_date, customer_id
LIMIT 10
```

Alternate Question: Calculate the total quantity purchased by each customer per market_date.

Here, we'll use the SUM() function

```
SELECT
    market_date,
    customer_id,
    SUM(quantity) AS total_qty_purchased
FROM farmers_market.customer_purchases
GROUP BY market_date, customer_id
ORDER BY market_date, customer_id
LIMIT 10
```

Slightly complex question: how many different kinds of products were purchased by each customer on each market date:

Different kinds of products

```
SELECT
    market_date,
    customer_id,
    COUNT(DISTINCT product_id) AS different_products_purchased
FROM farmers_market.customer_purchases
GROUP BY market_date, customer_id
ORDER BY market_date;
```

Question: Calculate the total price paid by customer_id 3 per market_date.

```
SELECT
    customer_id,
    market_date,
    SUM(quantity * cost_to_customer_per_qty) AS total_spent
FROM farmers_market.customer_purchases
```

```
WHERE
```

```
customer_id = 3
```

```
GROUP BY market_date
```

```
ORDER BY market_date
```

Question: Find the most and least expensive product price per vendor_id in the vendor_inventory.

```
SELECT
```

```
vendor_id
```

```
MAX(original_price) AS most_expensive,
```

```
MIN(original_price) AS least_expensive
```

```
FROM `farmers_market.vendor_inventory`
```

```
GROUP BY vendor_id
```

```
HAVING most_expensive > 5
```