Group By and Aggregation continued

Agenda:

In today's session, we'll cover essential topics, including:-

- Problem Statement
- Group By
- COUNT(*) vs. COUNT(1)
- COUNT DISTINCT
- HAVING Clause
- HAVING vs. WHERE

Summary of Previous Lecture:

Problem Statement:

- Data Analyst at Amazon Fresh, studying the Farmer's Market.
- Dataset: Farmer's Market database.

Aggregate Functions:

- Used to perform calculations on groups of rows or summarize data.
- Common aggregate functions:
    - MIN(): Returns the minimum value of a column.
    - MAX(): Returns the maximum value of a column.
    - COUNT(): Returns the number of rows in a column.
    - SUM(): Returns the sum of values in a column.
    - AVG(): Returns the average of values in a column.

Aggregate Functions Examples :

1. Finding the Most and Least Expensive Items:

```
SELECT
MIN(original_price) AS min_price,
MAX(original_price) AS max_price
FROM farmers_market.vendor_inventory;
```

2. Average Quantity of Products Purchased:

```
SELECT
      AVG(quantity) AS avg_qty
FROM farmers_market.customer_purchases
```

```
WHERE market_date = '2019-05-01';
```

3. Total Revenue Generated:

```
SELECT
      SUM(quantity * cost_to_customer_per_quantity) AS
total_revenue
FROM farmers_market.customer_purchases;
```