PARTITION VS GROUP BY

This T-SQL code demonstrates how to use PARTITION BY Vs GROUP BY.

```
USE [EllensWorkDB]

CREATE TABLE EmployeeSales
   (ID int NOT NULL
   ,FirstName VARCHAR(25) NOT NULL
   ,LastName VARCHAR(25) NOT NULL
   ,Quantity int NOT NULL
        )

INSERT INTO EmployeeSales
    VALUES(1, 'arun', 'prasanth', 40),
          (1, 'arun', 'prasanth', 45),
          (1, 'arun', 'prasanth', 49),
          (2, 'ann', 'antony', 45),
          (2, 'ann', 'antony', 49),
          (3, 'sruthy','abc', 41),
          (6, 'new', 'abc', 47);


SELECT * FROM EmployeeSales
```

Id	FirstName	LastName	Quantity
1	arun	prasanth	40
2	ann	antony	45
3	sruthy	abc	41
6	new	abc	47
1	arun	prasanth	45
1	arun	prasanth	49
2	ann	antony	49

```
--Demonstrates GROUP BY:
SELECT FirstName, SUM(Quantity) AS TotalQuantity
FROM EmployeeSales
GROUP BY FirstName
```

Result:

FirstName	TotalQuantity
ann	94
arun	134
new	47
sruthy	41

```
--Demonstrates PARTITION BY:
SELECT FirstName, SUM(Quantity) OVER(PARTITION BY ID) AS TotalQuantity
FROM EmployeeSales
```

Result:

FirstName	TotalQuantity
arun	134
arun	134
arun	134
ann	94
ann	94
sruthy	41
new	47

```
--Demonstrates PARTITION BY with the DISTINCT keyword:
SELECT DISTINCT ID, FirstName, SUM(Quantity) OVER(PARTITION BY ID) AS TotalQuantity
FROM EmployeeSales
```

Result:

ID	FirstName	TotalQuantity
1	arun	134
2	ann	94
3	sruthy	41
6	new	47