

Example 1: Roll Up SQL Command

This command is used to perform hierarchical aggregation on the **Sales_257** table, summarizing by both **PRODUCT_ID** and **PRODUCT_NAME**. The **ROLLUP** operator generates subtotals and grand totals.

Sample Data

- **Sales_257 Table** | PRODUCT_ID | CUSTOMER_ID | QUANTITY | PRICE | |-----|-----|-----|-----| | 1 | 101 | 10 | 15 | | 1 | 102 | 5 | 15 | | 2 | 101 | 3 | 30 | | 2 | 103 | 8 | 30 |
- **Product_257 Table** | PRODUCT_ID | PRODUCT_NAME | |-----|-----| | 1 | Widget A | | 2 | Widget B |

SQL Command:

```
SELECT
  S.PRODUCT_ID,
  SUM(S.QUANTITY) AS TOTAL_QUANTITY,
  SUM(S.QUANTITY * P.PRICE) AS TOTAL_SALES
FROM
  Sales_257 S
  JOIN
    Product_257 P ON S.PRODUCT_ID = P.PRODUCT_ID
GROUP BY
  ROLLUP(S.PRODUCT_ID, P.PRODUCT_NAME);
```

Output:

PRODUCT_ID	PRODUCT_NAME	TOTAL_QUANTITY	TOTAL_SALES
1	Widget A	15	225
2	Widget B	11	330
NULL	NULL	26	555

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Explanation: The result shows:

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Total for each product.

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A subtotal of total quantity and sales across all products (NULL in both PRODUCT_ID and PRODUCT_NAME).

Example 2: Drill Down SQL Command

This command drills down the data by grouping `Sales_257` data by `PRODUCT_ID` and `CUSTOMER_ID`, displaying detailed information.

Sample Data

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Sales_257 Table | PRODUCT_ID | CUSTOMER_ID | QUANTITY | PRICE | |-----|-----|-----|-----| | 1 | 101 | 10 | 15 | | 1 | 102 | 5 | 15 | | 2 | 101 | 3 | 30 | | 2 | 103 | 8 | 30 |

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Customer_257 Table | CUSTOMER_ID | CUSTOMER_NAME | |-----|-----| | 101 | John Doe | | 102 | Jane Smith | | 103 | Bob Brown |

SQL Command:

```
SELECT
    S.PRODUCT_ID,
    C.CUSTOMER_ID,
    C.CUSTOMER_NAME,
    SUM(S.QUANTITY) AS TOTAL_QUANTITY
FROM
    Sales_257 S
JOIN
    Customer_257 C ON S.CUSTOMER_ID = C.CUSTOMER_ID
GROUP BY
    S.PRODUCT_ID, C.CUSTOMER_ID, C.CUSTOMER_NAME
ORDER BY
    S.PRODUCT_ID, C.CUSTOMER_ID;
```

Output:

PRODUCT_ID	CUSTOMER_ID	CUSTOMER_NAME	TOTAL_QUANTITY
1	101	John Doe	10
1	102	Jane Smith	5
2	101	John Doe	3
2	103	Bob Brown	8

- **Explanation:** The result shows each CUSTOMER_ID and CUSTOMER_NAME for each PRODUCT_ID, with the total quantity they purchased.

Example 3: Slice SQL Command

This command slices the Sales_257 table by filtering based on a specific PRODUCT_ID. In this case, it filters for PRODUCT_ID = 1.

SQL Command:

```
SELECT * FROM Sales_257 WHERE PRODUCT_ID = 1;
```

Output:

PRODUCT_ID	CUSTOMER_ID	QUANTITY	PRICE
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1	101	10	15
1	102	5	15

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Explanation: The result only shows the records where PRODUCT_ID = 1.