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MODULE 7 ASSIGNMENT 4

USING A DIMENSIONAL MODEL WITH THE SALECO DATA WAREHOUSE

1. **Write and execute the SQL command to list the total sales by region and customer. Your output should be sorted by region and customer.**

```
SELECT reg_id, s.cus_code, SUM(sale_units*sale_price) AS total_sales
FROM dwdaysalesfact s JOIN dwcustomer c ON s.cus_code = c.cus_code
GROUP BY reg_id, s.cus_code
ORDER BY reg_id, s.cus_code;
```

```
saleco_dw=> SELECT reg_id, s.cus_code, SUM(sale_units*sale_price) AS total_sales
saleco_dw-> FROM dwdaysalesfact s JOIN dwcustomer c ON s.cus_code = c.cus_code
saleco_dw-> GROUP BY reg_id, s.cus_code
saleco_dw-> ORDER BY reg_id, s.cus_code;
 reg_id | cus_code | total_sales
--------+----------+-------------
      1 |    10012 |      287.91
      1 |    10013 |       64.32
      2 |    10014 |      494.71
      2 |    10019 |       39.95
      3 |    10010 |      180.26
      3 |    10011 |      130.89
      3 |    10015 |      325.82
      3 |    10016 |      179.22
      4 |    10017 |      419.66
      4 |    10018 |      129.32
(10 rows)
```

2. **Write and execute the SQL command to list the total sales by customer, month and product.**

```
SELECT s.cus_code, d.tm_month, s.p_code, SUM(sale_units * sale_price) AS total_sales
FROM dwdaysalesfact s JOIN dwcustomer c ON s.cus_code = c.cus_code
JOIN dwtime d ON s.tm_id = d.tm_id
JOIN dwproduct p ON s.p_code = p.p_code
GROUP BY s.cus_code, d.tm_month, s.p_code
ORDER BY s.cus_code, d.tm_month, s.p_code;
```

```
saleco_dw=> SELECT s.cus_code, d.tm_month, s.p_code, SUM(sale_units * sale_price) AS total_sales
saleco_dw-> FROM dwdaysalesfact s JOIN dwcustomer c ON s.cus_code = c.cus_code
saleco_dw-> JOIN dwtime d ON s.tm_id = d.tm_id
saleco_dw-> JOIN dwproduct p ON s.p_code = p.p_code
saleco_dw-> GROUP BY s.cus_code, d.tm_month, s.p_code
saleco_dw-> ORDER BY s.cus_code, d.tm_month, s.p_code;
 cus_code | tm_month |  p_code  | total_sales
----------+----------+----------+-------------
    10010 |       10 | 13-Q2/P2 |       74.95
    10010 |       10 | 23109-HB |       19.90
    10010 |       10 | 54778-2T |       14.97
    10010 |       10 | PVC23DRT |       70.44
    10011 |       10 | 2232/QTY |      109.92
    10011 |       10 | SM-18277 |       20.97
    10012 |        9 | SM-18277 |       20.97
    10012 |       10 | 23109-HB |        9.95
    10012 |       10 | 89-WRE-Q |      256.99
    10013 |       10 | 13-Q2/P2 |       29.98
    10013 |       10 | 54778-2T |        4.99
    10013 |       10 | PVC23DRT |       29.35
    10014 |        9 | 13-Q2/P2 |       14.99
    10014 |        9 | 2232/QTY |      109.92
    10014 |        9 | 23109-HB |        9.95
    10014 |       10 | WR3/TT3  |      359.85
    10015 |        9 | 2238/QPD |       38.95
    10015 |        9 | 23109-HB |        9.95
    10015 |        9 | 54778-2T |        9.98
    10015 |        9 | 89-WRE-Q |      256.99
    10015 |       10 | 23109-HB |        9.95
    10016 |        9 | 13-Q2/P2 |      104.93
    10016 |        9 | 1546-QQ2 |       39.95
    10016 |        9 | 54778-2T |        4.99
    10016 |        9 | PVC23DRT |       29.35
    10017 |        9 | 13-Q2/P2 |       14.99
    10017 |        9 | 23109-HB |       29.85
    10017 |        9 | 54778-2T |       14.97
    10017 |        9 | WR3/TT3  |      359.85
    10018 |        9 | 2238/QPD |       38.95
    10018 |        9 | 23109-HB |        9.95
    10018 |        9 | 54778-2T |        9.98
    10018 |        9 | PVC23DRT |       70.44
    10019 |        9 | 1546-QQ2 |       39.95
(34 rows)
```

3. **Write and execute the SQL command to list the total sales by customer and by product.**

SELECT s.cus_code, s.p_code, SUM(sale_units * sale_price) AS total_sales

FROM dwdaysalesfact s JOIN dwcustomer c ON s.cus_code = c.cus_code

JOIN dwproduct d ON s.p_code = d.p_code

GROUP BY s.cus_code, s.p_code

ORDER BY s.cus_code, s.p_code;

```
saleco_dw=> SELECT s.cus_code, s.p_code, SUM(sale_units * sale_price) AS total_sales
saleco_dw-> FROM dwdaysalesfact s JOIN dwcustomer c ON s.cus_code = c.cus_code
saleco_dw-> JOIN dwproduct d ON s.p_code = d.p_code
saleco_dw-> GROUP BY s.cus_code, s.p_code
saleco_dw-> ORDER BY s.cus_code, s.p_code;
 cus_code |  p_code  | total_sales
----------+----------+-------------
    10010 | 13-Q2/P2 |       74.95
    10010 | 23109-HB |       19.90
    10010 | 54778-2T |       14.97
    10010 | PVC23DRT |       70.44
    10011 | 2232/QTY |      109.92
    10011 | SM-18277 |       20.97
    10012 | 23109-HB |        9.95
    10012 | 89-WRE-Q |      256.99
    10012 | SM-18277 |       20.97
    10013 | 13-Q2/P2 |       29.98
    10013 | 54778-2T |        4.99
    10013 | PVC23DRT |       29.35
    10014 | 13-Q2/P2 |       14.99
    10014 | 2232/QTY |      109.92
    10014 | 23109-HB |        9.95
    10014 | WR3/TT3  |      359.85
    10015 | 2238/QPD |       38.95
    10015 | 23109-HB |       19.90
    10015 | 54778-2T |        9.98
    10015 | 89-WRE-Q |      256.99
    10016 | 13-Q2/P2 |      104.93
    10016 | 1546-QQ2 |       39.95
    10016 | 54778-2T |        4.99
    10016 | PVC23DRT |       29.35
    10017 | 13-Q2/P2 |       14.99
    10017 | 23109-HB |       29.85
    10017 | 54778-2T |       14.97
    10017 | WR3/TT3  |      359.85
    10018 | 2238/QPD |       38.95
    10018 | 23109-HB |        9.95
    10018 | 54778-2T |        9.98
    10018 | PVC23DRT |       70.44
    10019 | 1546-QQ2 |       39.95
(33 rows)
```

4. **Write and execute the SQL command to list the total sales by month and product category. Your output should be sorted by month and product category.**

SELECT tm_month, p_category, SUM(sale_units * sale_price) AS total_sales

FROM dwdaysalesfact s JOIN dwproduct p ON s.p_code = p.p_code

JOIN dwtime t on s.tm_id = t.tm_id

GROUP BY tm_month, p_category

ORDER BY tm_month, p_category;

```
saleco_dw=> SELECT tm_month, p_category, SUM(sale_units * sale_price) AS total_sales
saleco_dw-> FROM dwdaysalesfact s JOIN dwproduct p ON s.p_code = p.p_code
saleco_dw-> JOIN dwtime t on s.tm_id = t.tm_id
saleco_dw-> GROUP BY tm_month, p_category
saleco_dw-> ORDER BY tm_month, p_category;
 tm_month | p_category | total_sales
----------+------------+-------------
        9 | CAT1       |      174.83
        9 | CAT2       |      446.81
        9 | CAT3       |      537.54
        9 | CAT4       |       80.67
       10 | CAT1       |      124.89
       10 | CAT2       |      366.91
       10 | CAT3       |      459.64
       10 | CAT4       |       60.77
(8 rows)
```

5. **Write and execute the SQL command to list the number of product sales (number of rows) and total sales by month. Your output should be sorted by month.**

SELECT tm_month, COUNT(s.p_code) AS prod_count, SUM(sale_units * sale_price) AS total_sales

FROM dwdaysalesfact s JOIN dwproduct p ON s.p_code = p.p_code JOIN dwtime t ON s.tm_id = t.tm_id

GROUP BY tm_month

ORDER BY tm_month;

```
saleco_dw=> SELECT tm_month, COUNT(s.p_code) AS prod_count, SUM(sale_units * sale_price) AS total_sales
saleco_dw-> FROM dwdaysalesfact s JOIN dwproduct p ON s.p_code = p.p_code JOIN dwtime t ON s.tm_id = t.tm_id
saleco_dw-> GROUP BY tm_month
saleco_dw-> ORDER BY tm_month;
 tm_month | prod_count | total_sales
----------+------------+-------------
        9 |         23 |     1239.85
       10 |         13 |     1012.21
(2 rows)
```

6. **Write and execute the SQL command to list the number of product sales and total sales by month and product category. Your output should be sorted by month and product category.**

SELECT tm_month, p_category, COUNT(*) AS prod_count, SUM(sale_units * sale_price) AS total_sales
FROM dwdaysalesfact s JOIN dwproduct p ON s.p_code = p.p_code
JOIN dwtime t on s.tm_id = t.tm_id
GROUP BY tm_month, p_category
ORDER BY tm_month, p_category;

```
saleco_dw=> SELECT tm_month, p_category, COUNT(*) AS prod_count, SUM(sale_units * sale_price) AS total_sales
saleco_dw-> FROM dwdaysalesfact s JOIN dwproduct p ON s.p_code = p.p_code
saleco_dw-> JOIN dwtime t on s.tm_id = t.tm_id
saleco_dw-> GROUP BY tm_month, p_category
saleco_dw-> ORDER BY tm_month, p_category;
 tm_month | p_category | prod_count | total_sales
----------+------------+------------+-------------
        9 | CAT1       |          8 |      174.83
        9 | CAT2       |          4 |      446.81
        9 | CAT3       |          5 |      537.54
        9 | CAT4       |          6 |       80.67
       10 | CAT1       |          4 |      124.89
       10 | CAT2       |          2 |      366.91
       10 | CAT3       |          3 |      459.64
       10 | CAT4       |          4 |       60.77
(8 rows)
```

7. **Write and execute the SQL command to list the number of product sales (number of rows) and total sales by month, product category and product. Your output should be sorted by month, product category and product.**

SELECT tm_month, p_category, s.p_code, COUNT(*) AS prod_count, SUM(sale_units * sale_price) AS total_sales

FROM dwdaysalesfact s JOIN dwproduct p ON s.p_code = p.p_code

JOIN dwtime t ON s.tm_id = t.tm_id

GROUP BY tm_month, p_category, s.p_code

ORDER BY tm_month, p_category, s.p_code;

```
saleco_dw=> SELECT tm_month, p_category, s.p_code, COUNT(*) AS prod_count, SUM(sale_units * sale_price) AS total_sale
saleco_dw-> FROM dwdaysalesfact s JOIN dwproduct p ON s.p_code = p.p_code
saleco_dw-> JOIN dwtime t ON s.tm_id = t.tm_id
saleco_dw-> GROUP BY tm_month, p_category, s.p_code
saleco_dw-> ORDER BY tm_month, p_category, s.p_code;
 tm_month | p_category |  p_code  | prod_count | total_sales
----------+------------+----------+------------+-------------
        9 | CAT1       | 13-Q2/P2 |          4 |      134.91
        9 | CAT1       | 54778-2T |          4 |       39.92
        9 | CAT2       | 1546-QQ2 |          2 |       79.90
        9 | CAT2       | 2232/QTY |          1 |      109.92
        9 | CAT2       | 89-WRE-Q |          1 |      256.99
        9 | CAT3       | 2238/QPD |          2 |       77.90
        9 | CAT3       | PVC23DRT |          2 |       99.79
        9 | CAT3       | WR3/TT3  |          1 |      359.85
        9 | CAT4       | 23109-HB |          5 |       59.70
        9 | CAT4       | SM-18277 |          1 |       20.97
       10 | CAT1       | 13-Q2/P2 |          2 |      104.93
       10 | CAT1       | 54778-2T |          2 |       19.96
       10 | CAT2       | 2232/QTY |          1 |      109.92
       10 | CAT2       | 89-WRE-Q |          1 |      256.99
       10 | CAT3       | PVC23DRT |          2 |       99.79
       10 | CAT3       | WR3/TT3  |          1 |      359.85
       10 | CAT4       | 23109-HB |          3 |       39.80
       10 | CAT4       | SM-18277 |          1 |       20.97
(18 rows)
```