Shishir Rajendrakumar Deshpande
MSDS 420 - Assignment 2

Queries and responses generated by PSQL Server

SETUP of server and connection:

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.

```
saleco_dw=> SELECT REG_ID, S.CUS_CODE, SUM(SALE_UNITS*SALE_PRICE) AS TOTSALES
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 | totsales
--------+----------+----------
      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.

```
saleco_dw=> SELECT TM_MONTH, DWDAYSALESFACT.CUS_CODE, DWDAYSALESFACT.P_CODE, SUM(SALE_UNITS*SALE_PRICE) AS TOTSALES
FROM DWDAYSALESFACT JOIN DWTIME on DWDAYSALESFACT.TM_ID = DWTIME.TM_ID
GROUP BY TM_MONTH, DWDAYSALESFACT.CUS_CODE, DWDAYSALESFACT.P_CODE
ORDER BY TM_MONTH, DWDAYSALESFACT.CUS_CODE;
 tm_month | cus_code |  p_code   | totsales
----------+----------+-----------+----------
        9 |    10012 | SM-18277  |    20.97
        9 |    10014 | 13-Q2/P2  |    14.99
        9 |    10014 | 2232/QTY  |   109.92
        9 |    10014 | 23109-HB  |     9.95
        9 |    10015 | 2238/QPD  |    38.95
        9 |    10015 | 23109-HB  |     9.95
        9 |    10015 | 54778-2T  |     9.98
        9 |    10015 | 89-WRE-Q  |   256.99
        9 |    10016 | 13-Q2/P2  |   104.93
        9 |    10016 | 1546-QQ2  |    39.95
        9 |    10016 | 54778-2T  |     4.99
        9 |    10016 | PVC23DRT  |    29.35
        9 |    10017 | 13-Q2/P2  |    14.99
        9 |    10017 | 23109-HB  |    29.85
        9 |    10017 | 54778-2T  |    14.97
        9 |    10017 | WR3/TT3   |   359.85
        9 |    10018 | 2238/QPD  |    38.95
        9 |    10018 | 23109-HB  |     9.95
        9 |    10018 | 54778-2T  |     9.98
        9 |    10018 | PVC23DRT  |    70.44
        9 |    10019 | 1546-QQ2  |    39.95
       10 |    10010 | 13-Q2/P2  |    74.95
       10 |    10010 | 23109-HB  |    19.90
       10 |    10010 | 54778-2T  |    14.97
       10 |    10010 | PVC23DRT  |    70.44
       10 |    10011 | 2232/QTY  |   109.92
       10 |    10011 | SM-18277  |    20.97
       10 |    10012 | 23109-HB  |     9.95
       10 |    10012 | 89-WRE-Q  |   256.99
       10 |    10013 | 13-Q2/P2  |    29.98
       10 |    10013 | 54778-2T  |     4.99
       10 |    10013 | PVC23DRT  |    29.35
       10 |    10014 | WR3/TT3   |   359.85
       10 |    10015 | 23109-HB  |     9.95
(34 rows)
saleco_dw=>
```

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

```
                ^
saleco_dw=> SELECT DWDAYSALESFACT.CUS_CODE, DWDAYSALESFACT.P_CODE, SUM(SALE_UNITS*SALE_PRICE) AS TOTSALES
FROM DWDAYSALESFACT GROUP BY DWDAYSALESFACT.CUS_CODE, DWDAYSALESFACT.P_CODE
ORDER by DWDAYSALESFACT.CUS_CODE;
 cus_code |  p_code   | totsales
----------+-----------+----------
    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)

saleco_dw=> ^C
saleco_dw=>
```

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.

```
saleco_dw=> SELECT TM_MONTH, P_CATEGORY, SUM(SALE_UNITS*SALE_PRICE) AS TOTSALES
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, P_CATEGORY
saleco_dw-> ORDER BY  TM_MONTH, P_CATEGORY;
 tm_month | p_category | totsales
----------+------------+----------
        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)
```

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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.

```
saleco_dw=> SELECT
saleco_dw->     DWTIME.TM_MONTH,
saleco_dw->     COUNT(DWDAYSALESFACT.SALE_UNITS) AS NUMBER_OF_PRODUCT_SALES,
saleco_dw->     SUM(DWDAYSALESFACT. SALE_UNITS * DWDAYSALESFACT.SALE_PRICE) AS TOTSALES
saleco_dw-> FROM
saleco_dw->     DWDAYSALESFACT
saleco_dw-> INNER JOIN
saleco_dw->     DWTIME
saleco_dw-> ON
saleco_dw->     DWDAYSALESFACT.TM_ID = DWTIME.TM_ID
saleco_dw-> GROUP BY
saleco_dw->     DWTIME.TM_MONTH
saleco_dw-> ORDER BY
saleco_dw->     DWTIME. TM_MONTH;
 tm_month | number_of_product_sales | totsales
----------+-------------------------+----------
        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.

```
saleco_dw=> SELECT
saleco_dw->     DWTIME.TM_MONTH AS MONTH,
saleco_dw->     DWPRODUCT.P_CATEGORY AS PRODUCT_CATEGORY,
saleco_dw->     COUNT(DWDAYSALESFACT.SALE_UNITS) AS NUMBER_OF_PRODUCT_SALES,
saleco_dw->     SUM(DWDAYSALESFACT.SALE_UNITS * DWDAYSALESFACT.SALE_PRICE) AS TOTSALES
saleco_dw-> FROM
saleco_dw->     DWDAYSALESFACT
saleco_dw-> JOIN
saleco_dw->     DWTIME ON DWDAYSALESFACT.TM_ID = DWTIME.TM_ID
saleco_dw-> JOIN
saleco_dw->     DWPRODUCT ON DWDAYSALESFACT.P_CODE = DWPRODUCT.P_CODE
saleco_dw-> GROUP BY
saleco_dw->     DWTIME.TM_MONTH, DWPRODUCT.P_CATEGORY
saleco_dw-> ORDER BY
saleco_dw->     DWTIME.TM_MONTH, DWPRODUCT.P_CATEGORY;
 month | product_category | number_of_product_sales | totsales
-------+------------------+-------------------------+----------
     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)
```

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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.

```
saleco_dw=> SELECT
    DWTIME.TM_MONTH AS MONTH,
    DWPRODUCT.P_CATEGORY AS PRODUCT_CATEGORY, DWPRODUCT.P_CODE,
    COUNT(DWDAYSALESFACT.SALE_UNITS) AS NUMBER_OF_PRODUCT_SALES,
    SUM(DWDAYSALESFACT.SALE_UNITS * DWDAYSALESFACT.SALE_PRICE) AS TOTSALES
FROM
    DWDAYSALESFACT
JOIN
    DWTIME ON DWDAYSALESFACT.TM_ID = DWTIME.TM_ID
JOIN
    DWPRODUCT ON DWDAYSALESFACT.P_CODE = DWPRODUCT.P_CODE
GROUP BY
    DWTIME.TM_MONTH, DWPRODUCT.P_CATEGORY, DWPRODUCT.P_CODE
ORDER BY
    DWTIME.TM_MONTH, DWPRODUCT.P_CATEGORY, DWPRODUCT.P_CODE;
 month | product_category |  p_code   | number_of_product_sales | totsales
-------+------------------+-----------+-------------------------+----------
     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)

saleco_dw=> ^C
saleco_dw=>
```