

Shishir Rajendrakumar Deshpande

MSDS 420 - Assignment 2

Queries and responses generated by PSQL Server

SETUP of server and connection:

```
jdu9407@spselastic10:~  
login as: jdu9407  
Pre-authentication banner message from server:  
#####  
|  
| Please log in with your NetID in lowercase letters (e.g. abc123 not ABC123)  
|  
| #####  
End of banner message from server  
jdu9407@129.105.248.25's password:  
[jdu9407@spselastic10 ~]$ psql -h 129.105.248.26 -U jdu9407 -d postgres  
psql (10.14, server 10.15)  
Type "help" for help.
```

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.

```
jdu9407@spselastic10:~  
saleco_dw=> SELECT REG_ID, S.CUS_CODE, SUM(SALE_UNITS*SALE_PRICE) AS TOTSALES  
saleco_dw-> FROM DWDAWSALESFACT 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.

```
jdu9407@spselastic10:~  
saleco_dw=> SELECT TM_MONTH, DWDAWSALESFACT.CUS_CODE, DWDAWSALESFACT.P_CODE, SUM(SALE_UNITS*SALE_PRICE) AS TOTSALES  
FROM DWDAWSALESFACT JOIN DWTIME ON DWDAWSALESFACT.TM_ID = DWTIME.TM_ID  
GROUP BY TM_MONTH, DWDAWSALESFACT.CUS_CODE, DWDAWSALESFACT.P_CODE  
ORDER BY TM_MONTH, DWDAWSALESFACT.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/PTY | 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 | FVC23DRT | 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 | FVC23DRT | 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 | FVC23DRT | 70.44  
10 | 10011 | 2232/PTY | 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 | FVC23DRT | 29.35  
10 | 10014 | WR3/TT3 | 359.85  
10 | 10015 | 23109-HB | 9.95  
(34 rows)  
saleco_dw=>
```

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

```
jdu9407@spselastic10:~  
^  
saleco_dw=> SELECT DWDAYSALSAFACT.CUS_CODE, DWDAYSALSAFACT.P_CODE, SUM(SALE_UNITS*SALE_PRICE) AS TOTSALES  
FROM DWDAYSALSAFACT GROUP BY DWDAYSALSAFACT.CUS_CODE, DWDAYSALSAFACT.P_CODE  
ORDER BY DWDAYSALSAFACT.CUS_CODE;  
  cus_code | p_code | totalsales  
-----+-----+-----  
  10010 | 13-Q2/P2 | 74.95  
  10010 | 23109-HB | 19.90  
  10010 | 54778-2T | 14.97  
  10010 | PVC23DRT | 70.44  
  10011 | 2232/PTY | 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/PTY | 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.

```
jdu9407@spselastic10:~  
saleco_dw=> SELECT TM_MONTH, P_CATEGORY, SUM(SALE_UNITS*SALE_PRICE) AS TOTSALES  
saleco_dw-> FROM DWDAYSALSAFACT 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 | totalsales  
-----+-----+-----  
      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.

```
jdu9407@spselastic10:~
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 | totalsales
-----+-----+-----
          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.

```
jdu9407@spselastic10:~
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 | totalsales
-----+-----+-----+-----
          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.

```
jdu9407@spselastic10:~  
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 | totalsales  
-----+-----+-----+-----+-----  
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=> 
```