# Task 2: Walmart sales analysis

**ANIKET KUMAR** 



#### PROBLEM STATEMENT

- 1. Retrieve all columns for sales made in a specific branch (e.g., Branch 'A').
- 2. Find the total sales for each product line.
- 3. List all sales transactions where the payment method was 'Cash'.
- 4. Calculate the total gross income generated in each city.
- 5. Find the average rating given by customers in each branch.
- 6. Determine the total quantity of each product line sold.
- 7. List the top 5 products by unit price.
- 8. Find sales transactions with a gross income greater than 30.
- 9. Retrieve sales transactions that occurred on weekends.
- 10. Calculate the total sales and gross income for each month.
- 11. Find the number of sales transactions that occurred after 6 PM.
- 12. List the sales transactions that have a higher total than the average total of all transactions.
- 13. Calculate the cumulative gross income for each branch by date. 15. Find the total cogs for each customer type in each city.



#### **Dataset:**

- The dataset consists of the following columns:
- Invoice\_ID: Unique identifier for each invoice.
- Branch: Branch of the store where the sale took place.
- City: City where the store branch is located.
- Customer\_type: Type of customer (e.g., Member, Normal).
- Gender: Gender of the customer.
- Product\_line: Category of the product sold.
- Unit\_price: Price per unit of the product.
- Quantity: Quantity of the product sold.
- Tax\_5%: Tax applied on the sale.
- Total: Total amount of the sale.
- Date: Date of the transaction.
- Time: Time of the transaction.
- Payment: Payment method used (e.g., Cash, Credit Card).
- cogs: Cost of goods sold.
- gross\_margin\_percentage: Gross margin percentage.
- gross\_income: Gross income from the sale.
- Rating: Customer rating for the purchase.



```
66
      --- 1. Retrieve all columns for sales made in a specific branch (e.g., Branch 'A').------
68
      SELECT * FROM walmart
69
      WHERE branch = 'A';
71
72
Data Output Messages
                           Notifications
       invoice_id
                                                                                                                             product_line
                                                                               customer_type
                                                                                                                                                     unit_price
                                                                                                      gender
                                                                                                                                                                                   tax_5p
                                                                                                                                                    double precision
      [PK] character varying (15)
                                                                               character varying (10)
                                                                                                      character varying (10)
                                                                                                                             character varying (50)
                                  character varying (5)
                                                        character varying (15)
       750-67-8428
                                                                                                                              Health and beauty
                                                                               Member
                                                                                                       Female
                                                                                                                                                                74.69
                                                        Yangon
                                                                                                                             Home and lifestyle
       631-41-3108
2
                                                        Yangon
                                                                               Normal
                                                                                                      Male
                                                                                                                                                                 46.33
3
       123-19-1176
                                                                                                                             Health and beauty
                                                        Yangon
                                                                               Member
                                                                                                      Male:
                                                                                                                                                                58.22
                                                                                                                              Sports and travel
       373-73-7910
                                  A
                                                        Yangon
                                                                               Normal
                                                                                                      Male
                                                                                                                                                                86,31
       355-53-5943
                                                                               Member
                                                                                                      Female
                                                                                                                              Electronic accessories
                                                                                                                                                                68.84
                                                        Yangon
       665-32-9167
                                                                               Member
                                                                                                      Female
                                                                                                                              Health and beauty
                                                                                                                                                                36.26
                                                        Yangon
       265 64 0515
                                                        Vangan
                                                                               Mormal
                                                                                                      Eamala
                                                                                                                                                                AC OF
                                                                                                                              Electronia accompanion
 Total rows: 340 of 340
                          Query complete 00:00:00.626
                                                          Ln 77, Col 1
```

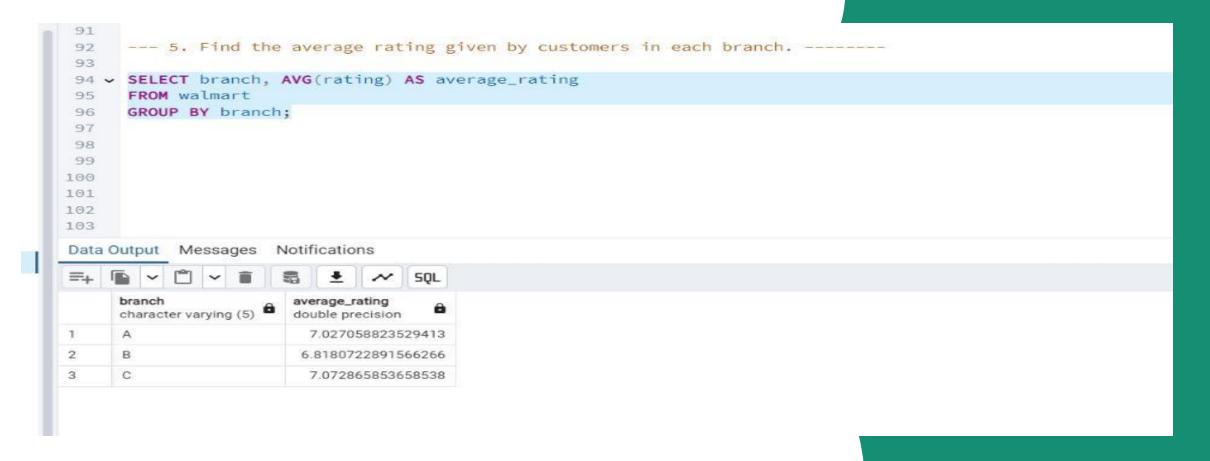
```
12
      --- 2. Find the total sales for each product line.---
73

→ SELECT product_line, SUM(total) AS total_sales

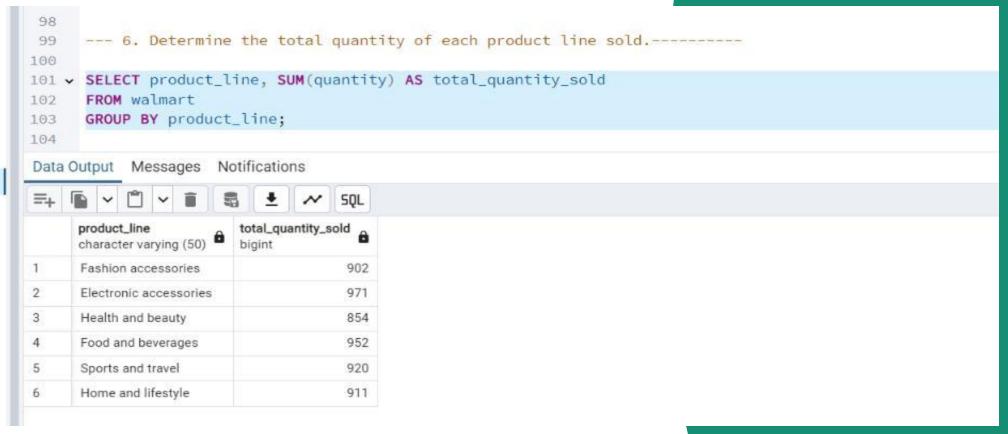
      FROM walmart
75
      GROUP BY product_line;
76
77
78
                         Notifications
Data Output
             Messages
                                          5QL
      product_line
                             total_sales
      character varying (50)
                                              8
                             double precision
1
       Fashion accessories
                              54306.0300000000006
2
       Electronic accessories
                               54337.640000000001
       Health and beauty
3
                               49193.840000000002
4
       Food and beverages
                              56144.960000000014
5
       Sports and travel
                               55123.000000000001
       Home and lifestyle
                               53861.960000000003
6
```

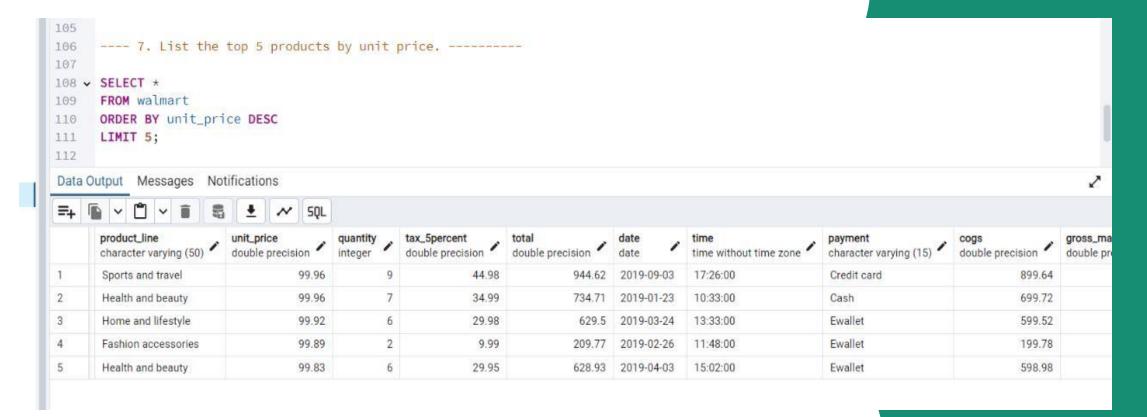
```
79
      --- 3. List all sales transactions where the payment method was 'Cash'.-----
81
      SELECT * FROM walmart
      WHERE payment = 'Cash';
84
85
Data Output Messages Notifications
        product_line
                                                            double precision
       character varying (50)
                              double precision
                                                                                                                                                           double precision
                                                                              double precision
                                                                                                                                     character varying (15)
                                                                                                             time without time zone
        Electronic accessories
                                          15.28
                                                         5
                                                                         3.82
                                                                                                 2019-08-03
                                                                                                              10:29:00
                                                                                                                                     Cash
                                                                                                                                                                        76.4
                                                                                                 2019-09-03
                                                                                                                                                                      102.04
2
        Electronic accessories
                                          25.51
                                                                          5.1
                                                                                                              17:03:00
                                                                                                                                     Cash
3
        Health and beauty
                                                                                                 2019-03-29
                                          71.38
                                                        10
                                                                        35.69
                                                                                                              19:21:00
                                                                                                                                     Cash
                                                                                                                                                                       713.8
4
        Sports and travel
                                          93.72
                                                         6
                                                                        28.12
                                                                                                 2019-01-15
                                                                                                             16:19:00
                                                                                                                                                                      562.32
                                                                                                                                     Cash
5
        Fashion accessories
                                          33.52
                                                                                                 2019-08-02
                                                                                                              15:31:00
                                                                        1.68
                                                                                                                                     Cash
                                                                                                                                                                       33.52
                                          88.36
                                                                        22.09
                                                                                                                                                                       441.8
6
        Food and beverages
                                                         5
                                                                                         463.89
                                                                                                 2019-01-25
                                                                                                              19:48:00
                                                                                                                                     Cash
7
        Health and beauty
                                          24 00
                                                         0
                                                                         11.7
                                                                                         205 21
                                                                                                 2010 02 15
                                                                                                            15-26-00
                                                                                                                                     Cach
                                                                                                                                                                      224 01
```

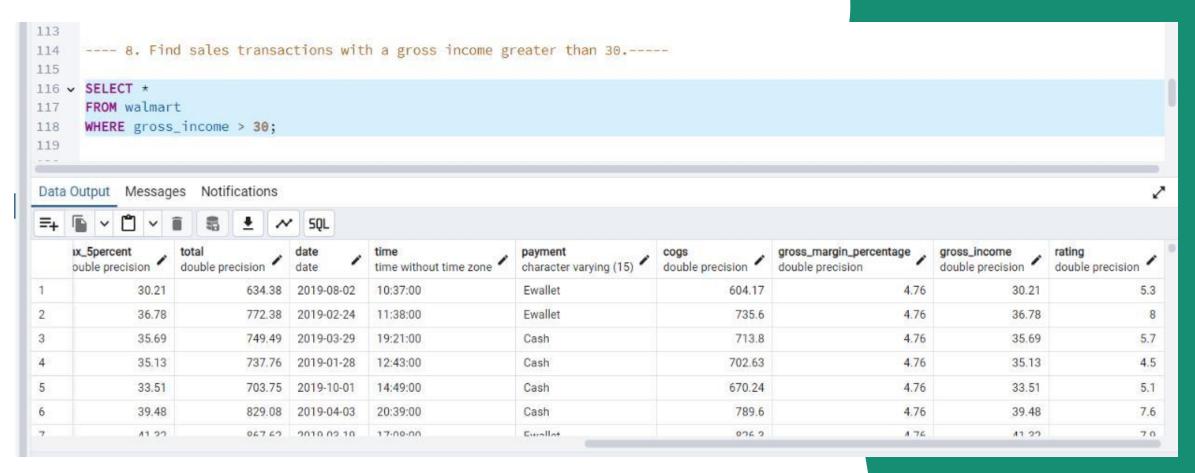
```
--- 4. Calculate the total gross income generated in each city. ----
86
     SELECT city, SUM(gross_income) AS total_gross_income
      FROM walmart
88
      GROUP BY city;
90
Data Output Messages
                      Notifications
                         total_gross_income
     character varying (15)
                         double precision
     Yangon
                           5057.359999999999
     Naypyitaw
                           5265.3300000000003
     Mandalay
                           5057.359999999995
```

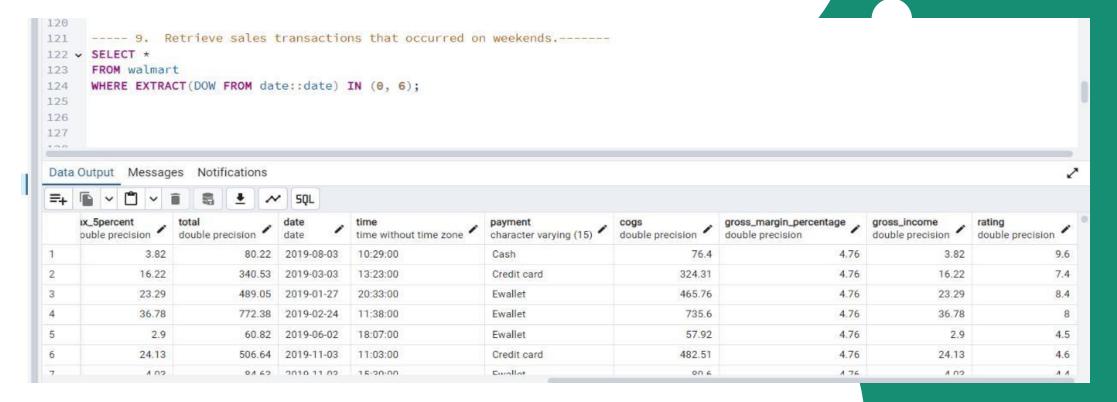












```
126
       --- 10. Calculate the total sales and gross income for each month.----
127
128
129 V SELECT
130
            DATE_TRUNC('month', date::date) AS month,
            SUM(total) AS total_sales,
131
            SUM(gross_income) AS total_gross_income
132
133
       FROM walmart
134
       GROUP BY month
135
       ORDER BY month;
136
                         Notifications
             Messages
Data Output
                                                    total_gross_income
      month
                               total_sales
      timestamp with time zone
                               double precision
                                                    double precision
1
       2019-01-01 00:00:00+05:30
                                          86562.76
                                                                4122.22
       2019-02-01 00:00:00+05:30
                                63169.870000000024
                                                      3008.210000000001
       2019-03-01 00:00:00+05:30
                                 72749.40000000005
                                                      3464,399999999999
       2019-04-01 00:00:00+05:30
                                 7957.649999999998
                                                     378.960000000000004
       2019-05-01 00:00:00+05:30
                                12798.720000000001
                                                                 609.49
       2019-06-01 00:00:00+05:30
                                 9612.259999999998
                                                     457.760000000000005
                                                                 547.66
       2019-07-01 00:00:00+05:30
                                11500.720000000003
```

```
137
      --- 11. Find the number of sales transactions that occurred after 6 PM.----
138
139
      SELECT COUNT(*) AS number_of_transactions_after_6pm
      FROM walmart
141
      WHERE "time"::time > '18:00:00';
142
143
144
Data Output Messages Notifications
     number_of_transactions_after_6pm
     bigint
```

```
---- 12. List the sales transactions that have a higher total than the average total of all transactions. -----

→ SELECT *
    FROM walmart
   WHERE total > (SELECT AVG(total) FROM walmart);
a Output Messages Notifications
                                                                                                                             payment cogs double precision
                                                      double precision double precision date
   character varying (50)
                         double precision
    Health and beauty
                                     74.69
                                                                  26.14
                                                                                                       13:08:00
                                                                                                                             Ewallet
                                                                                                                                                             522.83
    Home and lifestyle
                                     46.33
                                                                                                       13:23:00
                                                                                                                             Credit card
                                                                                                                                                             324.31
                                                                  16.22
    Health and beauty
                                                                                                                             Ewallet
                                                                                                                                                             465.76
                                     58.22
                                                                  23.29
                                                                                          2019-01-27
                                                                                                       20:33:00
                                                                                                                             Ewallet
    Sports and travel
                                     86.31
                                                                  30.21
                                                                                          2019-08-02
                                                                                                       10:37:00
                                                                                                                                                             604.17
    Electronic accessories
                                     85.39
                                                                  29.89
                                                                                          2019-03-25
                                                                                                       18:30:00
                                                                                                                             Ewallet
                                                                                                                                                             597.73
    Flectronic accessories
                                     68.84
                                                                  20.65
                                                                                                       14:36:00
                                                                                                                             Ewallet
                                                                                                                                                             413.04
    Home and lifectule
                                                   10
                                                                                                                             Emallat
                                     70 56
                                                                  26 70
                                                                                  772 20 2010 02 24 11-20-00
                                                                                                                                                              7256
```

```
LOZ
      --- 13. Calculate the cumulative gross income for each branch by date.----
154
155 ~ SELECT
156
           branch.
           date::date,
157
           SUM(gross_income) OVER (PARTITION BY branch ORDER BY date::date) AS cumulative_gross_income
158
159
       FROM walmart
      ORDER BY branch, date::date;
160
161
162
163
       ----- 14. Find the total cogs for each customer type in each city.---
164
Data Output Messages
                       Notifications
                                      SQL
                                    cumulative_gross_income
      branch
                                     double precision
      character varying (5)
                         date
                         2019-01-01
1
      A
                                          112,9199999999999
2
                         2019-01-01
      A
                                         112.91999999999999
3
      A
                         2019-01-01
                                         112.91999999999999
4
      A
                         2019-01-01
                                         112,9199999999999
5
      A
                         2019-01-01
                                         112.91999999999999
      A
                         2019-01-02
                                          156.34999999999997
7
      A
                         2019-01-02
                                         156.34999999999997
```

```
---- 14. Find the total cogs for each customer type in each city.---
164
165
166 V SELECT
            city,
167
168
            customer_type,
169
            SUM(cogs) AS total_cogs
       FROM walmart
170
171
       GROUP BY city, customer_type
       ORDER BY city, customer_type;
172
173
174
175
176
177
178
179
            Messages
                        Notifications
Data Output
                                        SQL
                                                total_cogs
                           customer_type
                           character varying (10)
      character varying (15)
                                                double precision
1
      Mandalay
                           Member
                                                 51147.320000000014
2
      Mandalay
                           Normal
                                                  49993.32000000001
3
      Naypyitaw
                           Member
                                                 54172.650000000016
4
      Naypyitaw
                           Normal
                                                  51130.87999999999
5
      Yangon
                           Member
                                                  51083.30999999997
6
                           Normal
                                                 50059.899999999994
      Yangon
```



#### THANK YOU