

# WALMART



## DATA ANALYSIS

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Batch: **MIP-DA-13**





# Objective

To analyse and derive insights from Walmart's sales data to improve business decision-making processes.



# 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.



# Sales Analysis

01

Retrieve all columns for sales made in a specific branch (e.g., Branch 'A').

```
create database Walmart;  
use Walmart;
```

```
SELECT * FROM w_sales
```

```
WHERE Branch = 'A'
```

| Branch | City   | Customer_type | Gender | Product_line           | Unit_price | Quantity | Tax     | Total    | Date       | Time     | Payment     | cogs   | gross_margin_percentage | gross_margin |
|--------|--------|---------------|--------|------------------------|------------|----------|---------|----------|------------|----------|-------------|--------|-------------------------|--------------|
| Yangon | Member | Female        | Female | Health and beauty      | 74.69      | 7        | 26.1415 | 548.9715 | 05-01-2019 | 13:08:00 | Ewallet     | 522.83 | 4.761904762             | 26.1         |
| Yangon | Normal | Male          | Male   | Home and lifestyle     | 46.33      | 7        | 16.2155 | 340.5255 | 03-03-2019 | 13:23:00 | Credit card | 324.31 | 4.761904762             | 16.1         |
| Yangon | Member | Male          | Male   | Health and beauty      | 58.22      | 8        | 23.288  | 489.048  | 27-01-2019 | 20:33:00 | Ewallet     | 465.76 | 4.761904762             | 23.1         |
| Yangon | Normal | Male          | Male   | Sports and travel      | 86.31      | 7        | 30.2085 | 634.3785 | 08-02-2019 | 10:37:00 | Ewallet     | 604.17 | 4.761904762             | 30.1         |
| Yangon | Member | Female        | Female | Electronic accessories | 68.84      | 6        | 20.652  | 433.692  | 25-02-2019 | 14:36:00 | Ewallet     | 413.04 | 4.761904762             | 20.6         |
| Yangon | Member | Female        | Female | Health and beauty      | 36.26      | 2        | 3.626   | 76.146   | 10-01-2019 | 17:15:00 | Credit card | 72.52  | 4.761904762             | 3.6          |
| Yangon | Normal | Female        | Female | Electronic accessories | 46.95      | 5        | 11.7375 | 246.4875 | 12-02-2019 | 10:25:00 | Ewallet     | 234.75 | 4.761904762             | 11.1         |
| Yangon | Normal | Male          | Male   | Food and beverages     | 43.19      | 10       | 21.595  | 453.495  | 07-02-2019 | 16:48:00 | Ewallet     | 431.9  | 4.761904762             | 21.1         |
| Yangon | Normal | Female        | Female | Health and beauty      | 71.38      | 10       | 35.69   | 749.49   | 29-03-2019 | 19:21:00 | Cash        | 713.8  | 4.761904762             | 35.6         |
| Yangon | Member | Female        | Female | Health and beauty      | 68.93      | 7        | 24.1255 | 506.6355 | 11-03-2019 | 11:03:00 | Credit card | 482.51 | 4.761904762             | 24.1         |
| Yangon | Normal | Male          | Male   | Sports and travel      | 72.61      | 6        | 21.783  | 457.443  | 01-01-2019 | 10:39:00 | Credit card | 435.66 | 4.761904762             | 21.1         |
| Yangon | Normal | Male          | Male   | Food and beverages     | 54.67      | 3        | 8.2005  | 172.2105 | 21-01-2019 | 18:00:00 | Credit card | 164.01 | 4.761904762             | 8.2          |
| Yangon | Normal | Male          | Male   | Electronic accessories | 34.56      | 5        | 8.64    | 181.44   | 17-02-2019 | 11:15:00 | Ewallet     | 172.8  | 4.761904762             | 8.6          |
| Yangon | Member | Male          | Male   | Sports and travel      | 88.63      | 3        | 13.2945 | 279.1845 | 02-03-2019 | 17:36:00 | Ewallet     | 265.89 | 4.761904762             | 13.1         |
| Yangon | Member | Female        | Female | Home and lifestyle     | 52.59      | 8        | 21.036  | 441.756  | 22-03-2019 | 19:20:00 | Credit card | 420.72 | 4.761904762             | 21.1         |
| Yangon | Normal | Female        | Female | Fashion accessories    | 87.67      | 2        | 8.767   | 184.107  | 10-03-2019 | 12:17:00 | Credit card | 175.34 | 4.761904762             | 8.7          |
| Yangon | Normal | Male          | Male   | Health and beauty      | 24.89      | 9        | 11.2005 | 235.2105 | 15-03-2019 | 15:36:00 | Cash        | 224.01 | 4.761904762             | 11.1         |
| Yangon | Normal | Male          | Male   | Health and beauty      | 96.58      | 2        | 9.658   | 202.818  | 15-03-2019 | 10:12:00 | Credit card | 193.16 | 4.761904762             | 9.6          |
| Yangon | Member | Male          | Male   | Sports and travel      | 62.62      | 5        | 15.655  | 322.755  | 12-03-2019 | 12:15:00 | Ewallet     | 212.1  | 4.761904762             | 15.1         |



02

# Sales Analysis

Find the total sales for each product line.

SELECT

```
Product_Line, ROUND(SUM(Total), 2) AS Total_Sales
```

FROM

```
w_sales
```

```
GROUP BY Product_line;
```

| Product_Line           | Total_Sales |
|------------------------|-------------|
| Health and beauty      | 49193.74    |
| Electronic accessories | 54337.53    |
| Home and lifestyle     | 53861.91    |
| Sports and travel      | 55122.83    |
| Food and beverages     | 56144.84    |
| Fashion accessories    | 54305.9     |

**Walmart** \*

# Sales Analysis

03

List all sales transactions where the payment method was 'Cash'.

SELECT \* FROM

w\_sales

WHERE

Payment = 'CASH'

| Branch | City      | Customer_type | Gender | Product_line           | Unit_price | Quantity | Tax     | Total    | Date       | Time     | Order_ID |
|--------|-----------|---------------|--------|------------------------|------------|----------|---------|----------|------------|----------|----------|
|        | Naypyitaw | Normal        | Female | Electronic accessories | 15.28      | 5        | 3.82    | 80.22    | 08-03-2019 | 10:29:00 | C-001    |
|        | Mandalay  | Member        | Male   | Electronic accessories | 25.51      | 4        | 5.102   | 107.142  | 09-03-2019 | 17:03:00 | C-002    |
|        | Yangon    | Normal        | Female | Health and beauty      | 71.38      | 10       | 35.69   | 749.49   | 29-03-2019 | 19:21:00 | C-003    |
|        | Mandalay  | Member        | Female | Sports and travel      | 93.72      | 6        | 28.116  | 590.436  | 15-01-2019 | 16:19:00 | C-004    |
|        | Mandalay  | Normal        | Male   | Fashion accessories    | 33.52      | 1        | 1.676   | 35.196   | 08-02-2019 | 15:31:00 | C-005    |
|        | Mandalay  | Normal        | Female | Food and beverages     | 88.36      | 5        | 22.09   | 463.89   | 25-01-2019 | 19:48:00 | C-006    |
|        | Yangon    | Normal        | Male   | Health and beauty      | 24.89      | 9        | 11.2005 | 235.2105 | 15-03-2019 | 15:36:00 | C-007    |
|        | Mandalay  | Member        | Male   | Sports and travel      | 78.07      | 9        | 35.1315 | 737.7615 | 28-01-2019 | 12:43:00 | C-008    |
|        | Mandalay  | Normal        | Male   | Sports and travel      | 83.78      | 8        | 33.512  | 703.752  | 10-01-2019 | 14:49:00 | C-009    |
|        | Mandalay  | Member        | Male   | Home and lifestyle     | 30.12      | 8        | 12.048  | 253.008  | 03-03-2019 | 13:01:00 | C-010    |
|        | Naypyitaw | Member        | Male   | Home and lifestyle     | 56.11      | 2        | 5.611   | 117.831  | 02-02-2019 | 10:11:00 | C-011    |
|        | Mandalay  | Member        | Female | Sports and travel      | 69.12      | 6        | 20.736  | 435.456  | 08-02-2019 | 13:03:00 | C-012    |
|        | Naypyitaw | Member        | Female | Food and beverages     | 98.7       | 8        | 39.48   | 829.08   | 04-03-2019 | 20:39:00 | C-013    |
|        | Naypyitaw | Member        | Male   | Health and beauty      | 15.37      | 2        | 1.537   | 32.277   | 16-03-2019 | 19:47:00 | C-014    |
|        | Mandalay  | Member        | Female | Electronic accessories | 93.96      | 4        | 18.792  | 394.632  | 09-03-2019 | 18:00:00 | C-015    |
|        | Naypyitaw | Member        | Male   | Food and beverages     | 91.4       | 7        | 31.99   | 671.79   | 03-02-2019 | 10:19:00 | C-016    |
|        | Yangon    | Member        | Female | Food and beverages     | 44.59      | 5        | 11.1475 | 234.0975 | 10-02-2019 | 15:10:00 | C-017    |
|        | Naypyitaw | Normal        | Female | Electronic accessories | 85.98      | 8        | 34.392  | 722.232  | 28-02-2019 | 19:01:00 | C-018    |
|        | Yangon    | Member        | Male   | Home and lifestyle     | 41.34      | 2        | 1.424   | 82.114   | 27-02-2019 | 11:26:00 | C-019    |



# Sales Analysis



04

SELECT

```
city, ROUND(SUM(gross_income), 2) AS Gross_income  
FROM  
w_sales  
GROUP BY city
```

| city      | Gross_income |
|-----------|--------------|
| Yangon    | 5057.16      |
| Naypyitaw | 5265.18      |
| Mandalay  | 5057.03      |



# >> Sales Analysis

05

Find the average rating given by customers in each branch.

SELECT

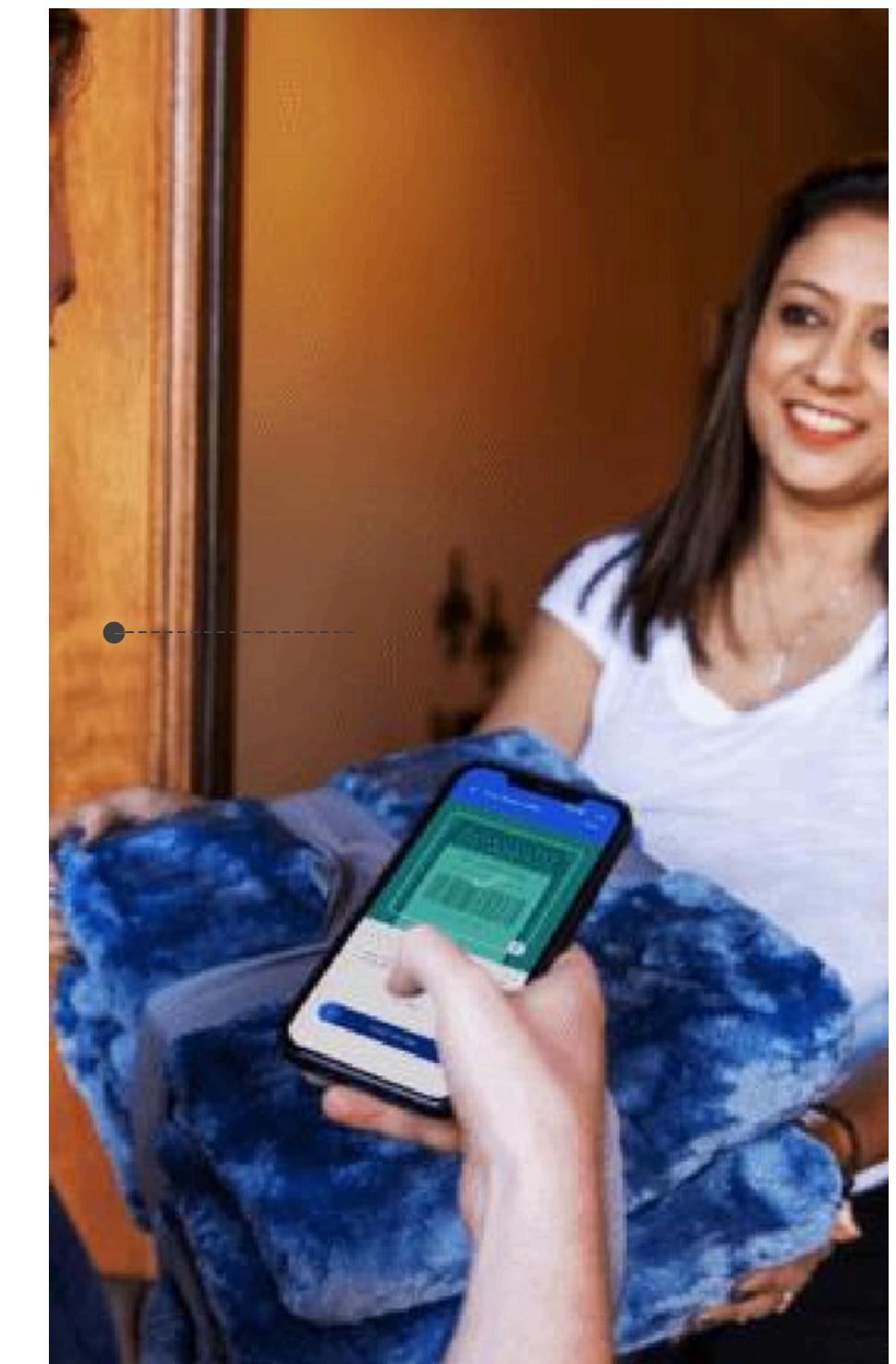
Branch, ROUND(AVG(Rating), 1) AS Avg\_rating

FROM

w\_sales

GROUP BY Branch;

| Branch | Avg_rating |
|--------|------------|
| A      | 7          |
| C      | 7.1        |
| B      | 6.8        |



# Sales Analysis

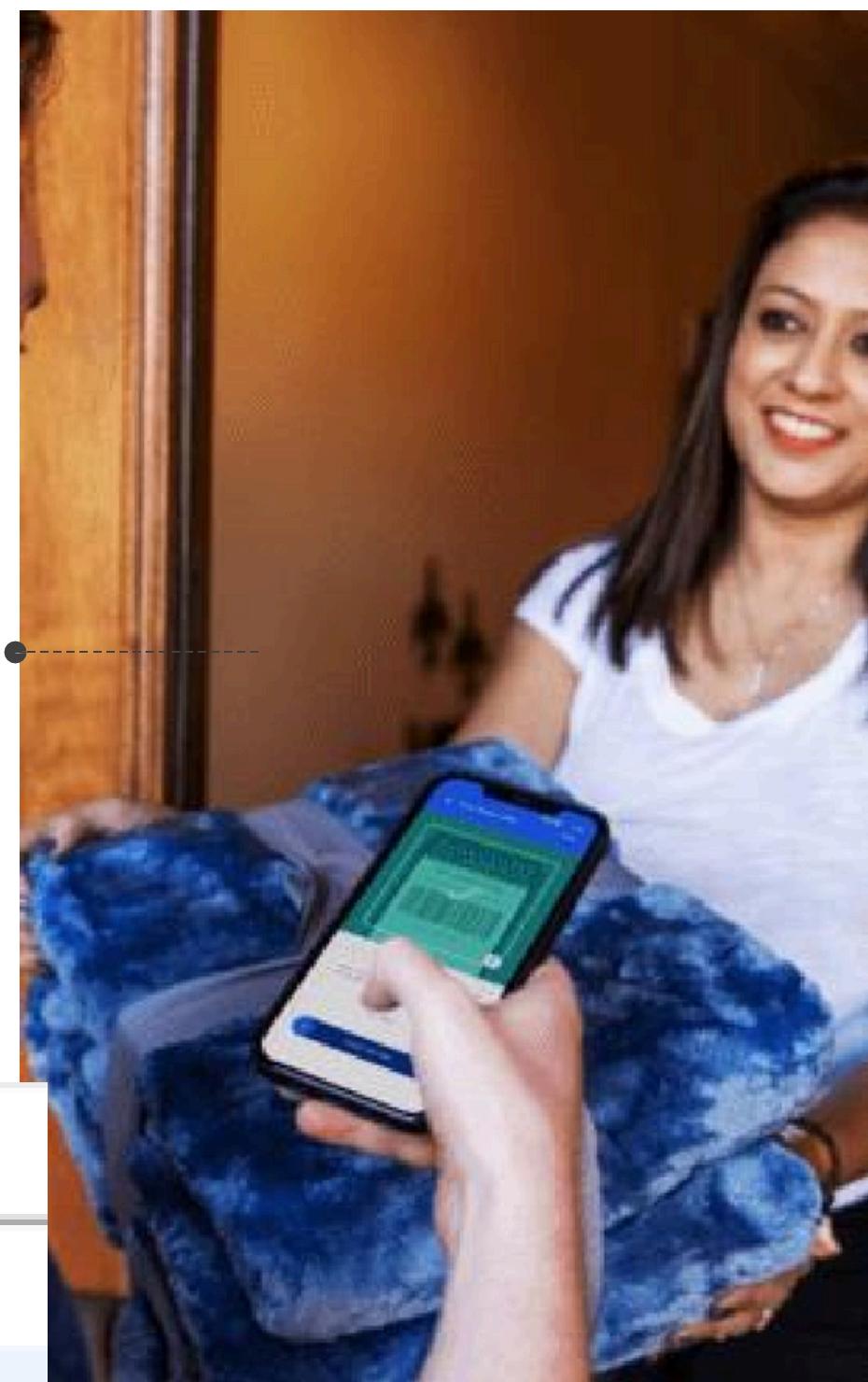
06

Determine the total quantity of each product line sold.

SELECT

```
Product_line, SUM(Quantity) AS Product_quantity  
FROM  
w_sales  
GROUP BY Product_line;
```

| Product_line           | Product_quantity |
|------------------------|------------------|
| Health and beauty      | 854              |
| Electronic accessories | 971              |
| Home and lifestyle     | 911              |
| Sports and travel      | 920              |
| Food and beverages     | 952              |
| Fashion accessories    | 902              |



# Sales Analysis

07

List the top 5 products by unit price.

SELECT

Product\_line, Unit\_price

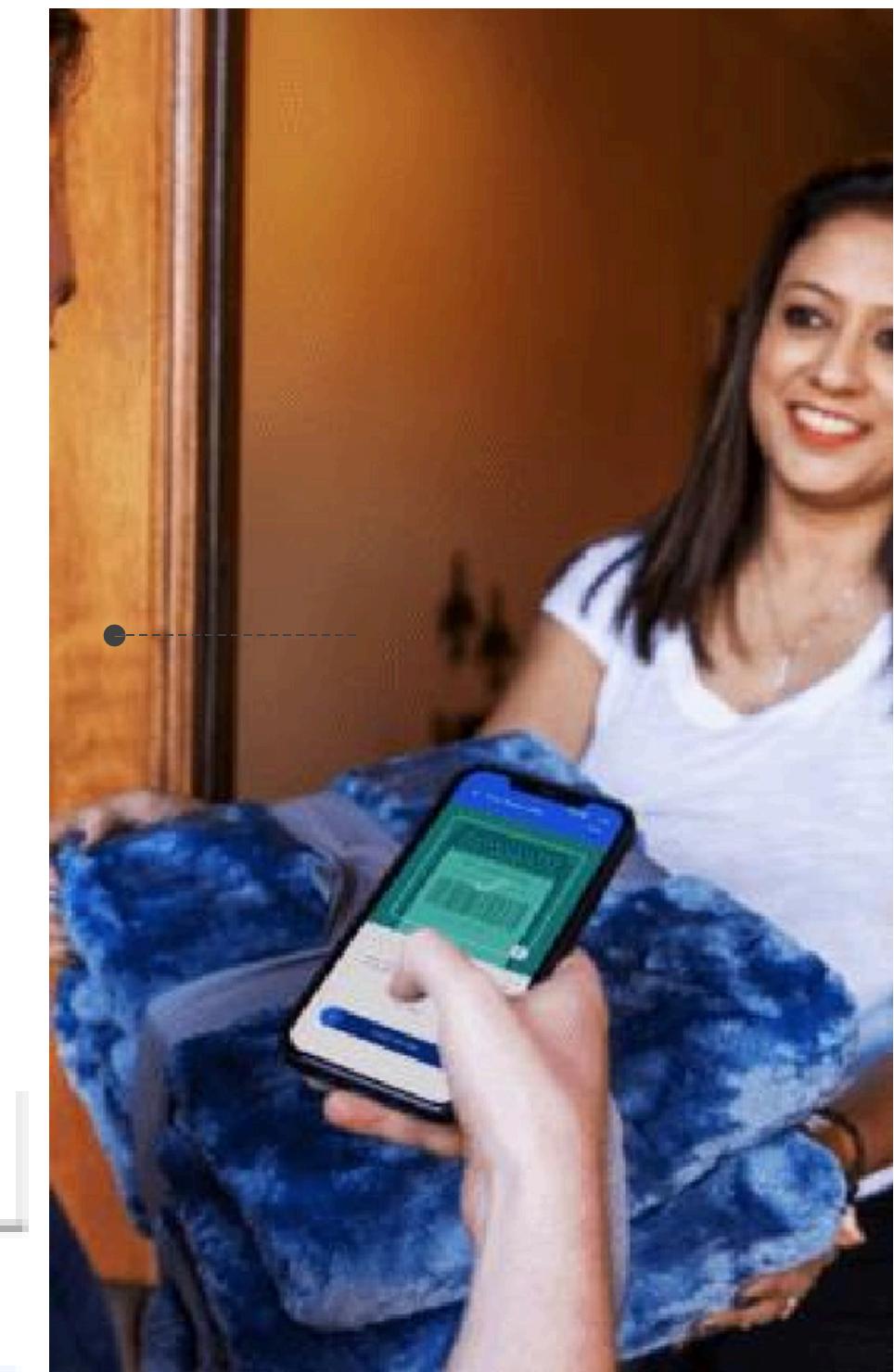
FROM

w\_sales

ORDER BY Unit\_price DESC

LIMIT 5;

| Product_line        | Unit_price |
|---------------------|------------|
| Health and beauty   | 99.96      |
| Sports and travel   | 99.96      |
| Home and lifestyle  | 99.92      |
| Fashion accessories | 99.89      |
| Health and beauty   | 99.83      |





# Sales Analysis

08

Find sales transactions with a gross income greater than 30.

SELECT \* FROM

w\_sales

WHERE

gross\_income > 30;

| Invoice_ID  | Branch | City      | Customer_type | Gender | Product_line           | Unit_price | Quantity | VAT     | Total    | Date_      | Time_    | Payment     | cogs   | gross_margin_percentage | gross_income |
|-------------|--------|-----------|---------------|--------|------------------------|------------|----------|---------|----------|------------|----------|-------------|--------|-------------------------|--------------|
| 373-73-7910 | A      | Yangon    | Normal        | Male   | Sports and travel      | 86.31      | 7        | 30.2085 | 634.3785 | 08-02-2019 | 10:37:00 | Ewallet     | 604.17 | 4.761904762             | 30.2085      |
| 315-22-5665 | C      | Naypyitaw | Normal        | Female | Home and lifestyle     | 73.56      | 10       | 36.78   | 772.38   | 24-02-2019 | 11:38:00 | Ewallet     | 735.6  | 4.761904762             | 36.78        |
| 829-34-3910 | A      | Yangon    | Normal        | Female | Health and beauty      | 71.38      | 10       | 35.69   | 749.49   | 29-03-2019 | 19:21:00 | Cash        | 713.8  | 4.761904762             | 35.69        |
| 149-71-6266 | B      | Mandalay  | Member        | Male   | Sports and travel      | 78.07      | 9        | 35.1315 | 737.7615 | 28-01-2019 | 12:43:00 | Cash        | 702.63 | 4.761904762             | 35.1315      |
| 640-49-2076 | B      | Mandalay  | Normal        | Male   | Sports and travel      | 83.78      | 8        | 33.512  | 703.752  | 10-01-2019 | 14:49:00 | Cash        | 670.24 | 4.761904762             | 33.512       |
| 228-96-1411 | C      | Naypyitaw | Member        | Female | Food and beverages     | 98.7       | 8        | 39.48   | 829.08   | 04-03-2019 | 20:39:00 | Cash        | 789.6  | 4.761904762             | 39.48        |
| 574-22-5561 | C      | Naypyitaw | Member        | Female | Fashion accessories    | 82.63      | 10       | 41.315  | 867.615  | 19-03-2019 | 17:08:00 | Ewallet     | 826.3  | 4.761904762             | 41.315       |
| 326-78-5178 | C      | Naypyitaw | Member        | Male   | Food and beverages     | 91.4       | 7        | 31.99   | 671.79   | 03-02-2019 | 10:19:00 | Cash        | 639.8  | 4.761904762             | 31.99        |
| 399-46-5918 | C      | Naypyitaw | Normal        | Female | Electronic accessories | 85.98      | 8        | 34.392  | 722.232  | 28-02-2019 | 19:01:00 | Cash        | 687.84 | 4.761904762             | 34.392       |
| 635-40-6220 | A      | Yangon    | Normal        | Male   | Health and beauty      | 89.6       | 8        | 35.84   | 752.64   | 07-02-2019 | 11:28:00 | Ewallet     | 716.8  | 4.761904762             | 35.84        |
| 817-48-8732 | A      | Yangon    | Member        | Female | Home and lifestyle     | 72.35      | 10       | 36.175  | 759.675  | 20-01-2019 | 15:55:00 | Cash        | 723.5  | 4.761904762             | 36.175       |
| 232-11-3025 | A      | Yangon    | Normal        | Male   | Sports and travel      | 78.77      | 10       | 39.385  | 827.085  | 24-01-2019 | 10:04:00 | Cash        | 787.7  | 4.761904762             | 39.385       |
| 393-65-2792 | C      | Naypyitaw | Normal        | Male   | Food and beverages     | 89.48      | 10       | 44.74   | 939.54   | 06-01-2019 | 12:46:00 | Credit c... | 894.8  | 4.761904762             | 44.74        |
| 796-12-2025 | C      | Naypyitaw | Normal        | Male   | Fashion accessories    | 62.12      | 10       | 31.06   | 652.26   | 11-02-2019 | 16:19:00 | Cash        | 621.2  | 4.761904762             | 31.06        |
| 287-21-9091 | A      | Yangon    | Normal        | Male   | Home and lifestyle     | 74.67      | 9        | 33.6015 | 705.6315 | 22-01-2019 | 10:55:00 | Ewallet     | 672.03 | 4.761904762             | 33.6015      |
| 829-49-1914 | C      | Naypyitaw | Member        | Female | Food and beverages     | 78.31      | 10       | 39.155  | 822.255  | 05-03-2019 | 16:24:00 | Ewallet     | 783.1  | 4.761904762             | 39.155       |
| 766-85-7061 | B      | Mandalay  | Normal        | Male   | Health and beauty      | 87.87      | 10       | 43.935  | 922.635  | 29-03-2019 | 10:25:00 | Ewallet     | 878.7  | 4.761904762             | 43.935       |
| 189-98-2939 | C      | Naypyitaw | Normal        | Male   | Fashion accessories    | 78.55      | 9        | 35.3475 | 742.2975 | 01-03-2019 | 13:22:00 | Cash        | 706.95 | 4.761904762             | 35.3475      |
| 704-48-3927 | A      | Yangon    | Member        | Male   | Electronic accessories | 88.67      | 10       | 44.335  | 931.035  | 12-01-2019 | 14:50:00 | Ewallet     | 886.7  | 4.761904762             | 44.335       |
| 861-77-0145 | C      | Naypyitaw | Member        | Male   | Electronic accessories | 81.97      | 10       | 40.985  | 860.685  | 03-03-2019 | 14:30:00 | Cash        | 819.7  | 4.761904762             | 40.985       |
| 237-01-6122 | C      | Naypyitaw | Member        | Female | Home and lifestyle     | 80.79      | 9        | 36.3555 | 763.4655 | 01-02-2019 | 20:31:00 | Credit c... | 727.11 | 4.761904762             | 36.3555      |
| 638-60-7125 | A      | Yangon    | Normal        | Female | Electronic accessories | 99.56      | 8        | 39.824  | 836.304  | 14-02-2019 | 17:03:00 | Credit c... | 796.48 | 4.761904762             | 39.824       |
| 219-22-9386 | B      | Mandalay  | Member        | Male   | Sports and travel      | 99.96      | 9        | 44.982  | 944.622  | 09-03-2019 | 17:26:00 | Credit c... | 899.64 | 4.761904762             | 44.982       |



# Sales Analysis



09

Retrieve sales transactions that occurred on weekends.

```
SELECT
    Total, DATE_FORMAT(STR_TO_DATE(Date_, '%Y-%m-%d'), '%Y-%m-%d') as Transaction_date
FROM
    w_sales
WHERE
    DAYOFWEEK(DATE_FORMAT(STR_TO_DATE(Date_, '%Y-%m-%d'), '%Y-%m-%d')) IN (1 , 7);
```

| Total    | Transaction_date |
|----------|------------------|
| 506.6355 | 2011-03-20       |
| 457.443  | 2001-01-20       |
| 84.63    | 2011-03-20       |
| 277.137  | 2005-03-20       |
| 441.756  | 2022-03-20       |
| 184.107  | 2010-03-20       |
| 71.526   | 2007-01-20       |
| 328.755  | 2010-03-20       |
| 829.08   | 2004-03-20       |
| 32.277   | 2016-03-20       |
| 535.7205 | 2027-02-20       |
| 119.259  | 2010-02-20       |
| 234.0975 | 2010-02-20       |
| 75.054   | 2022-03-20       |
| 722.232  | 2028-02-20       |
| 93.114   | 2027-03-20       |
| 70.287   | 2010-02-20       |
| 614.943  | 2007-01-20       |
| 827.085  | 2024-01-20       |
| 652.26   | 2011-02-20       |
| 152.838  | 2005-03-20       |



# Sales Analysis



10

Calculate the total sales and gross income for each city and each month.

SELECT

```
DATE_FORMAT(STR_TO_DATE(Date_, '%Y-%m-%d'), '%Y-%m') AS month,  
SUM(Total) AS Total_Sales,  
SUM(gross_income) AS Total_Gross_Income  
FROM w_sales  
GROUP BY month  
ORDER BY month;
```

| month   | Total_Sales        | Total_Gross_Income |
|---------|--------------------|--------------------|
| 2001-01 | 4745.1810000000005 | 225.961            |
| 2001-02 | 2444.5364999999997 | 116.40650000000001 |
| 2001-03 | 2634.3660000000004 | 125.446            |
| 2002-01 | 1945.5030000000002 | 92.64299999999999  |
| 2002-02 | 4140.948           | 197.188            |
| 2002-03 | 6560.3055          | 312.3955           |
| 2003-01 | 2078.1285          | 98.9585            |
| 2003-02 | 5467.927500000002  | 260.3775           |
| 2003-03 | 4853.1735          | 231.1035           |
| 2004-01 | 1623.6885          | 77.3185            |
| 2004-02 | 2439.4965          | 116.16650000000001 |
| 2004-03 | 3894.439499999995  | 185.4494999999997  |
| 2005-01 | 3536.683499999996  | 168.4135           |
| 2005-02 | 3031.1295          | 144.3395000000002  |
| 2005-03 | 6230.878499999999  | 296.7085           |
| 2006-01 | 3614.205           | 172.105            |
| 2006-02 | 2905.4235000000003 | 138.3535           |
| 2006-03 | 3092.596499999997  | 147.2664999999998  |
| 2007-01 | 2834.243999999997  | 134.964            |
| 2007-02 | 7228.210500000001  | 344.2005000000003  |
| 2007-03 | 1438.2585          | 68.4885            |
| 2008-01 | 5707.777500000001  | 282.0074000000000  |



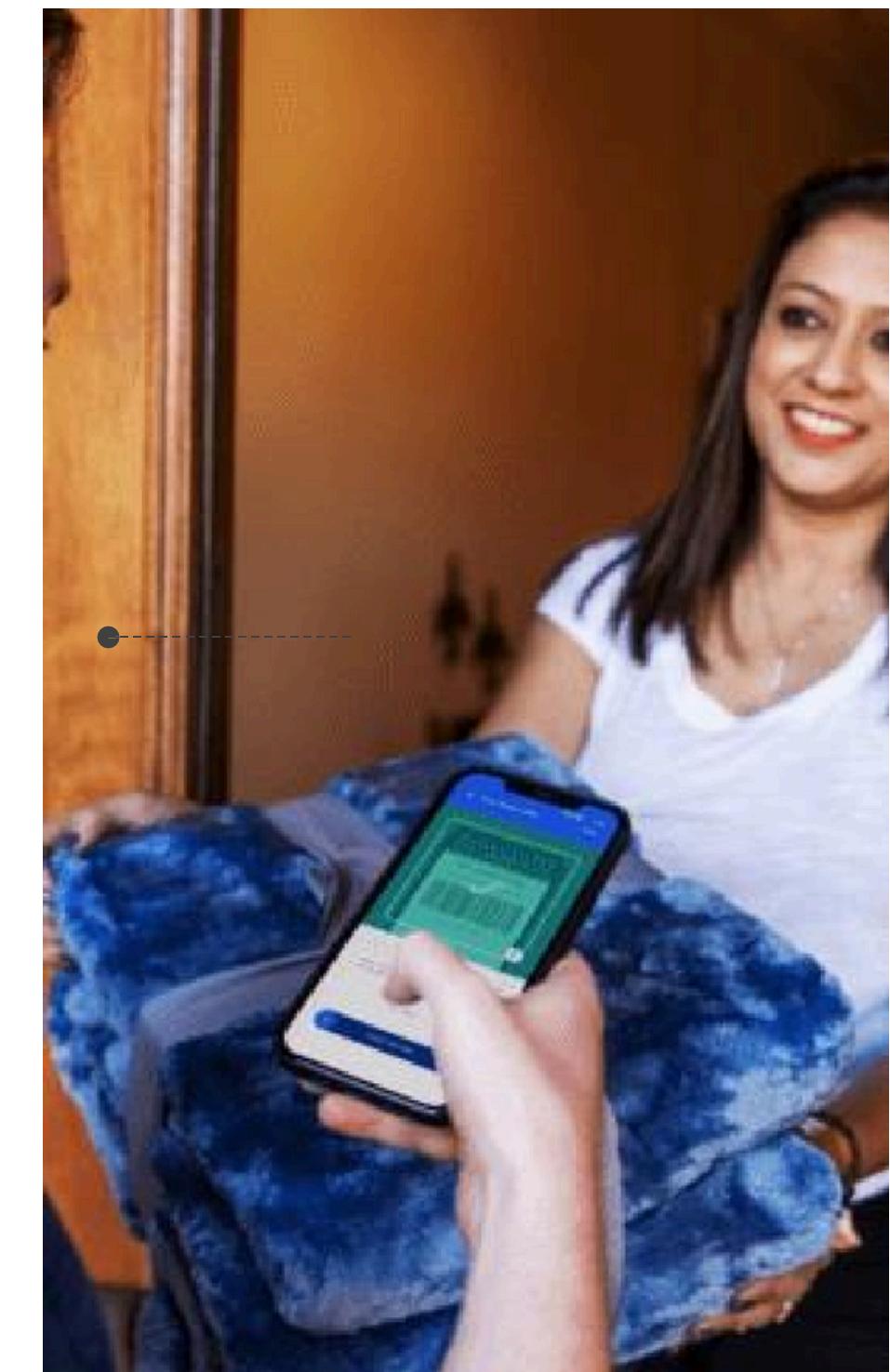
# >> Sales Analysis

11

Find the number of sales transactions that occurred after 6 PM.

```
select count(*) as number_of_transaction from w_sales  
where time(Time_) > '18:00:00'
```

| number_of_transaction |
|-----------------------|
| 281                   |





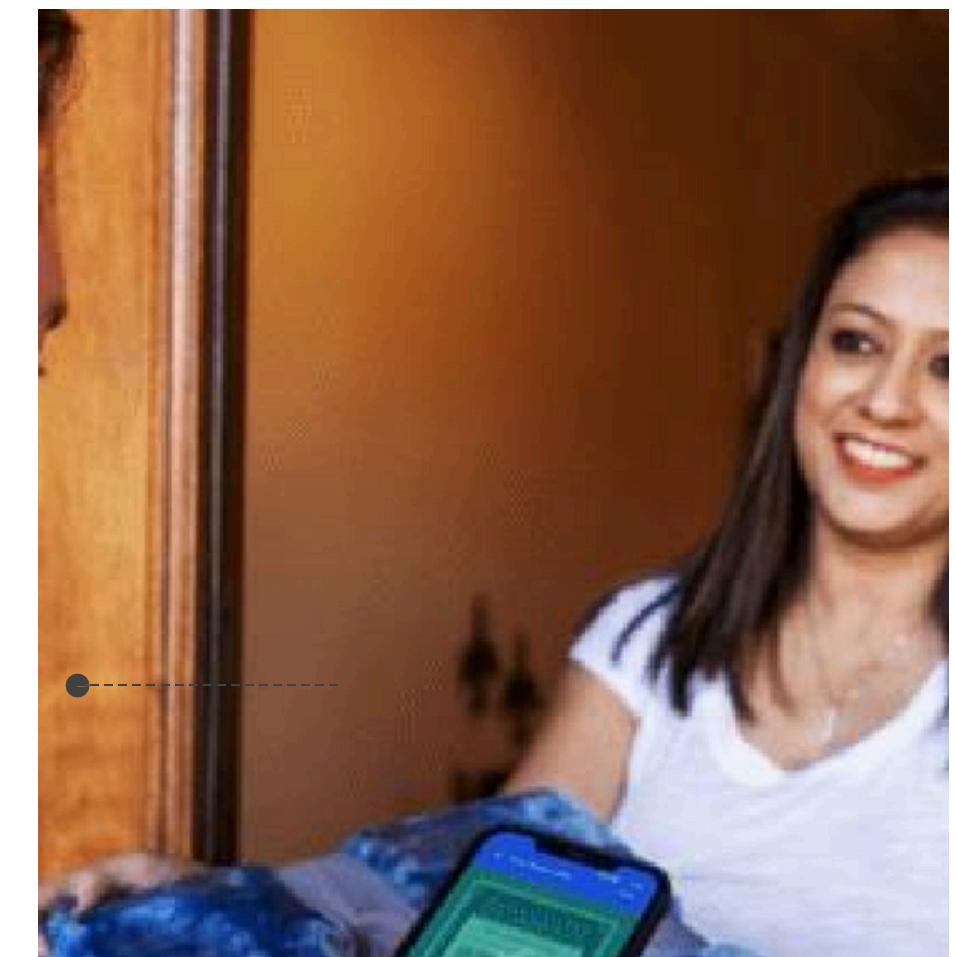
# Sales Analysis

12

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

```
select * from w_sales
```

```
where total > (select avg(Total) from w_sales)
```



| Invoice_ID  | Branch | City      | Customer_type | Gender | Product_line           | Unit_price | Quantity | VAT     | Total    | Date_      | Time_    | Payment     | cogs   | gross_margin_percentage | gross_income | Ra  |
|-------------|--------|-----------|---------------|--------|------------------------|------------|----------|---------|----------|------------|----------|-------------|--------|-------------------------|--------------|-----|
| 750-67-8428 | A      | Yangon    | Member        | Female | Health and beauty      | 74.69      | 7        | 26.1415 | 548.9715 | 05-01-2019 | 13:08:00 | Ewallet     | 522.83 | 4.761904762             | 26.1415      | 9.1 |
| 631-41-3108 | A      | Yangon    | Normal        | Male   | Home and lifestyle     | 46.33      | 7        | 16.2155 | 340.5255 | 03-03-2019 | 13:23:00 | Credit card | 324.31 | 4.761904762             | 16.2155      | 7.4 |
| 123-19-1176 | A      | Yangon    | Member        | Male   | Health and beauty      | 58.22      | 8        | 23.288  | 489.048  | 27-01-2019 | 20:33:00 | Ewallet     | 465.76 | 4.761904762             | 23.288       | 8.4 |
| 373-73-7910 | A      | Yangon    | Normal        | Male   | Sports and travel      | 86.31      | 7        | 30.2085 | 634.3785 | 08-02-2019 | 10:37:00 | Ewallet     | 604.17 | 4.761904762             | 30.2085      | 5.3 |
| 699-14-3026 | C      | Naypyitaw | Normal        | Male   | Electronic accessories | 85.39      | 7        | 29.8865 | 627.6165 | 25-03-2019 | 18:30:00 | Ewallet     | 597.73 | 4.761904762             | 29.8865      | 4.1 |
| 355-53-5943 | A      | Yangon    | Member        | Female | Electronic accessories | 68.84      | 6        | 20.652  | 433.692  | 25-02-2019 | 14:36:00 | Ewallet     | 413.04 | 4.761904762             | 20.652       | 5.8 |
| 315-22-5665 | C      | Naypyitaw | Normal        | Female | Home and lifestyle     | 73.56      | 10       | 36.78   | 772.38   | 24-02-2019 | 11:38:00 | Ewallet     | 735.6  | 4.761904762             | 36.78        | 8   |
| 252-56-2699 | A      | Yangon    | Normal        | Male   | Food and beverages     | 43.19      | 10       | 21.595  | 453.495  | 07-02-2019 | 16:48:00 | Ewallet     | 431.9  | 4.761904762             | 21.595       | 8.2 |
| 829-34-3910 | A      | Yangon    | Normal        | Female | Health and beauty      | 71.38      | 10       | 35.69   | 749.49   | 29-03-2019 | 19:21:00 | Cash        | 713.8  | 4.761904762             | 35.69        | 5.7 |
| 299-46-1805 | B      | Mandalay  | Member        | Female | Sports and travel      | 93.72      | 6        | 28.116  | 590.436  | 15-01-2019 | 16:19:00 | Cash        | 562.32 | 4.761904762             | 28.116       | 4.5 |
| 656-95-9349 | A      | Yangon    | Member        | Female | Health and beauty      | 68.93      | 7        | 24.1255 | 506.6355 | 11-03-2019 | 11:03:00 | Credit card | 482.51 | 4.761904762             | 24.1255      | 4.6 |
| 765-26-6951 | A      | Yangon    | Normal        | Male   | Sports and travel      | 72.61      | 6        | 21.783  | 457.443  | 01-01-2019 | 10:39:00 | Credit card | 435.66 | 4.761904762             | 21.783       | 6.9 |
| 300-71-4605 | C      | Naypyitaw | Member        | Male   | Electronic accessories | 86.04      | 5        | 21.51   | 451.71   | 25-02-2019 | 11:24:00 | Ewallet     | 430.2  | 4.761904762             | 21.51        | 4.8 |
| 227-03-5010 | A      | Yangon    | Member        | Female | Home and lifestyle     | 52.59      | 8        | 21.036  | 441.756  | 22-03-2019 | 19:20:00 | Credit card | 420.72 | 4.761904762             | 21.036       | 8.5 |
| 145-94-9061 | B      | Mandalay  | Normal        | Female | Food and beverages     | 88.36      | 5        | 22.09   | 463.89   | 25-01-2019 | 19:48:00 | Cash        | 441.8  | 4.761904762             | 22.09        | 9.6 |
| 871-79-8483 | B      | Mandalay  | Normal        | Male   | Fashion accessories    | 94.13      | 5        | 23.5325 | 494.1825 | 25-02-2019 | 19:39:00 | Credit card | 470.65 | 4.761904762             | 23.5325      | 4.8 |
| 149-71-6266 | B      | Mandalay  | Member        | Male   | Sports and travel      | 78.07      | 9        | 35.1315 | 737.7615 | 28-01-2019 | 12:43:00 | Cash        | 702.63 | 4.761904762             | 35.1315      | 4.5 |
| 640-49-2076 | B      | Mandalay  | Normal        | Male   | Sports and travel      | 83.78      | 8        | 33.512  | 703.752  | 10-01-2019 | 14:49:00 | Cash        | 670.24 | 4.761904762             | 33.512       | 5.1 |
| 183-56-6882 | C      | Naypyitaw | Member        | Female | Food and beverages     | 99.42      | 4        | 19.884  | 417.564  | 06-02-2019 | 10:42:00 | Ewallet     | 397.68 | 4.761904762             | 19.884       | 7.5 |
| 129-29-8530 | A      | Yangon    | Member        | Male   | Sports and travel      | 62.62      | 5        | 15.655  | 328.755  | 10-03-2019 | 19:15:00 | Ewallet     | 313.1  | 4.761904762             | 15.655       | 7   |



# Sales Analysis



13

Calculate the cumulative gross income for each branch by date.

**SELECT**

Branch, Date\_, SUM(gross\_income)

**FROM** m\_sales

**GROUP BY** Branch , Date ;

| Branch | Date_      | SUM(gross_income)  |
|--------|------------|--------------------|
| A      | 05-01-2019 | 96.405             |
| C      | 08-03-2019 | 68.598             |
| A      | 03-03-2019 | 38.786500000000004 |
| A      | 27-01-2019 | 79.7275            |
| A      | 08-02-2019 | 80.6835            |
| C      | 25-03-2019 | 60.8455            |
| A      | 25-02-2019 | 86.01599999999999  |
| C      | 24-02-2019 | 68.409             |
| A      | 10-01-2019 | 34.833             |
| B      | 20-02-2019 | 81.56200000000001  |
| B      | 06-02-2019 | 51.46049999999996  |
| B      | 09-03-2019 | 143.166            |
| A      | 12-02-2019 | 26.529500000000002 |
| A      | 07-02-2019 | 98.41              |
| A      | 29-03-2019 | 46.553             |
| B      | 15-01-2019 | 136.303            |
| A      | 11-03-2019 | 81.4845            |
| A      | 01-01-2019 | 112.92             |
| A      | 21-01-2019 | 75.79700000000001  |
| B      | 11-03-2019 | 23.016             |
| C      | 25-02-2019 | 23.9405            |



# Sales Analysis

14

Find the total cogs for each customer type in each city.

```
select City, Customer_type, round(sum(cogs),2) as Total_Cogs from w_sales  
group by City, Customer_type
```

| City      | Customer_type | Total_Cogs |
|-----------|---------------|------------|
| Yangon    | Member        | 51083.31   |
| Naypyitaw | Normal        | 51130.88   |
| Yangon    | Normal        | 50059.9    |
| Mandalay  | Member        | 51147.32   |
| Mandalay  | Normal        | 49993.32   |
| Naypyitaw | Member        | 54172.65   |



# Insights

- Naypyitaw has highest total cogs value.
- Food and beverages has the maximum total sales.
- Number of transactions occurred after 6PM is 281
- Number of quantities sold for the electronic accessories is the highest(971)
- Branch C has highest average rating by Customers.
- Naypyitaw city has highest total gross income.

**THANK  
YOU!**

