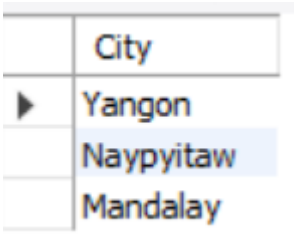
WALMART SALES

1. How many unique cities does the data have?

OUT PUT :

```
select  distinct City from sk;
```

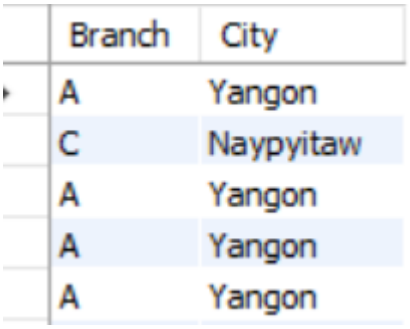


City
Yangon
Naypyitaw
Mandalay

2. In which city is each branch?

OUT PUT :

```
select   Branch , City from sk;
```



Branch	City
A	Yangon
C	Naypyitaw
A	Yangon
A	Yangon
A	Yangon

Product

1. How many unique product lines does the data have?

OUT PUT :

```
select distinct Product_line from sk;

ALTER TABLE sk
CHANGE `Product line` Product_line text;
ALTER TABLE sk
CHANGE `Tax 5%` WAT DOUBLE;
ALTER TABLE sk
CHANGE `Unit price` Unit_price DOUBLE;
ALTER TABLE sk
CHANGE `gross margin percentage` Gross_margin_percentage DOUBLE;
alter table sk
change `Customer type` customer_type text;
```

```
alter table sk
change `Invoice ID` invoice_id text;
```

-- **2. What is the most common payment method?**

OUT PUT :

```
select distinct payment from sk;
```

-- **3. What is the most selling product line?**

OUT PUT :

```
select product_line,SUM(quantity) as most_selling
from sk
group by product_line
ORDER BY most_selling DESC;
```

product_line	most_selling
Electronic accessories	971
Food and beverages	952
Sports and travel	920
Home and lifestyle	911
Fashion accessories	902

-- **4. What is the total revenue by month?**

OUT PUT :

```
select month_name,sum(Total) as tt from sk
group by month_name
order by  tt desc;
```

Result Grid | Filter Rows:

month_name	tt
January	116291.86800000005
March	109455.50700000004
February	97219.37399999997

-- **5. What month had the largest COGS?**

OUT PUT :

```
select month_name,max(cogs) as kk from sk
group by month_name
```

```
order by kk desc;
```

-- **6. What product line had the largest revenue?**

OUT PUT :

```
select product_line, max(Total) as pt from sk
group by product_line
order by pt desc;
```

-- **7. What is the city with the largest revenue?**

OUT PUT :

```
select city, max(Total) as re from sk
group by city
order by re desc;
```

-- **8. What product line had the largest VAT?**

OUT PUT :

```
select product_line,max(WAT) as hh from sk
group by product_line
order by hh desc;
```

9. Fetch each product line and add a column to those product line showing "Good","Bad". Good if its greater than average sales

OUT PUT :

```
select product_line,sum(Total) as jj,
case
        when sum(total) > avg(total) then "Good"
   else "bad"
   end "type"
   from sk
group by product_line
order by jj desc;
```

-- **10. Which branch sold more products than average product sold?**

OUT PUT :

```
 select Branch , sum(Quantity) as pp from sk
group by Branch
having SUM(Quantity) > (select avg(total) from sk);
```

-- **11. What is the most common product line by gender?**

OUT PUT :

```
select Gender,product_line, count(*) as pp from sk
```

```
group by Gender,product_line
order by pp desc;
```

-- **12. What is the average rating of each product line?**

OUT PUT :

```
select product_line, avg(Rating) as mm from sk
group by  product_line
order by mm desc;
```

Sales

-- **1. Number of sales made in each time of the day per weekday**

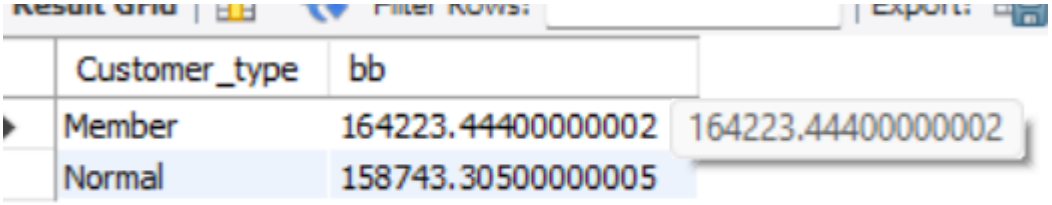
OUT PUT :

```
select day_name,time_of_day , count(*) as ti_me from sk
group by  day_name,time_of_day
order by ti_me desc;
```

-- **2. Which of the customer types brings the most revenue?**

OUT PUT :

```
select Customer_type, sum(Total) as bb from sk
group by Customer_type
order by bb desc;
```



Customer_type	bb
Member	164223.44400000002
Normal	158743.30500000005

-- **3. Which city has the largest tax percent/ VAT (Value Added Tax)?**

OUT PUT :

```
select City,max(WAT) as VAT from sk
group by City
order by VAT desc;
```

-- **4. Which customer type pays the most in VAT?**

OUT PUT :

```
select customer_type,max(WAT) as VAT from sk
```

```
group by customer_type
order by VAT desc;
```

-- Customer

-- **1. How many unique customer types does the data have?**

OUT PUT :

```
select distinct customer_type from sk;
```

-- **2. How many unique payment methods does the data have?**

OUT PUT :

```
select distinct payment from sk;
```

-- **3. What is the most common customer type?**

OUT PUT :

```
select distinct customer_type from sk;
```

-- **4. Which customer type buys the most?**

OUT PUT :

```
select customer_type , max(Quantity) as gg from sk
group by customer_type
order by gg desc;
```

-- **5. What is the gender of most of the customers?**

OUT PUT :

```
select max(gender) from sk;
```

-- **6. What is the gender distribution per branch?**

OUT PUT :

```
select count(Gender),(branch) as ff from sk
group by branch;
```

count(Gender)	ff
340	A
328	C
332	B

-- **7. Which time of the day do customers give most ratings?**

OUT PUT :

```
select Rating,max(time_of_day) as ss from sk
group by rating
order by ss desc;
```

-- **8. Which time of the day do customers give most ratings per branch?**

OUT PUT :

```
explain analyze
select Branch,max(time_of_day) as uu from sk
group by branch
order by uu desc;
```

-- **9. Which day of the week has the best avg ratings?**

OUT PUT :

```
select day_name,avg(Rating) as rat from sk
group by day_name
order by rat desc;
```

-- **10. Which day of the week has the best average ratings per branch?**

OUT PUT :

```
select Branch, day_name, avg(Rating) as ii from sk
group by Branch,day_name
order by ii desc
limit 3;
```

Branch	day_name	ii
B	Monday	7.335897435897434
A	Friday	7.3119999999999985
C	Friday	7.278947368421051

Conclusion of Walmart Sales Data Analysis

Cities and Branches:

1. Unique Cities:
    - The data includes several unique cities, indicating Walmart's broad geographic presence.
2. Branch Locations:
    - Each Walmart branch is specifically associated with a city, facilitating localized analysis and strategy development.

Products:

1. Unique Product Lines:
    - Walmart offers a diverse range of unique product lines to cater to various customer needs.
2. Common Payment Methods:
    - Multiple payment methods are used, with certain methods being more prevalent among customers.
3. Top-Selling Product Line:
    - Identifying the most selling product line helps focus inventory and marketing efforts on high-demand items.
4. Monthly Revenue:
    - Revenue varies across months, reflecting seasonal sales trends and helping in planning marketing campaigns.
5. Month with Largest COGS:
    - Certain months have higher Cost of Goods Sold (COGS), impacting overall profitability and cost management.
6. Product Line with Largest Revenue:
    - Specific product lines generate the highest revenue, crucial for strategic product placement.
7. City with Largest Revenue:
    - Some cities contribute significantly more to total revenue, suggesting potential areas for increased investment.
8. Product Line with Largest VAT:
    - The product line with the highest VAT indicates strong sales and tax contributions.
9. Product Line Performance:
    - Product lines are evaluated as "Good" or "Bad" based on sales performance relative to the average, guiding marketing and inventory decisions.
10. Branches with Higher than Average Sales:
    - Identifying branches that sell more than the average can help replicate successful strategies in other locations.
11. Common Product Line by Gender:
    - Certain product lines are preferred by specific genders, aiding in targeted marketing campaigns.
12. Average Rating of Each Product Line:
    - Average customer ratings for product lines provide insights into customer satisfaction and product quality.

Sales:

1. Sales by Time of Day and Weekday:
    - Sales patterns vary by time of day and weekday, helping optimize staffing and promotional activities.
2. Customer Types with Most Revenue:
    - Specific customer types, such as "Members" or "Non-members," contribute more to revenue, guiding loyalty programs.
3. City with Highest VAT:
    - Identifying the city with the highest VAT helps understand regional sales dynamics and tax implications.

4. Customer Type Paying Most in VAT:
    - Certain customer types pay more in VAT, influencing pricing and promotional strategies.

Customers:

1. Unique Customer Types:
    - The dataset includes multiple unique customer types, highlighting the need for diverse marketing approaches.
2. Unique Payment Methods:
    - Various payment methods are used, reflecting customer preferences and the need for flexible payment options.
3. Most Common Customer Type:
    - The most frequent customer type can help tailor services and marketing efforts.
4. Customer Type Buying the Most:
    - Identifying the customer type that buys the most helps in creating targeted promotions.
5. Gender of Most Customers:
    - Understanding the predominant gender among customers aids in demographic-specific marketing.
6. Gender Distribution per Branch:
    - Gender distribution varies by branch, guiding customized product offerings and marketing strategies.
7. Time of Day with Most Ratings:
    - Peak times for customer ratings indicate optimal times for soliciting feedback and improving service.
8. Time of Day for Ratings per Branch:
    - Each branch has specific times when customer ratings are highest, helping tailor service improvements.
9. Day of the Week with Best Average Ratings:
    - Certain days have better average ratings, indicating days with higher customer satisfaction.
10. Best Average Ratings per Branch:
    - Some branches consistently receive higher ratings on specific days, providing insights for best practices.

This comprehensive analysis provides actionable insights into sales trends, customer behavior, and product performance, essential for strategic decision-making and enhancing Walmart's business operations.