Walmart Business Problems

# Analyze Payment Methods and Sales

* + **Question:** What are the different payment methods, and how many transactions and items were sold with each method?
  + **Purpose:** This helps understand customer preferences for payment methods, aiding in payment optimization strategies.
  + **Code:**

SELECT

payment\_method,

COUNT(\*) AS no\_payments,

SUM(quantity) AS no\_qty\_sold

FROM walmart\_clean\_data

GROUP BY payment\_method;

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# Identify the Highest-Rated Category in Each Branch

* + **Question:** Which category received the highest average rating in each branch?
  + **Purpose:** This allows Walmart to recognize and promote popular categories in specific branches, enhancing customer satisfaction and branch-specific marketing.
  + **Code:**

select \* from

( select

branch,category,

avg(rating) as avg\_rating,

rank() over(partition by branch order by avg(rating)desc) as rank\_rating

from walmart\_clean\_data

group by branch,category

) as ranked

where rank\_rating =1;

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# Determine the Busiest Day for Each Branch

* + **Question:** What is the busiest day of the week for each branch based on transaction volume?
  + **Purpose:** This insight helps in optimizing staffing and inventory management to accommodate peak days.
  + **Code:**

select \*

from

(select

branch,

dayname(str\_to\_date(date,'%d-%m-%y')) as day\_name,

count(\*) as no\_transactions,

rank() over(partition by branch order by count(\*) desc) as rank\_transaction

from walmart\_clean\_data

group by branch,day\_name

)as ranked

where rank\_transaction=1;

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# Calculate Total Quantity Sold by Payment Method

* + **Question:** How many items were sold through each payment method?
  + **Purpose:** This helps Walmart track sales volume by payment type, providing insights into customer purchasing habits.
  + **Code:**

SELECT

payment\_method,

SUM(quantity) AS no\_qty\_sold

FROM walmart\_clean\_data

GROUP BY payment\_method;



# Analyze Category Ratings by City

* + **Question:** What are the average, minimum, and maximum ratings for each category in each city?
  + **Purpose:** This data can guide city-level promotions, allowing Walmart to address regional preferences and improve customer experiences.
  + **Code:**

select

city,

category,

min(rating) as min\_rating,

max(rating) as max\_rating,

avg(rating) as avg\_rating

from walmart\_clean\_data

group by city,category;



# Calculate Total Profit by Category

* + **Question:** What is the total profit for each category, ranked from highest to lowest?
  + **Purpose:** Identifying high-profit categories helps focus efforts on expanding these products or managing pricing strategies effectively.
  + **Code:**

select

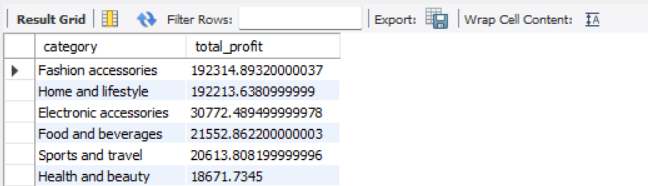
category,

sum(unit\_price\*quantity\*profit\_margin) as total\_profit

from walmart\_clean\_data

group by category

order by total\_profit desc;



# Determine the Most Common Payment Method per Branch

* + **Question:** What is the most frequently used payment method in each branch?
  + **Purpose:** This information aids in understanding branch-specific payment preferences, potentially allowing branches to streamline their payment processing systems.
  + **Code:**

with cte as

(SELECT

branch,

payment\_method,

COUNT(\*) AS total\_trans,

RANK() OVER(PARTITION BY branch ORDER BY COUNT(\*) DESC) AS rank\_trans

FROM walmart\_clean\_data

GROUP BY branch, payment\_method

)

select \* from cte where rank\_trans=1;

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# Analyze Sales Shifts Throughout the Day

* + **Question:** How many transactions occur in each shift (Morning, Afternoon, Evening) across branches?
  + **Purpose:** This insight helps in managing staff shifts and stock replenishment schedules, especially during high-sales periods.
  + **Code:**

select

branch,

case

when hour(time(time))<12 then 'Morning'

when hour(time(time))between 12 and 17 then 'Afternoon'

else 'Evening'

end as shift,

count(\*) as num\_invoices

from walmart\_clean\_data

GROUP BY branch, shift

ORDER BY branch, num\_invoices DESC;

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