

WALMART DATA ANALYTICS

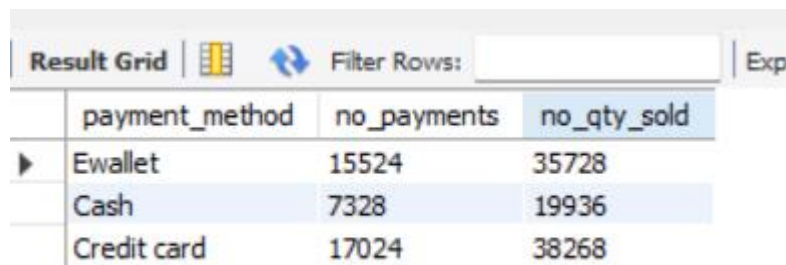
SQL BUSINESS PROBLEM:

1. Analyze payment Method and sales

What are the different payment methods, and how many transactions and items were sold with each method?

Sql:

```
""select payment_method , count(*)as no_payments,  
sum(quantity)as no_qty_sold  
from walmart  
group by payment_method""
```



The screenshot shows a SQL query result grid with the following data:

	payment_method	no_payments	no_qty_sold
▶	Ewallet	15524	35728
	Cash	7328	19936
	Credit card	17024	38268

-- 2. Identify the highest-rated category in each branch

Which category received the highest average rating in each branch?

Sql:

```
""SELECT *  
FROM (  
    SELECT branch,  
           category,  
           AVG(rating) AS avg_rating,  
           RANK() OVER (PARTITION BY branch ORDER BY AVG(rating) DESC) AS `rank`
```

```

FROM walmart

GROUP BY branch, category

) AS subquery

WHERE `rank` = 1''';

```

	branch	category	avg_rating	rank
▶	WALM001	Electronic accessories	7.45	1
	WALM002	Food and beverages	8.25	1
	WALM003	Sports and travel	7.5	1
	WALM004	Food and beverages	9.3	1
	WALM005	Health and beauty	8.366666666666665	1
	WALM006	Fashion accessories	6.797058823529412	1
	WALM007	Food and beverages	7.55	1
	WALM008	Food and beverages	7.4	1
	WALM009	Sports and travel	9.6	1
	WALM010	Electronic accessories	9	1
	WALM011	Food and beverages	7	1
	WALM012	Health and beauty	7.45	1
	WALM013	Health and beauty	7.6	1
	WALM014	Electronic accessories	6.833333333333333	1
	WALM015	Home and lifestyle	6.223076923076923	1
	WALM016	Sports and travel	9.1	1
	WALM017	Electronic accessories	7	1
	WALM018	Electronic accessories	8.75	1

-- 3. Determine the busiest day for each branch

What is the busiest day of the week for each branch based on transaction volume?

sql

```
'''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 AVG (rating) DESC) AS `rank`
```

```

FROM walmart

GROUP BY branch, category, day_name

) AS subquery

WHERE `rank` = 1";

```

	branch	day_name	no_transactions	rank
▶	WALM001	Saturday	4	1
	WALM002	Sunday	4	1
	WALM003	Saturday	4	1
	WALM004	Saturday	4	1
	WALM005	Saturday	4	1
	WALM006	Sunday	4	1
	WALM006	Wednesday	12	1
	WALM007	Sunday	4	1
	WALM008	Sunday	4	1
	WALM009	Sunday	4	1
	WALM010	Tuesday	4	1
	WALM011	Monday	4	1
	WALM012	Thursday	4	1
	WALM013	Saturday	4	1
	WALM014	Wednesday	8	1
	WALM015	Tuesday	16	1
	WALM016	Thursday	4	1
	WALM017	Tuesday	4	1
	WALM018	Sunday	4	1

-- 4. Calculate the Total Quantity of items sold by payment method.

How many items were sold through each payment method?

sql

```

""select

    payment_method,

    sum(quantity) as no_qty_sold

from walmart

group by payment_method"";

```

Result Grid		Filter Rows:
	payment_method	no_qty_sold
▶	Ewallet	35728
	Cash	19936
	Credit card	38268

-- 5. Analyze category Rating by city

What are the average, minimum, and maximum ratings for each category
In each city?

sql

""select

city,

category,

min(rating) as min_rating,

max(rating) as max_rating,

avg(rating) as avg_rating

from walmart

group by 1,2""

city	category	min_rating	max_rating	avg_rating
San Antonio	Health and beauty	5	9.1	7.05
Harlingen	Electronic accessories	9.6	9.6	9.6
Haltom City	Home and lifestyle	3	9.5	6.227777777777777
Bedford	Health and beauty	6.1	9.3	8.15
Irving	Sports and travel	5.3	5.3	5.3
Denton	Electronic accessories	4.1	9	6.7
Cleburne	Electronic accessories	5.8	7.8	7.249999999999999
Canyon	Home and lifestyle	3	9	6.25
Grapevine	Health and beauty	7.2	7.2	7.2
Texas City	Food and beverages	5.5	5.9	5.7
Irving	Fashion accessories	3	9.8	6.206896551724138
San Angelo	Electronic accessories	3	7	5.830769230769231
Abilene	Electronic accessories	7.1	8.8	7.966666666666666
San Angelo	Food and beverages	8.2	8.5	8.35
Lewisville	Health and beauty	5.5	5.7	5.6
Corpus Christi	Sports and travel	4.5	4.5	4.5
Round Rock	Health and beauty	4.6	8.7	6.649999999999999
Cedar Park	Sports and travel	6.6	6.9	6.75

-- 6. calculate the total profit for each category

What is the total profit for each category, ranked from highest to lowest?

sql

""select

```

category,
sum(total) as total_revenue,
sum(total * profit_margin) as profit
from walmart'''
group by 1

```

Result Grid			
		Filter Rows:	
		Export:	
		Wrap C	
	category	total_revenue	profit
▶	Health and beauty	187404.71999999983	74686.93800000005
	Electronic accessories	312700.12000000034	123089.95800000004
	Home and lifestyle	1957000.2399999993	768854.5523999989
	Sports and travel	209991.7200000001	82455.2328
	Food and beverages	213885.11999999994	86211.44879999998
	Fashion accessories	1957923.5999999992	769259.5727999983

-- 7. Determine the Most common payment method for each branch


What is the most frequently used payment method in each branch?

sql

```

'''WITH cte AS (
    SELECT branch,
           payment_method,
           COUNT(*) AS total_trans,
           RANK() OVER (PARTITION BY branch ORDER BY COUNT(*) DESC) AS `rank`
    FROM walmart
    GROUP BY 1,2
)
SELECT *
FROM cte
WHERE `rank` = 1''';

```

Result Grid			Filter Rows:		Export:
	branch	payment_method	total_trans	rank	
▶	WALM001	Ewallet	180	1	
	WALM002	Ewallet	148	1	
	WALM003	Credit card	460	1	
	WALM004	Ewallet	176	1	
	WALM005	Ewallet	224	1	
	WALM006	Ewallet	200	1	
	WALM007	Ewallet	208	1	
	WALM008	Ewallet	156	1	
	WALM009	Credit card	556	1	
	WALM010	Ewallet	188	1	
	WALM011	Ewallet	156	1	
	WALM012	Ewallet	208	1	
	WALM013	Ewallet	176	1	
	WALM014	Ewallet	112	1	
	WALM015	Ewallet	228	1	
	WALM016	Ewallet	184	1	

--8. Analyze sales shifts throughout the day

How many transctions occurs in each shift(morning, afternoon, evening) across branches?

sql

'''SELECT

CASE

WHEN HOUR(TIME(time)) < 12 THEN 'Morning'

WHEN HOUR(TIME(time)) BETWEEN 12 AND 17 THEN 'Afternoon'

ELSE 'Evening'

END AS shift,

COUNT(DISTINCT invoice_id) AS number_of_invoices

FROM walmart

GROUP BY shift

ORDER BY number_of_invoices DESC''';

Result Grid	Filter Rows:
shift	number_of_invoices
Afternoon	4636
Evening	3246
Morning	2087

