Darshan Rajeev Naik

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WALMART QTR-01 SALES DATA ANALYSIS USING MYSQL

Key Metrics

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```sql
SELECT
    Total_purchases,
    Total_Quantity,
    avg_ordervalue,
    Revenue,
    profit,
    CASE
        WHEN revenue = 0 THEN 0
        ELSE ROUND(((profit / revenue) * 100), 2)
    END AS Profit_percentage
FROM
    (SELECT
        COUNT(invoice_id) AS Total_Purchases,
            SUM(quantity) AS Total_Quantity,
            ROUND(AVG(total), 2) AS avg_ordervalue,
            ROUND(SUM(total), 2) AS Revenue,
            ROUND(SUM(total) - SUM(Cogs), 2) AS Profit
    FROM
        sales) AS sub_overall;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

Total_purchases	Total_Quantity	avg_ordervalue	Revenue	profit	Profit_percentage
995	5472	322.50	320886.39	15280.30	4.76

Top Customer Type

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Limit to 10000 rows

```sql
SELECT
    customer_type,
    ROUND(revenue, 2) AS revenue,
    ROUND(((revenue / (SELECT
                SUM(total)
            FROM
                sales)) * 100),
        2) AS percentage_share
FROM
    (SELECT
        customer_type, SUM(total) AS Revenue
    FROM
        sales
    GROUP BY customer_type
    ORDER BY revenue DESC) AS ct
GROUP BY customer_type
LIMIT 1;
```

Result Grid | Filter Rows:

customer_type	revenue	percentage_share
Member	163625.10	50.99

Most Preferred Payment Type

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```sql
SELECT
    payment_method,
    payment_method_count,
    ROUND(((payment_method_count / (SELECT
                COUNT(invoice_id)
            FROM
                sales)) * 100),
        2) AS percentage_share,
    revenue,
    ROUND(((revenue / (SELECT
                SUM(total)
            FROM
                sales)) * 100),
        2) AS revenue_share_percentage
FROM
    (SELECT
        COUNT(invoice_id) AS payment_method_count,
            payment AS payment_method,
            SUM(total) AS revenue
    FROM
        sales
    GROUP BY payment_method) AS payment
ORDER BY payment_method_count DESC
LIMIT 1;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: | Fetch rows:

payment_method	payment_method_count	percentage_share	revenue	revenue_share_percentage
Cash	344	34.57	112206.5700	34.97

Top Selling Product Line

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```sql
SELECT
    product_line,
    Total_revenue,
    ROUND((Total_revenue / (SELECT
                SUM(total)
            FROM
                sales) * 100),
        2) AS percentage_share
FROM
    (SELECT
        product_line, SUM(total) AS Total_Revenue
    FROM
        sales
    GROUP BY product_line
    ORDER BY Total_Revenue DESC
    LIMIT 1) AS pl;
```

Result Grid | Filter Rows: | Export:

product_line	Total_revenue	percentage_share
Food and beverages	56144.8440	17.50

Most Profitable Product Line

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```sql
SELECT
    product_line,
    ROUND(profit, 2) AS profit,
    ROUND((SUM(profit) / (SELECT
                    SUM(total) - SUM(cogs)
                FROM
                    sales) * 100),
            2) AS percentage_share
FROM
    (SELECT
        product_line, total_revenue - total_cogs AS profit
    FROM
        (SELECT
        product_line,
            SUM(total) AS total_Revenue,
            SUM(cogs) AS total_cogs
    FROM
        sales
    GROUP BY product_line) AS p1
    GROUP BY product_line
    ORDER BY profit DESC) AS p2
GROUP BY product_line
LIMIT 1;
```

Result Grid | Filter Rows:

product_line	profit	percentage_share
Food and beverages	2673.56	17.50

Product Line With Quantity Sold

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```sql
SELECT
    product_line, SUM(quantity) AS total_quantity
FROM
    sales
GROUP BY product_line
ORDER BY total_quantity DESC;
```

product_line	total_quantity
Electronic accessories	961
Food and beverages	952
Home and lifestyle	911
Sports and travel	902
Fashion accessories	902
Health and beauty	844

Month Wise Revenue Distribution

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```sql
SELECT
    month,
    month_name,
    ROUND(Total_revenue, 2) AS Total_revenue,
    ROUND(((Total_revenue / (SELECT
                    SUM(total)
                FROM
                    sales)) * 100),
            2) AS Percentage_share
FROM
    (SELECT
        MONTH(date) AS month,
            MONTHNAME(date) AS month_name,
            SUM(total) AS Total_revenue
    FROM
        sales
    GROUP BY month , month_name
    ORDER BY month) AS revenue;
```

	month	month_name	Total_revenue	Percentage_share
▶	1	January	116291.87	36.24
	2	February	95727.38	29.83
	3	March	108867.15	33.93

Branch Wise Revenue and Profit Distribution

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```sql
SELECT
    city,
    branch,
    revenue,
    ROUND(((revenue / (SELECT
                    SUM(total)
                FROM
                    sales)) * 100),
            2) AS revenue_percentage,
    profit
FROM
    (SELECT
        city,
            branch,
            ROUND(SUM(total), 2) AS revenue,
            ROUND(SUM(gross_income), 2) AS profit
    FROM
        sales
    GROUP BY city , branch
    ORDER BY revenue DESC) AS rp;
```

Result Grid | Filter Rows: | Export: | Wrap

city	branch	revenue	revenue_percentage	profit
Naypyitaw	C	110490.78	34.43	5261.47
Yangon	A	105861.01	32.99	5041.00
Mandalay	B	104534.61	32.58	4977.84

Distribution of Payment Method In Total Revenue

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```sql
SELECT
    payment,
    count_of_transactions,
    ROUND(((total_revenue / (SELECT
                SUM(total)
            FROM
                sales)) * 100),
        2) AS revenue_percentage
FROM
    (SELECT
        payment,
        COUNT(invoice_id) AS count_of_Transactions,
        SUM(total) AS total_revenue
    FROM
        sales
    GROUP BY payment
    ORDER BY total_revenue DESC) AS pt;
```

payment	count_of_transactions	revenue_percentage
Cash	344	34.97
Ewallet	342	33.76
Credit card	309	31.27

Peak Sales Month

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Limit to 10000 rows

```sql
SELECT
    month,
    ROUND(total_revenue, 2) AS total_revenue,
    ROUND(((total_revenue / (SELECT
                SUM(total)
            FROM
                sales)) * 100),
        2) AS revenue_percentage
FROM
    (SELECT
        MONTHNAME(date) AS month,
            ROUND(SUM(total), 2) AS total_revenue
    FROM
        sales
    GROUP BY month
    ORDER BY total_revenue DESC
    LIMIT 1) pst;
```

Result Grid | Filter Rows:

month	total_revenue	revenue_percentage
January	116291.87	36.24

Peak Sales Day

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Limit to 10000 rows

```sql
SELECT
    day_of_week,
    ROUND(total_revenue, 2) AS total_revenue,
    ROUND(((total_revenue / (SELECT
                SUM(total)
            FROM
                sales)) * 100),
        2) AS Percentage
FROM
    (SELECT
        day_of_week, SUM(total) AS total_revenue
    FROM
        sales
    GROUP BY day_of_week
    ORDER BY total_revenue DESC
    LIMIT 1) AS ps;
```

Result Grid | Filter Rows:

day_of_week	total_revenue	Percentage
Saturday	56120.81	17.49

Peak Sales Day Time

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```sql
SELECT
    day_time,
    ROUND(total_revenue, 2) AS total_revenue,
    ROUND(((total_revenue / (SELECT
                    SUM(total)
                FROM
                    sales)) * 100),
            2) AS revenue_percentage
FROM
    (SELECT
        day_time, ROUND(SUM(total), 2) AS total_revenue
    FROM
        sales
    GROUP BY day_time
    ORDER BY total_revenue DESC
    LIMIT 1) pst;
```

Result Grid | Filter Rows:

day_time	total_revenue	revenue_percentage
Evening	137365.27	42.81

Peak Sales Time Shift on a Daily Basis

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```sql
select day_of_week, day_time, total_sales, revenue_percentage, ranking
from(
select day_of_week, day_time, total_sales, round(((total_sales/(select sum(total) from sales))*100),2)
as revenue_percentage, rank() over( partition by day_of_week order by total_sales desc) as ranking
    from(
        select day_of_week, day_time, sum(total) as total_sales
        from sales
        group by day_of_week, day_time
        order by day_of_week, day_time desc) as total_sales
    ) as total_sales_2
where ranking=1
order by total_sales desc;
```

day_of_week	day_time	total_sales	revenue_percentage	ranking
Saturday	Evening	27924.5295	8.70	1
Tuesday	Evening	21997.9200	6.86	1
Thursday	Evening	19115.6805	5.96	1
Sunday	Evening	18408.0435	5.74	1
Wednesday	Afternoon	18041.1735	5.62	1
Friday	Afternoon	17845.8840	5.56	1
Monday	Evening	15657.6000	4.88	1

Top 3 Peak Sales Day Branch wise

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```sql
select branch, day_of_week,revenue, percentage, ranking
from(
    select branch, day_of_week, revenue, percentage, rank() over(partition by branch order by percentage desc) as ranking
    from
    (
        select branch, day_of_week, sum(total) as revenue, round(((sum(quantity)/(select sum(quantity) from sales))*100),2) as percentage
        from sales
        group by branch, day_of_week
        )as br
    )as br1
        where ranking in (1,2,3) ;
```

branch	day_of_week	revenue	percentage	ranking
A	Saturday	16765.4130	5.54	1
A	Sunday	17006.8185	5.19	2
A	Friday	14543.8650	5.01	3
B	Saturday	21284.4240	6.12	1
B	Tuesday	18859.2390	5.68	2
B	Wednesday	12119.2365	5.12	3
C	Sunday	17035.7460	5.65	1
C	Tuesday	17667.7935	5.59	2
C	Saturday	18070.9725	5.14	3

Branch Whose Average Quantity Sold Is More Than Average Quantity Sold

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```sql
SELECT
    CASE
        WHEN
            branch_avg > (SELECT
                    AVG(quantity)
                FROM
                    sales)
        THEN
            branch
        ELSE NULL
    END AS branch,
    branch_avg,
    (SELECT
            AVG(quantity)
        FROM
            sales) AS avg_quantity
FROM
    (SELECT
        branch, AVG(quantity) branch_avg
    FROM
        sales
    GROUP BY branch) AS p1
WHERE
    branch_avg > (SELECT
            AVG(quantity)
        FROM
            sales)
ORDER BY branch_avg DESC;
```

branch	branch_avg	avg_quantity
C	5.5902	5.4995

Naming Product Line as Good and Bad based on Average Sales

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```sql
SELECT
    product_line,
    CASE
        WHEN
            avg_sales > (SELECT
                    ROUND(AVG(total), 2)
                FROM
                    sales)
        THEN
            'Good'
        ELSE 'Bad'
    END AS product_category,
    avg_sales,
    (SELECT
            ROUND(AVG(total), 2)
        FROM
            sales) AS avg_total_sales
FROM
    (SELECT
        product_line, ROUND(AVG(total), 2) AS avg_sales
    FROM
        sales
    GROUP BY product_line) AS p1;
```

product_line	product_category	avg_sales	avg_total_sales
Food and beverages	Good	322.67	322.50
Health and beauty	Good	323.54	322.50
Sports and travel	Good	330.90	322.50
Fashion accessories	Bad	305.09	322.50
Home and lifestyle	Good	336.64	322.50
Electronic accessories	Bad	318.24	322.50

Gender Wise Product Preferences

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```sql
select gender, product_line, product_count
from(
    select gender, product_line, product_count, rank() over(partition by gender order by product_count desc) as ranking
    from(
        select gender, product_line, count(product_line) as product_count
        from sales
        group by gender, product_line
        order by gender, product_count desc) as p1)as p2
        where ranking in (1,2, 3);
```

gender	product_line	product_count
Female	Fashion accessories	96
Female	Food and beverages	90
Female	Sports and travel	86
Male	Health and beauty	88
Male	Electronic accessories	86
Male	Food and beverages	84

Product Line Wise Average Rating

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```sql
SELECT
    product_line, ROUND(AVG(rating), 2) AS avg_rating
FROM
    sales
GROUP BY product_line
ORDER BY avg_rating DESC;
```

product_line	avg_rating
Food and beverages	7.11
Fashion accessories	7.03
Health and beauty	6.98
Electronic accessories	6.91
Sports and travel	6.86
Home and lifestyle	6.84

Time Of The Day Most Ratings Received

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```sql
SELECT
    day_time, COUNT(rating) AS count_of_rating
FROM
    sales
GROUP BY day_time
ORDER BY count_of_rating DESC
LIMIT 1;
```

Result Grid | Filter Rows:

day_time	count_of_rating
Evening	429

Highest Average Rated Day

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```sql
SELECT
    day_of_week, AVG(rating) AS avg_rating
FROM
    sales
GROUP BY day_of_week
ORDER BY avg_rating DESC
LIMIT 1;
```

Result Grid | Filter Rows:

day_of_week	avg_rating
Monday	7.13065

Day That Has Highest Average Rating Branch Wise

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```sql
select branch, day_of_week, round(avg_rating,2) as avg_rating
from(
select branch, day_of_week, avg(rating) as avg_rating, rank() over(partition by branch order by avg(rating) desc) as ranking
from sales
group by branch, day_of_week
order by branch) as b
where ranking=1;
```

branch	day_of_week	avg_rating
A	Friday	7.31
B	Monday	7.27
C	Saturday	7.23

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Thank You
Express your Views On Analysis
In Comment Section