

Assignment for Business Analyst Intern @Jar

This document provides a detailed response to the questions posed in the assignment, offering in-depth insights and explanations based on the analysis conducted. It includes key findings, methodologies, and outcomes to support a comprehensive understanding of the subject matter.

Tools: SQL

Question 1 : (30 marks)

Sales Analysis:

Part 1: Sales and Profitability Analysis

- Merge the List of Orders and Order Details datasets on the basis of Order ID. Calculate the total sales (Amount) for each category across all orders.

```
select o.Category ,SUM(Amount) as TotalAmount
from List_of_Orders as l
JOIN Order_Details as o
on l.Order_ID = o.Order_ID
group by o.Category;
```

	Category	TotalAmount
1	Clothing	139054
2	Electronics	165267
3	Furniture	127181

- For each category, calculate the average profit per order and total profit margin (profit as a percentage of Amount).

```
select o.Category ,round((sum(o.Amount) * 100.0) / (select sum(Amount) from Order_Details), 2) as PercentageContribution
from List_of_Orders as l
JOIN Order_Details as o
on l.Order_ID = o.Order_ID
group by o.Category;
```

```
select o.Category ,round(sum(o.Profit) / count(DISTINCT o.Order_ID),2) as AvgProfitPerOrder,
round((SUM(o.Profit) * 100.0) / SUM(o.Amount),2) AS TotalProfitMarginPercentage
from List_of_Orders as l
JOIN Order_Details as o
on l.Order_ID = o.Order_ID
group by o.Category;
```

	Category	PercentageContribution
1	Clothing	32.23
2	Electronics	38.3
3	Furniture	29.47

	Category	AvgProfitPerOrder	TotalProfitMarginPercentage
1	Clothing	28.4	8.03
2	Electronics	51.44	6.35
3	Furniture	12.35	1.81

- Identify the top-performing and underperforming categories based on these metrics. Also, suggest reasons for their performance differences.

Electronics is clearly the best-performing category, bringing in the highest sales and profits, likely because of strong demand and higher-priced items. On the other hand, Furniture is struggling with very low profit margins and earnings per order, probably due to high costs and pricing challenges.

Part 2: Target Achievement Analysis

- Using the Sales Target dataset, calculate the percentage change in target sales for the Furniture category month-over-month.

```
select * from Sales_target

select
    datename(month,Month_of_Order_Date) as Month,
    Category,
    Target,
    lag(Target) over (order by Month_of_Order_Date) as Previous_Target,
    round(
        (cast(Target as float) - lag(Target) over (order by Month_of_Order_Date))
        / lag(Target) over (order by Month_of_Order_Date) * 100, 2
    ) as Percentage_Change
from
    Sales_Target
where
    Category = 'Furniture';
```

	Month	Category	Target	Previous_Target	Percentage_Change
1	January	Furniture	11500	NULL	NULL
2	February	Furniture	11600	11500	0.87
3	March	Furniture	11800	11600	1.72
4	April	Furniture	10400	11800	-11.86
5	May	Furniture	10500	10400	0.96
6	June	Furniture	10600	10500	0.95
7	July	Furniture	10800	10600	1.89
8	August	Furniture	10900	10800	0.93
9	Septem...	Furniture	11000	10900	0.92
10	October	Furniture	11100	11000	0.91
11	Novem...	Furniture	11300	11100	1.8
12	Decem...	Furniture	11400	11300	0.88

- Analyse the trends to identify months with significant target fluctuations. Suggest strategies for aligning target expectations with actual performance trends.

Most months show small and steady increases in target sales, which suggests a careful approach to growth. But April shows a sharp drop of -11.86%, which could be a reaction to low sales expectations or past performance. On the other hand, July and November targets are slightly higher, likely because of seasonal sales boosts. To make targets more realistic, April's drop should be reviewed and adjusted more smoothly instead of a sudden cut. Also, using past sales trends and seasonal patterns can help set better targets that match actual performance.

Part 3: Regional Performance Insights

- From the List of Orders dataset, identify the top 5 states with the highest order count. For each of these states, calculate the total sales and average profit.

```
select top 5
    l.State,
    count(distinct l.Order_ID) as OrderCount,
    sum(o.Amount) as TotalSales,
    round(avg(o.Profit), 2) as AvgProfit
from
    List_of_Orders l
join
    Order_Details o
on
    l.Order_ID = o.Order_ID
group by
    l.State
order by
    OrderCount desc;
```

	State	OrderCount	TotalSales	AvgProfit
1	Madhya Pradesh	101	105140	16.33
2	Maharashtra	90	95348	21.3
3	Rajasthan	32	21149	16.99
4	Gujarat	27	21058	5.34
5	Punjab	25	16786	-10.15

- Highlight any regional disparities in sales or profitability. Suggest regions or cities that should be prioritized for improvement.

There's a clear regional disparity in performance. While Madhya Pradesh and Maharashtra are leading in both order count and total sales, their profits are just moderate, showing that high sales don't always mean high profits. On the other hand, Punjab is concerning as it shows a negative average profit, meaning sales are happening at a loss. Even Gujarat, with decent sales, is struggling with very low profits. This highlights that some regions may need a review of pricing, cost structures, or discounting strategies to improve profitability.

SQL :

<https://github.com/aditychaurasiya/Jar>

Question 2 : (10 marks)**App Exploration:**

Explore the features and user experience of the Jar app. Highlight five things you found particularly effective and user-friendly. Additionally, identify five areas where improvements could be made, providing your reasoning for each suggestion.

Question 3: (10 marks)**Product Exploration:**

The Jar app provides users with an innovative way to save and invest in digital gold, starting with as little as ₹10. It automates savings and investments, making financial planning seamless and accessible. As the first Made-in-India app to pioneer such a solution, Jar has successfully created a niche in automated savings and investment.

Building on its strong foundation and leveraging its existing user base and trust, what are some new business opportunities Jar could venture into, to expand its offerings and enhance user engagement? Discuss how the app can utilize its strengths, such as automation, a user-friendly design, and established credibility, to seamlessly integrate these new services, deepen its value proposition, and achieve significant milestones in the financial ecosystem.