Jaisonllanos /
AzureProject

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AzureProject / **Notebook_Class_Project.ipynb**

Jaisonllanos Notebook

a3d3e64 · 10 minutes ago

1090 lines (1090 loc) · 44.7 KB

Preview   Code   Blame

Raw

1) Profit by Region- 2015

The purpose is to display the total profit generated from sales in each region during the year 2015. This helps in identifying which region contributed the most to the overall profit in that particular year.

In [50]:
```
SELECT
    Region,
    SUM(Profit) AS TotalProfit
FROM
    sales_data
WHERE
    YEAR(Order_Date) = 2015
GROUP BY
    Region
ORDER BY
    TotalProfit DESC;
```

(4 rows affected)
Total execution time: 00:00:00.024

Out[50]:

Region	TotalProfit
South	1234311
East	622897
Central	143237
West	-1864364

2) Monthly Profit -2015

The purpose is to display the total profit generated each month in the year 2015. By grouping the results by year and month and ordering them choronologically, the query allows for clear analysis of how profits varied from month to month throughout the year.

In [51]:
```
SELECT
    YEAR(Order_Date) AS Order_Year,
    MONTH(Order_Date) AS Order_Month,
    SUM(Profit) AS Monthly_Profit
FROM
    sales_data
WHERE
    YEAR(Order_Date) = 2015
GROUP BY
    YEAR(Order_Date),
    MONTH(Order_Date)
ORDER BY
    Order_Year, Order_Month;
```

(12 rows affected)
Total execution time: 00:00:00.012

Out[51]:

Order_Year	Order_Month	Monthly_Profit
2015	1	412726
2015	2	-127603
2015	3	295005
2015	4	-718510
2015	5	112138
2015	6	-122485
2015	7	-390477
2015	8	-336985
2015	9	-149170
2015	10	-394505
2015	11	5959
2015	12	1549988

3) Total Porfit by Category- Year 2015

The Purpose of this is to display the top 5 categories that generated the highest total profit in the year 2015. By grouping by category and summing up the profit, followed by ordering and limiting the top 5, the query provides insight into which product categories were the most profitable during that specific year.

In [52]:
```
SELECT TOP 5
    Category,
    SUM(Profit) AS TotalProfit
FROM
    sales_data
WHERE
    YEAR(Order_Date) = 2015
GROUP BY
    Category
ORDER BY
    TotalProfit DESC;
```

(3 rows affected)
Total execution time: 00:00:00.007

Out[52]:

Category	TotalProfit
Technology	844773
Furniture	-265000
Office Supplies	-443692

4) Total Profit By Sub-Category 2015

The purpose of this is to display the total profit generated by each sub-category in the year 2015. By grouping by sub-category and summing up the profits, followed by ordering by total profit in

descending order, the query provides insight into which specific sub-categories contributed the most to the overall profit during that year.

In [53]:
```sql
SELECT
    Sub_Category,
    SUM(Profit) AS TotalProfit
FROM
    sales_data
WHERE
    YEAR(Order_Date) = 2015
GROUP BY
    Sub_Category
ORDER BY
    TotalProfit DESC;
```

(17 rows affected)
Total execution time: 00:00:00.009

Out[53]:

Sub_Category	TotalProfit
Phones	865890
Binders	417163
Bookcases	407650
Chairs	334414
Envelopes	259311
Fasteners	135788
Paper	115428
Accessories	109306
Labels	65524
Appliances	10245
Machines	-4946
Copiers	-125477
Storage	-272670
Tables	-336436
Supplies	-371875
Furnishings	-670628
Art	-802606

5) Total Profit Segment + Unique Clients 2015

The purpose of this is to display the total profit generated and the number of customers for each segment in the year 2015. By grouping by segment and calculating both the total profit and count of unique customers, the query provides insights into which segments were the most profitable and

had the largest customer base during the year of 2015.

In [54]:
```
SELECT
    Segment,
    SUM(Profit) AS TotalProfit,
    COUNT(DISTINCT Customer_ID) AS UniqueCustomers
FROM
    sales_data
WHERE
    YEAR(Order_Date) = 2015
GROUP BY
    Segment
ORDER BY
    TotalProfit DESC;
```

(3 rows affected)

Total execution time: 00:00:00.011

Out[54]:

Segment	TotalProfit	UniqueCustomers
Home Office	1475757	105
Consumer	-297119	307
Corporate	-1042557	177

6) Customer Segment Analysis

By understanding which segments contribute the most to sales, businesses can tailor their marketing and sales strategies to target the most profitable segments effectively. This Helps in enhancing customer satisfaction and loyalty.

In [55]:
```
SELECT
    Segment,
    SUM(Sales) AS total_sales
FROM sales_data
GROUP BY Segment
ORDER BY total_sales DESC
```

(3 rows affected)

Total execution time: 00:00:00.012

Out[55]:

Segment	total_sales
Consumer	18270542114159
Corporate	10850692509297
Home Office	6247603791199

Sales Performance By Region

By analyzing regional sales data, businesses can identify high performing regions, address

underperforming ares, and allocate resources more efficiently.

In [57]:
```
SELECT
    Region,
    SUM(Sales) AS total_sales
FROM [sales_data]
GROUP BY Region
ORDER BY total_sales DESC
```

(4 rows affected)

Total execution time: 00:00:00.044

Out[57]:

Region	total_sales
West	11071012263257
East	10202693171101
Central	8245860567887
South	5849272412410

Profitability Analysis 2015 - SandDance

The purpose is to analyze and present the profitability of different sub-categories of items for the year of 2015. By summing up the profit generated by each sub-category. The query helps identify which specific types of items contributed the most overall profit in that year. This analysis is useful for understanding the revenue generating potential of different product categories.

In [56]:
```
SELECT
    Sub_Category AS Item,
    SUM(Profit) AS TotalProfit
FROM
    sales_data
WHERE
    YEAR(Order_Date) = 2015
GROUP BY
    Sub_Category
ORDER BY
    TotalProfit DESC;
```

(17 rows affected)

Total execution time: 00:00:00.009

Out[56]:

Item	TotalProfit
Phones	865890
Binders	417163
Bookcases	407650
Chairs	334414
Envelopes	259311
Fasteners	135788
Paper	115428
Accessories	109306
Labels	65524

Appliances	10245
Machines	-4946
Copiers	-125477
Storage	-272670
Tables	-336436
Supplies	-371875

Appliances	10245
Machines	-4946