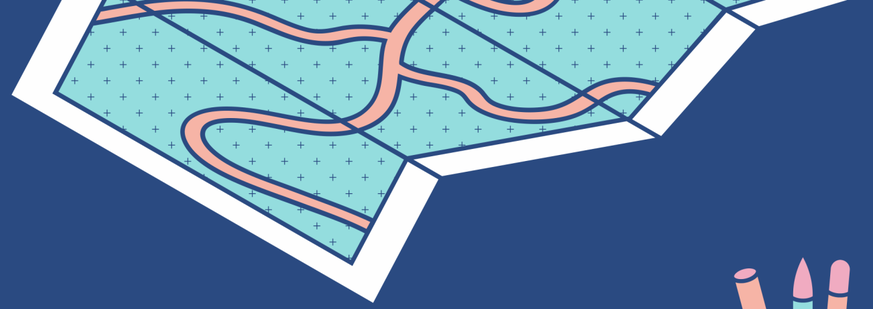


SQL CASE STUDY 01

E-Commerce Store Performance Analysis

As the owner of an e-commerce store, Sam wants to gain insights into the performance of his online business and make data-driven decisions to improve profitability, customer satisfaction, and overall business growth.

SQL CASE STUDY 01

Top 10 Crucial Insights Sought by E-Commerce Owner

1. How many orders were processed?
2. What is the total revenue?
3. The average profit, discount, and shipping cost per sale?
4. Which product category generates the highest sales revenue?
5. What is the profitability for each product category? (Profit Margin by Product Category)
6. How does the average order value vary across different customer segments?
7. What are the monthly trends in sales and Which months or seasons experience a significant increase or decrease in sales?
8. How does the sales performance vary across different regions or countries?
9. What is the average time to process an order (order date to ship date) for each ship mode?
10. Is there a ship mode that consistently performs better regarding order processing time?

SQL CASE STUDY 01

How many orders were processed?

```
SELECT
    COUNT (DISTINCT ([Order ID] ) ) AS total_orders
FROM orders
```

RESULT

Total 5129 Order were processed

SQL CASE STUDY 01

What is the total revenue?

```
SELECT
    SUM(sales) AS total_Revenue
FROM products
```

RESULT

Total of $8024275 USD revenue was generated

SQL CASE STUDY 01

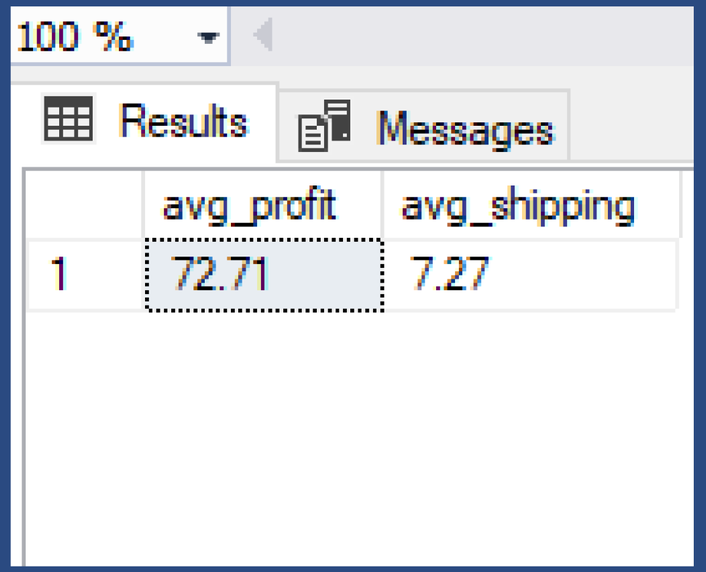
The average profit, and shipping cost per sale?

```
WITH average_values AS
( SELECT

    ROUND(AVG(Profit),2) AS avg_profit,
    ROUND(AVG([Shipping Cost]),2) AS avg_shipping

FROM products )

SELECT *
FROM average_values
```



SQL CASE STUDY 01

Which product category generates the highest sales revenue?

```
SELECT
    [Product Category],
    SUM(Sales) AS total_revenue

FROM products
GROUP BY [Product Category]
ORDER BY total_revenue DESC
```

RESULTS

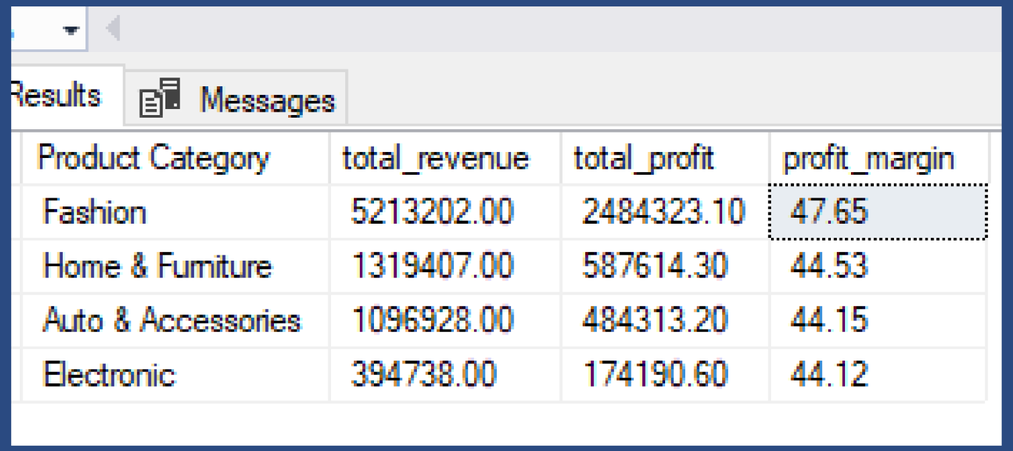
FASHION category generated the highest revenue

SQL CASE STUDY 01

What is the profit margin for each product category?

```
SELECT
    [Product Category],
    SUM(sales) AS total_revenue,
    SUM(Profit) AS total_profit,
    (SUM(profit)/SUM(sales))*100 AS profit_margin

FROM products
GROUP BY [Product Category]
ORDER BY total_profit DESC
```



Results | Messages

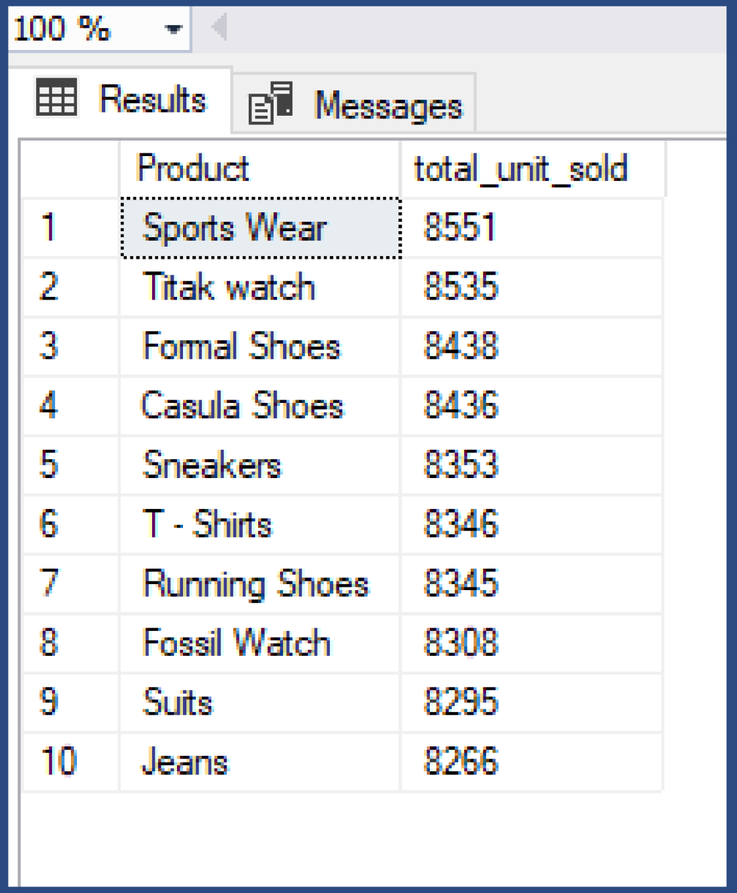
Product Category	total_revenue	total_profit	profit_margin
Fashion	5213202.00	2484323.10	47.65
Home & Furniture	1319407.00	587614.30	44.53
Auto & Accessories	1096928.00	484313.20	44.15
Electronic	394738.00	174190.60	44.12

SQL CASE STUDY 01

What are the top 10 selling products?

```
SELECT
    TOP 10 Product,
    SUM(Quantity) AS total_unit_sold

FROM products
GROUP BY Product
ORDER BY total_unit_sold DESC
```


100 %

Results | Messages

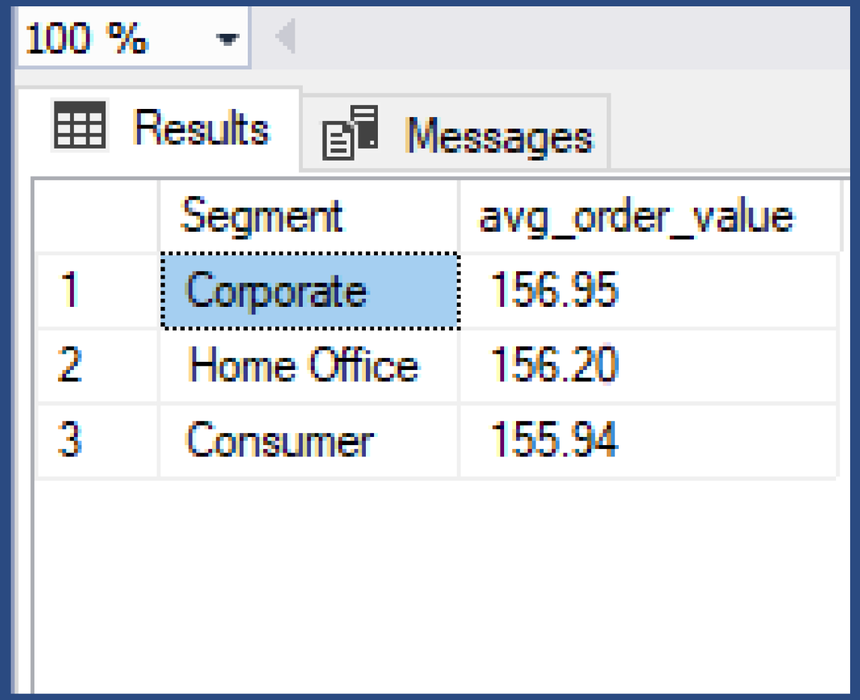
	Product	total_unit_sold
1	Sports Wear	8551
2	Titak watch	8535
3	Formal Shoes	8438
4	Casula Shoes	8436
5	Sneakers	8353
6	T - Shirts	8346
7	Running Shoes	8345
8	Fossil Watch	8308
9	Suits	8295
10	Jeans	8266

SQL CASE STUDY 01

How does the average order value vary across different customer segments?

```
SELECT
    c.Segment,
    ROUND(avg(p.sales),2) AS avg_order_value

FROM customers c
FULL JOIN products p
ON c.[Order ID] = p.[Order ID]
WHERE c.Segment IS NOT NULL
GROUP BY c.Segment
ORDER BY avg_order_value DESC
```

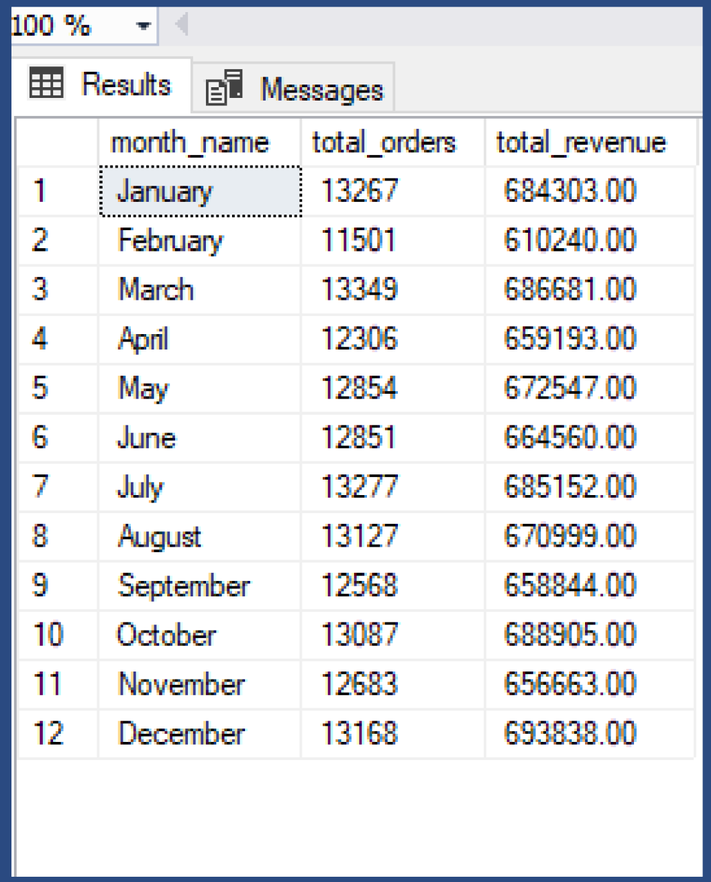


	Segment	avg_order_value
1	Corporate	156.95
2	Home Office	156.20
3	Consumer	155.94

What are the total orders & revenue per month

```
SELECT
    DATENAME(month, o.[Order Date]) AS month_name,
    SUM (p.Quantity) AS total_orders,
    SUM(p.Sales) AS total_revenue

FROM orders o
FULL JOIN products p
ON o.[Order ID] = p.[Order ID]
WHERE o.Months IS NOT NULL
GROUP BY DATENAME(month, o.[Order Date])
ORDER BY MIN(o.[Order Date])
```



100 %

Results | Messages

	month_name	total_orders	total_revenue
1	January	13267	684303.00
2	February	11501	610240.00
3	March	13349	686681.00
4	April	12306	659193.00
5	May	12854	672547.00
6	June	12851	664560.00
7	July	13277	685152.00
8	August	13127	670999.00
9	September	12568	658844.00
10	October	13087	688905.00
11	November	12683	656663.00
12	December	13168	693838.00

SQL CASE STUDY 01

How does the sales performance vary across different countries

```
SELECT
    r.Country,
    SUM(p.Quantity) AS total_orders,
    SUM(Sales) AS total_revenue,
    SUM(Profit) AS total_profit

FROM products p
FULL JOIN regions r
ON p.[Order ID] = r.[Order ID]
GROUP BY r.Country
```

Results | Messages

	Country	total_orders	total_revenue	total_profit
1	United States	30024	1562170.00	724731.90
2	Australia	8518	442452.00	205449.80
3	France	8379	437441.00	203542.40
4	Mexico	8018	418795.00	194069.90
5	Germany	6155	323619.00	149967.50
6	China	5705	296640.00	136900.50
7	Brazil	5098	256549.00	118261.90
8	United Kingdom	4871	253975.00	118619.70
9	India	4631	244746.00	114549.10
10	Indonesia	4122	222379.00	105489.30

SQL CASE STUDY 01

What is the average time to process an order for each ship mode?

```
WITH shipping_data AS
( SELECT
    [Ship Mode],
    order_date, ship_date,
    DATEDIFF(day, order_date, ship_date) AS ship_days

FROM
( SELECT CONVERT (DATE, [Order Date]) AS order_date,
    CONVERT (DATE, [Ship Date]) AS ship_date, [Ship Mode] FROM orders )
AS shipping_date )

SELECT [Ship Mode], AVG(ship_days) AS avg_ship_days
FROM shipping_data
GROUP BY [Ship Mode]
```

Results | Messages

Ship Mode	avg_ship_days
First Class	5
Same Day	0
Standard Class	5
Second Class	5

SQL CASE STUDY 01

Explore my Portfolio Blog for the Top 10 Questions and Insights

NOTE: The queries and questions presented in the project can be modified and customized based on specific requirements and business needs.