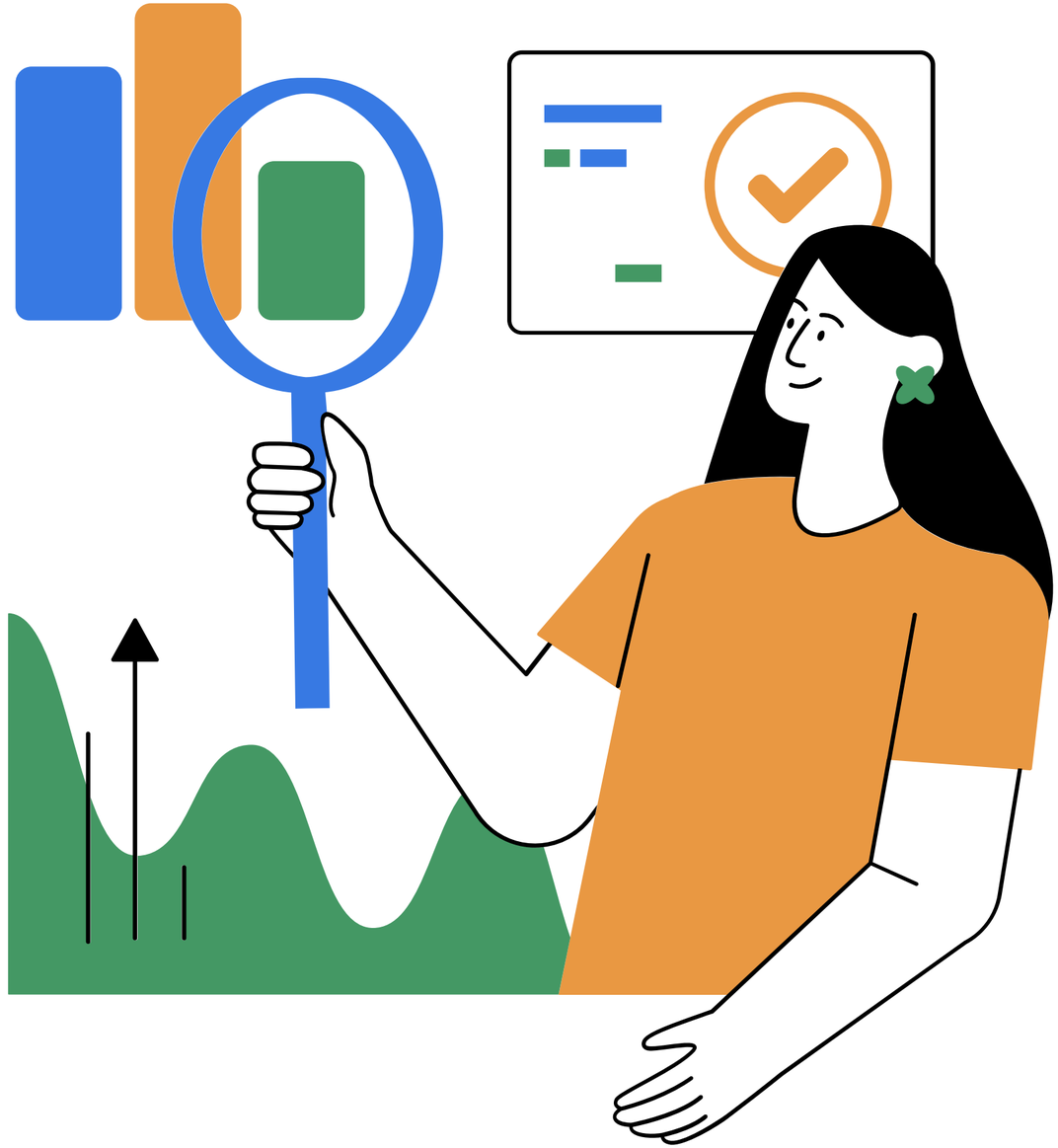
Sales Data Analysis using SQL



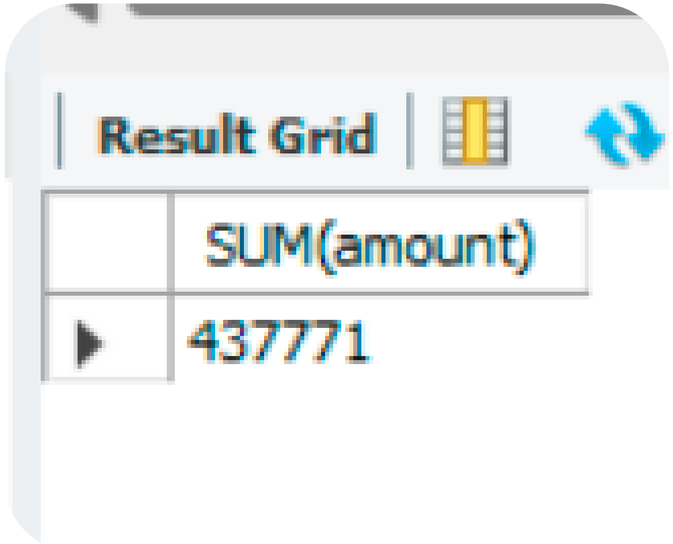
Performed end-to-end analysis on retail sales data using SQL.
Created KPIs for total sales, profit, and customer performance; identified top categories, regions, and sub-categories driving revenue.
Demonstrated proficiency in joins, aggregations, and business insights using MySQL.

Key Metrics / KPIs:

Total Sales
Total Profit
Total Orders
Total Customers
Total Quantity Sold
Top Performing Category
Top 5 Cities by Sales
Top States by Profit
Top 5 Sub-Categories
Sales by Mode of Payment

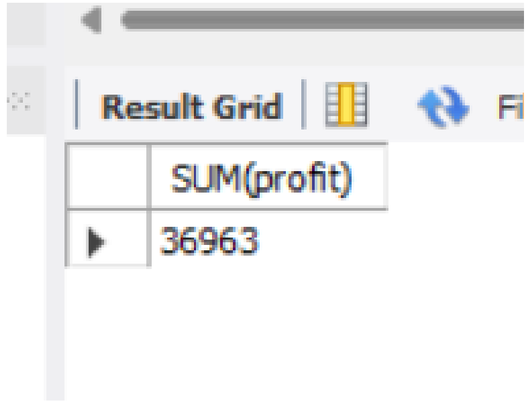
Total Revenue generated

```sql
SELECT * FROM sales.orders;
use sales

-- Total Sales / Revenue

SELECT
    SUM(amount)
FROM
    details AS total_sales
```



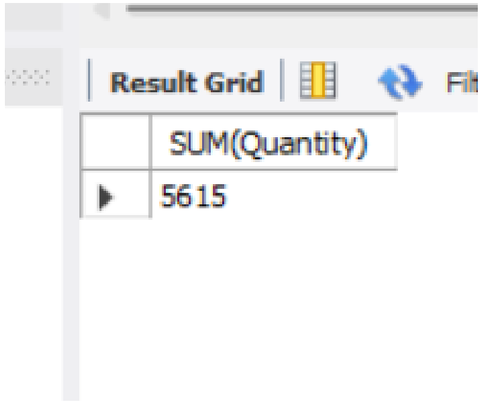
Total Profit By Sales

```sql
use sales


-- Total profit By Sales



SELECT
    SUM(profit)
FROM
    details AS total_profit

```



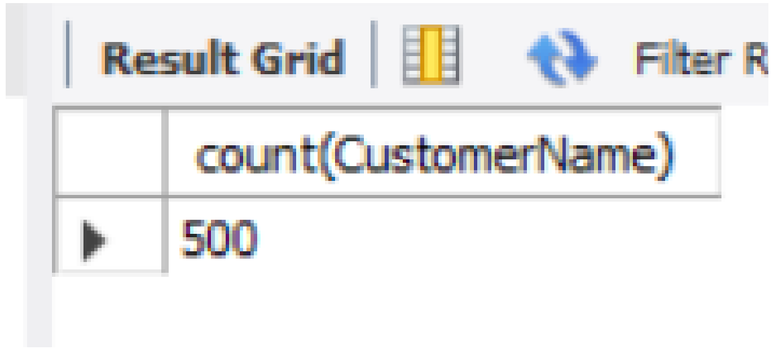
Total Quantities Sold

```
2   use sales
3
4    -- Total quantity sold
5
6   SELECT
7       SUM(Quantity)
8   FROM
9       details AS total_Qty_sold
```



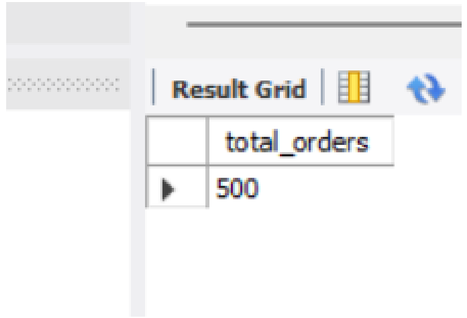
Count of Total Customers

```sql
-- Total customers in sales
select count(CustomerName) from orders as total_customers
```



Number of Order's Placed

```sql
SELECT
    COUNT(DISTINCT `Order ID`) AS total_orders
FROM
    Details;
```



Total Profit By Category

```sql
SELECT
    category,
    SUM(profit) AS total_profit
FROM details
GROUP BY category
ORDER BY total_profit DESC;
```

Result Grid | Filter Rows:

category	total_profit
Clothing	13325
Electronics	13162
Furniture	10476

Top 5 Sales By Sub-Category

```sql
SELECT
    `Sub-Category`,
    SUM(profit) AS total_profit
FROM details
GROUP BY `Sub-Category`
ORDER BY total_profit DESC
LIMIT 5;
```

Result Grid | Filter Rows:

Sub-Category	total_profit
Printers	8606
Bookcases	6516
Saree	4057
Accessories	3353
Tables	3139

Mode of Payments by Sales

```sql
SELECT
    PaymentMode, SUM(Amount) AS total_payment
FROM
    details
GROUP BY PaymentMode
ORDER BY total_payment DESC
```

Result Grid | Filter Rows:

PaymentMode	total_payment
COD	155181
Credit Card	86932
EMI	77881
UPI	68641
Debit Card	49136

Top 5 Cities by Sales

```sql
SELECT
    o.City, SUM(d.Amount) AS total_sales
FROM
    orders o
        JOIN
    details d ON o.`Order ID` = d.`Order ID`
GROUP BY o.City
ORDER BY total_sales DESC
LIMIT 5;
```

Result Grid | Filter Rows:

City	total_sales
Indore	63680
Mumbai	58886
Pune	43612
Mathura	28747
Bhopal	23783

Result 1

Output

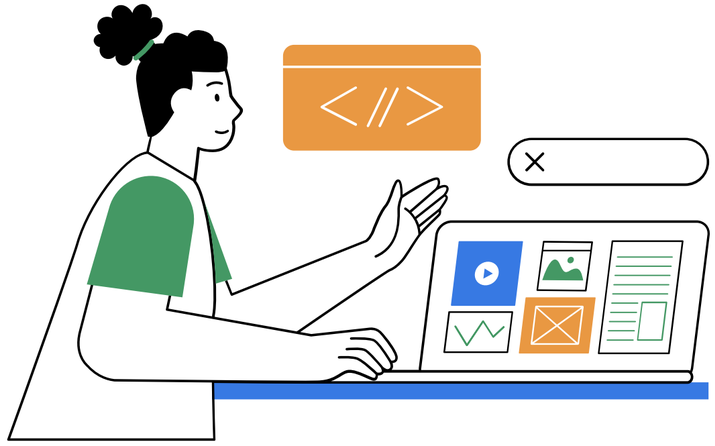
Top 5 States by Sales

```sql
SELECT
    o.state,
    SUM(d.amount) AS total_sales
FROM details d
JOIN orders o
    ON d.`Order ID` = o.`Order ID`
GROUP BY o.state
ORDER BY total_sales DESC
LIMIT 5;
```

Result Grid | Filter Rows:

state	total_sales
Maharashtra	102498
Madhya Pradesh	87463
Uttar Pradesh	38362
Delhi	22957
Rajasthan	22334

Tools & Technologies

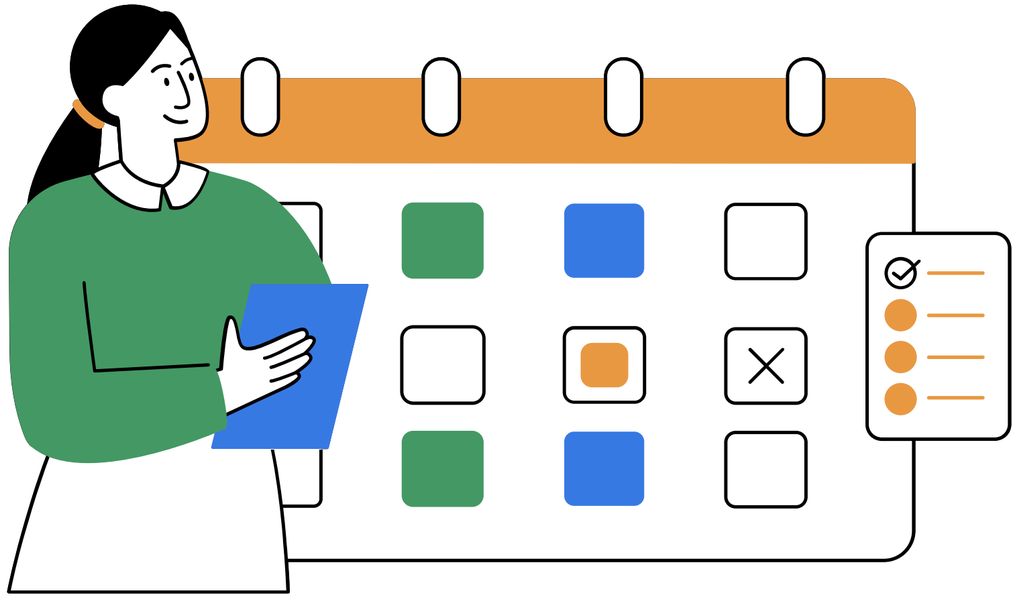


SQL : *(MySQL)*

Functions used : *`SUM()`, `COUNT()`, `AVG()`, `DISTINCT()`, `CASE WHEN`*

Joins,Group By,Aggregations,Order By,Limit

Dataset Information

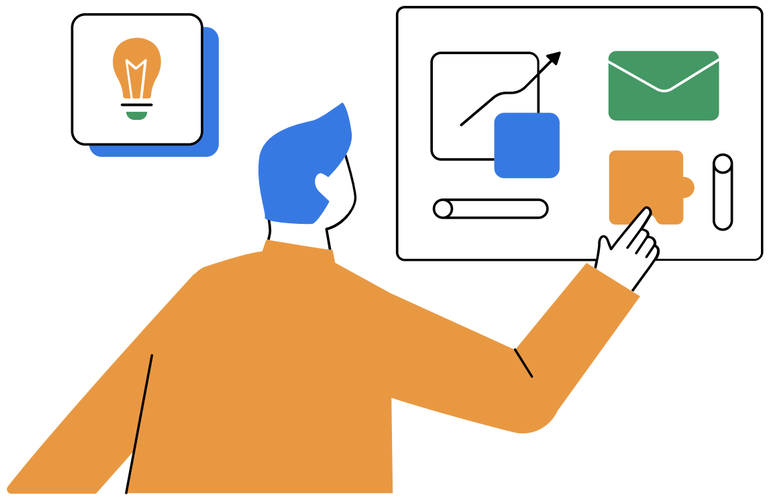


Two datasets were used:

- **orders** — Contains customer and order-level details (Order ID, Customer Name, City, State, etc.)

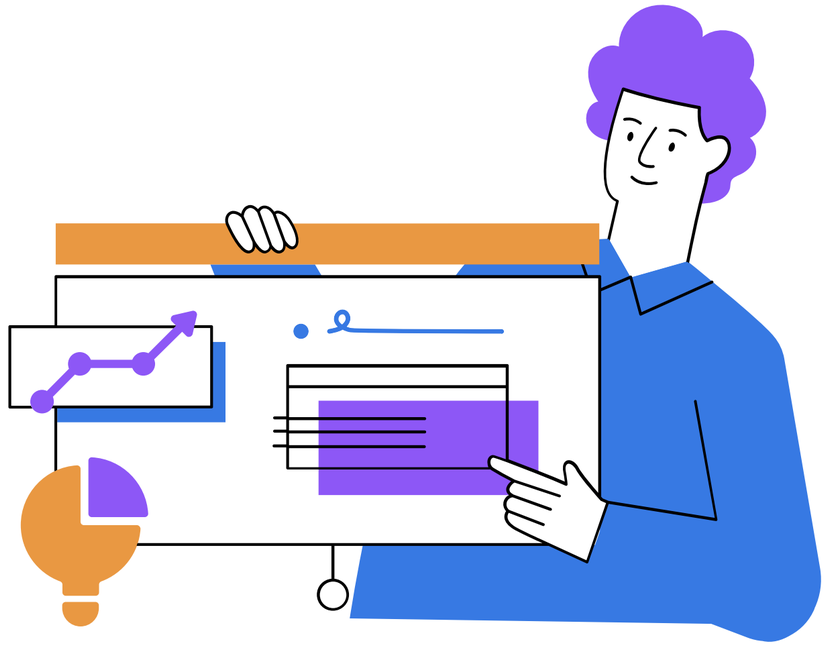
- **details** — Contains sales transaction details (Order ID, Product, Quantity, Profit, and Amount)

Business Insights



Insight	Observation
🌆 Top States & Cities	Delhi and Maharashtra lead in sales and customer volume. These regions show higher purchasing power and frequent orders.
🛒 Top Categories	Technology and Office Supplies generate the most sales, suggesting strong B2B and tech accessory demand.
💰 Profit Margins	High sales don’t always equal high profit — some categories show high revenue but low margins.
👥 Customer Base	A few top customers contribute significantly to total revenue — indicates potential for loyalty programs.
📦 Order Trends	Large volume orders are clustered in metro regions, reflecting urban retail dominance.

Business Improvement Recommendations



Area	Recommendation	Benefit
Regional Marketing	Increase targeted campaigns in medium-performing states like Gujarat & Tamil Nadu	Expands sales footprint
Product Mix Optimization	Focus on high-margin categories and discontinue low-profit sub-categories	Improves profitability
Customer Retention	Implement loyalty rewards for top customers	Boosts repeat orders
Inventory Planning	Analyze sales by sub-category & city to optimize stock levels	Reduces overstock / shortages
Payment Promotions	Offer discounts on less-used payment modes (e.g., UPI/Cards)	Increases conversion rate

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Thank You