MySQL

WsCube Tech
Upskilling Bharat

Sales Data Analysis with SQL

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Introduction

In an Amazon sales data analysis project using SQL, the objective is to gain insights into sales performance and customer behavior by querying and analyzing large datasets. SQL is used to extract, filter, and aggregate data from various tables such as orders, products, and customers. By leveraging SQL queries, you can track sales trends, identify high-performing products, analyze customer purchase patterns, and evaluate the effectiveness of promotional campaigns. This data-driven approach helps in making informed business decisions, optimizing inventory, and enhancing overall sales strategies.

List all products with a discounted price below ₹500

The SQL query provided is designed to identify and list all products with a discounted price below ₹500.The primary goal of the query is to filter out and display products that are currently offered at a price lower than ₹500 after applying any discounts.This is useful for sales analysis, promotional campaigns, or customer-facing applications where you want to highlight or advertise lower-priced items.

```
3 •  SELECT
4        *
5    FROM
6        mytable
7    WHERE
8        discounted_price < 500;
```

Find products with a discount percentage of 50% or more

The purpose of the query to find products with a discount percentage of 50% or more is to identify items that are heavily discounted, offering substantial savings to customers. This information can be used to highlight significant deals in marketing campaigns, analyze the effectiveness of discount strategies, or manage inventory by focusing on products with the highest discounts.

```
3 •  SELECT
4        product_name
5    FROM
6        mytable
7    WHERE
8        discount_percentage >= 0.5;
```

Retrieve all products where the name contains the word "Cable”

The purpose of the query to retrieve all products where the name contains the word "Cable" is to identify and list products related to cables. This helps in quickly finding and managing items specifically associated with cables in the product catalog.

```
3 • SELECT
4       *
5   FROM
6       mytable
7   WHERE
8       product_name LIKE '%cable%';
```

Display the difference betweenthe average of the actual price andthe discounted price for each product

The purpose of the query to display the difference between the average of the actual price and the discounted price for each product is to measure and compare the typical savings or discount amount for each product. This insight helps in evaluating discount effectiveness and pricing strategies by showing how much less customers pay compared to the regular price on average.

```
4 •  SELECT
5        mytable.product_name,
6        AVG(actual_price - discounted_price) AS avg_price_diff
7    FROM
8        mytable
9    GROUP BY mytable.product_name;
```

Query reviews that mention "fast charging" in their content

The purpose of the query to retrieve reviews that mention "fast charging" in their content is to identify and analyze customer feedback specifically discussing the "fast charging" feature. This helps in understanding customer perceptions and experiences related to this feature.

```
3 • SELECT
4       review_content
5   FROM
6       mytable
7   WHERE
8       review_content LIKE '%fast charging%';
```

Identify products with a discount percentage between 20% and 40%

The purpose of the query to identify products with a discount percentage between 20% and 40% is to locate items that are moderately discounted. This helps in highlighting products with significant yet not extreme discounts, which can be useful for promotions, sales analysis, or inventory management.

```
3 • SELECT
4       product_name
5   FROM
6       mytable
7   WHERE
8       discount_percentage BETWEEN 0.2 AND 0.4;
```

Find products that have an actual price above ₹1,000 and are rated 4 stars or above

The purpose of the query to find products that have an actual price above ₹1,000 and are rated 4 stars or above is to identify high-value products with strong customer ratings. This helps in highlighting premium products that are well-regarded by customers, useful for targeted marketing, quality assessment, or prioritizing high-performing items in inventory.

```
3 •  SELECT
4        product_name
5    FROM
6        mytable
7    WHERE
8        actual_price > 1000 AND rating >= 4;
```

Find products where the discounted price ends with a 9

The purpose of the query to find products where the discounted price ends with a 9 is to identify items with a specific pricing pattern, often used for psychological pricing or promotional strategies. This can help in analyzing pricing strategies and identifying products with prices that may have been set to attract customer attention or create a perception of a deal.

```
3•  SELECT
4       product_name
5   FROM
6       mytable
7   WHERE
8       discounted_price LIKE '%9';
```

Display review contents that contains words like worst, waste, poor, or not good

The purpose of the query to display review contents that contain words like "worst," "waste," "poor," or "not good" is to identify negative feedback or dissatisfied customer experiences. This helps in analyzing and addressing issues related to product quality or service, and can guide improvements or customer support efforts.

```
3 •  SELECT
4        review_content
5    FROM
6        mytable
7    WHERE
8        review_content LIKE '%worst%'
9            OR '%waste%'
10           OR '%poor%'
11           OR '%not good%';
```

List all products where the category includes "Accessories

The purpose of the query to list all products where the category includes "Accessories" is to identify and display items classified under the "Accessories" category. This helps in organizing and managing inventory, facilitating targeted marketing, and aiding customers in finding products related to accessories.

```
3•  SELECT
4       product_name
5   FROM
6       mytable
7   WHERE
8       category LIKE '%accessories%';
```

conclusion

In conclusion, analyzing Amazon's sales data using SQL provides valuable insights into sales trends, product performance, and customer behavior. By querying and aggregating data, businesses can identify top-selling products, evaluate the impact of discounts, and understand purchasing patterns. This analysis supports data-driven decision-making, improves inventory management, and enhances marketing strategies, ultimately leading to better business outcomes and increased profitability.

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