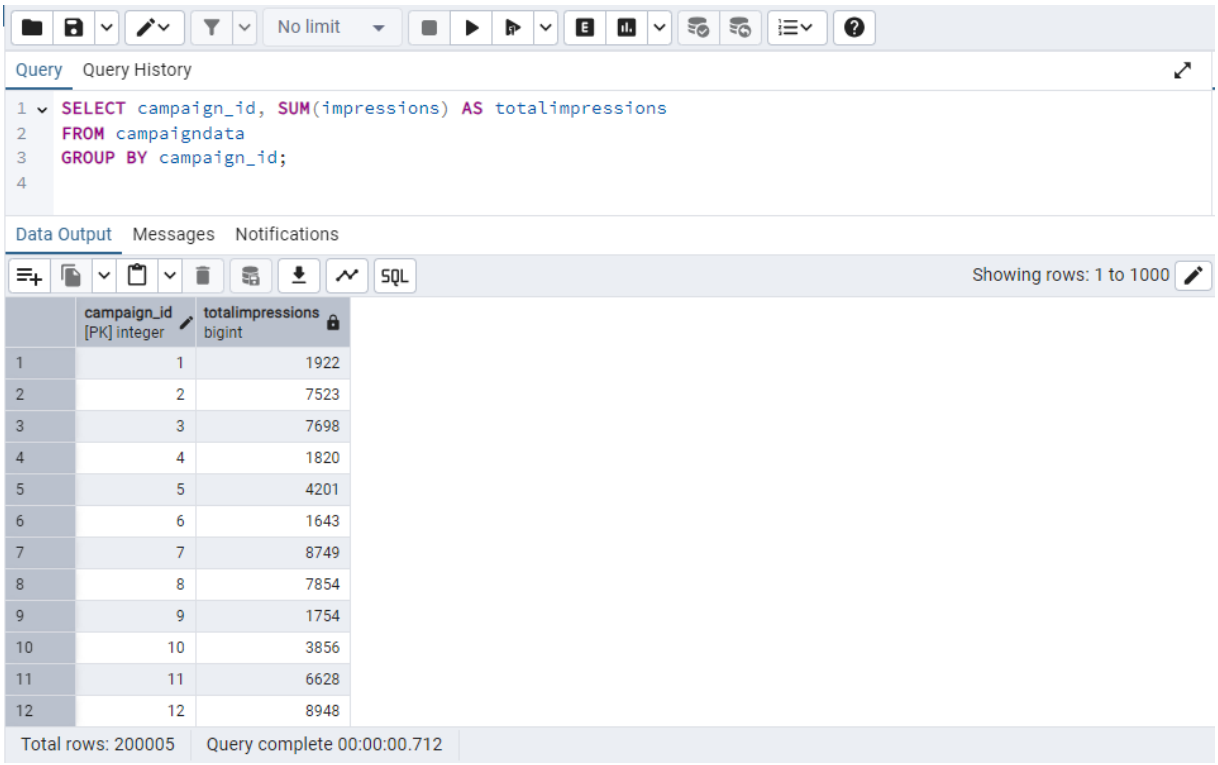
SQL QUERIES, SUMMARIES AND FINDINGS ON MARKETING CAMPAIGN DATASET

1. TOTAL IMPRESSIONS FOR EACH CAMPAIGN



	campaign_id [PK] integer	totalimpressions bigint
1	1	1922
2	2	7523
3	3	7698
4	4	1820
5	5	4201
6	6	1643
7	7	8749
8	8	7854
9	9	1754
10	10	3856
11	11	6628
12	12	8948

Query Objective: (1)

The goal of this query is to determine the total impressions for each campaign by aggregating the number of times an ad was displayed across different campaigns. This helps in evaluating the reach and visibility of each marketing campaign.

Query Summary: (1)

The SQL query retrieves the **campaign ID** and the corresponding **total impressions** by summing up the impressions for each campaign. The dataset consists of **200,005 total rows**. The results provide insight into how many times each campaign's ad was displayed to users.

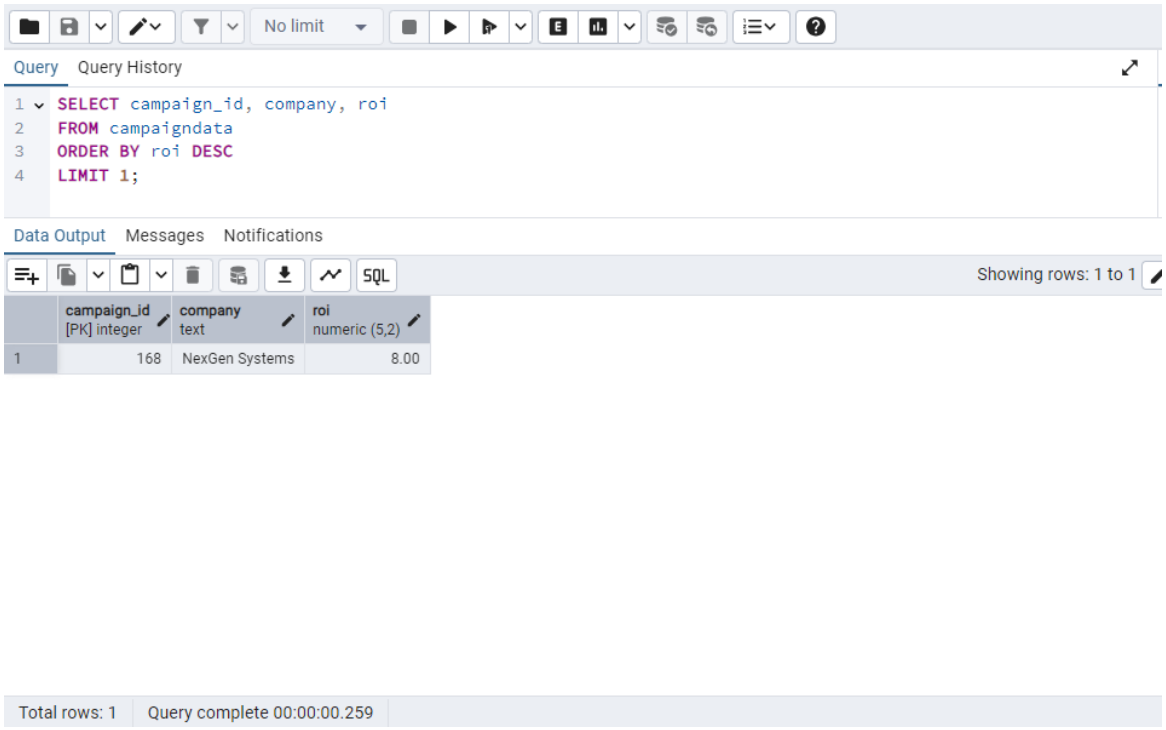
Findings: (1)

i. Each campaign has a unique campaign_id and an associated total_impressions count.

ii. Some campaigns have significantly higher impressions than others, indicating a larger reach.

iii. The distribution of impressions across campaigns appears to vary, which suggests differences in campaign budgets, targeting strategies, or platform engagement levels.

2. CAMPAIGN WITH HIGHEST ROI



Query Objective: (2)

The purpose of this query is to **identify the campaign with the highest Return on Investment (ROI)**. By determining the most successful campaign, stakeholders can gain insights into what strategies lead to the best financial returns.

Query Summary:(2)

The SQL query retrieves the campaign_id, company name, and ROI from the campaign_data table. It then orders the results in descending order of ROI, ensuring that the highest ROI campaign appears first. The LIMIT 1 clause is used to display only the top-performing campaign.

The query execution returned a single row.

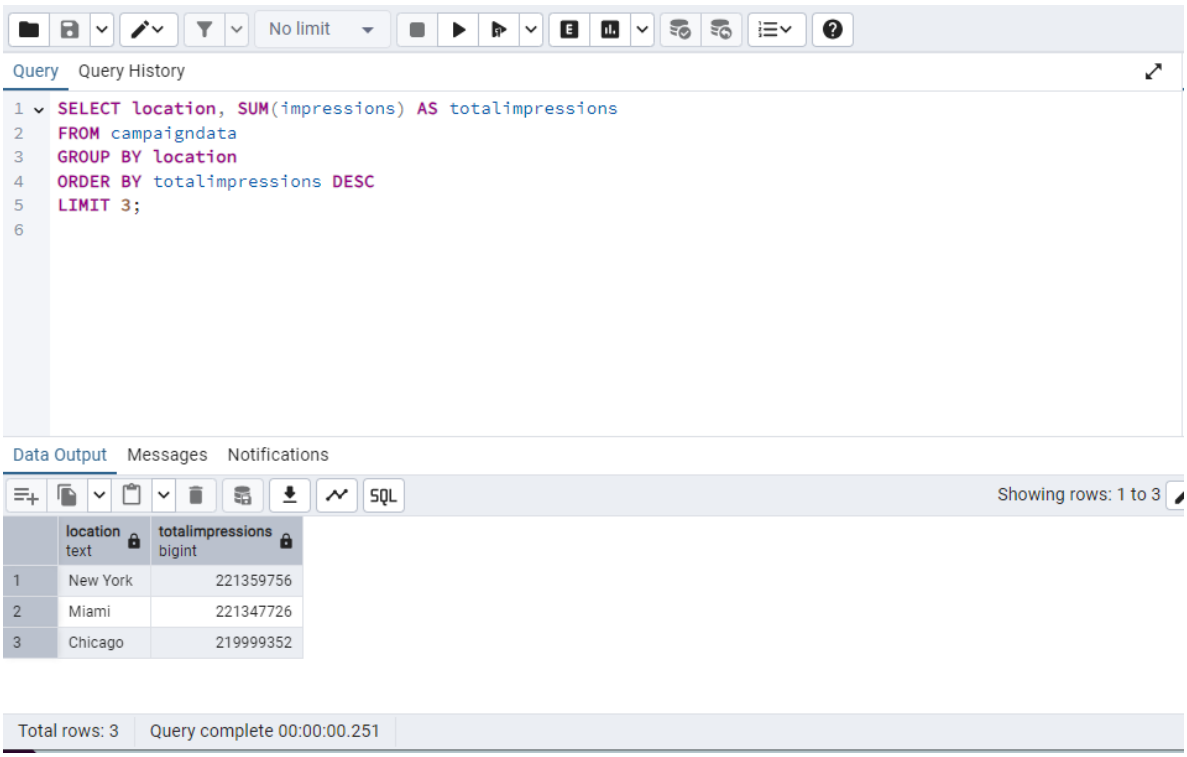
Findings: (2)

i. The campaign with the highest ROI has **campaign_id 168**.

ii. This campaign was run by **NexGen Systems**.

iii. The campaign achieved an ROI of 8.00, meaning that for every unit of investment, the return was eight times the cost.

3. TOP 3 LOCATIONS WITH THE MOST IMPRESSIONS



Query Objective: (3)

The objective of this analysis is to **identify the top three locations with the highest number of impressions**. Impressions indicate how often an advertisement was displayed, helping to understand regional ad reach and visibility.

Query Summary: (3)

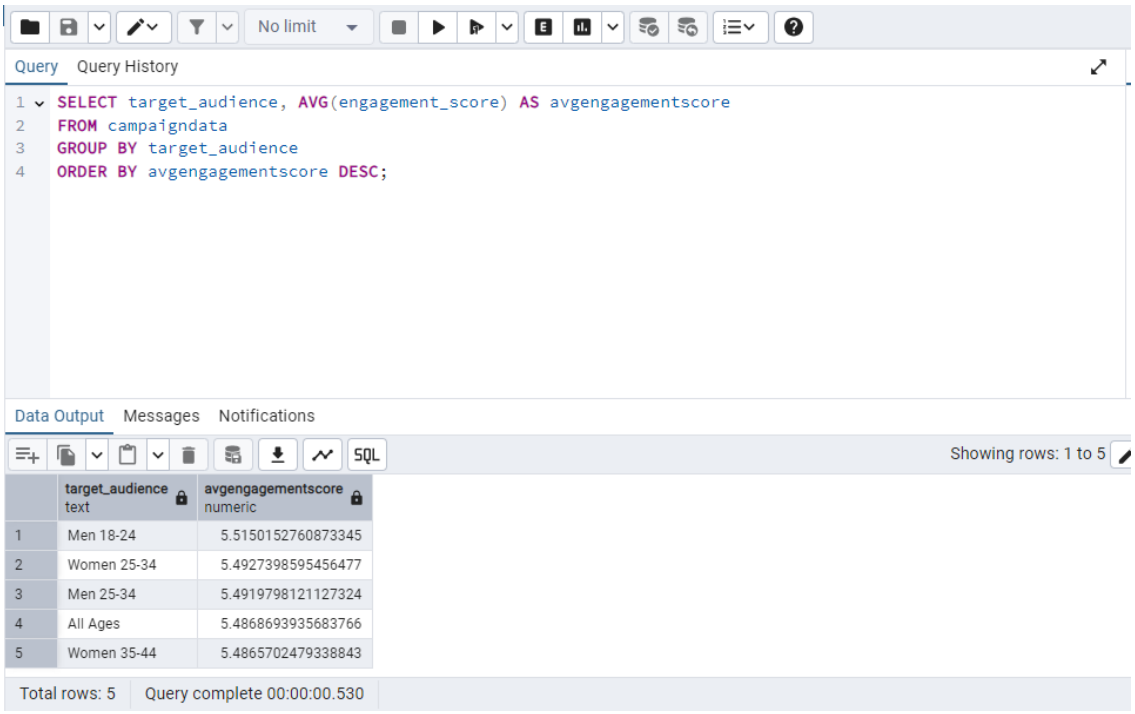
The SQL query retrieves the **location and total impressions** from the campaign_data table. The query:

- **Aggregates impressions** for each location using SUM(impressions).
- **Groups results by location** to get location-specific totals.
- **Sorts the locations in descending order of impressions** to rank them.
- **Limits the output to the top three locations** with the highest impressions.
- The query execution returned three rows.

Findings:(3)

I. **New York** had the highest number of impressions: **2,213,957,56.**
II. **Miami** followed closely with **2,213,477,26** impressions.
III. **Chicago** ranked third with **2,199,993,52** impressions.
IV. These findings suggest that these locations had the highest audience reach, which could indicate high engagement or ad visibility in these regions.

4. AVERAGE ENGAGEMENT SCORE BY TARGET AUDIENCE



Query Objective: (4)

The purposes of this query is to determine which target audience group has the highest engagement score, to identify the most engaged demographic for optimizing future marketing campaigns, and to provide insights into which audience segments respond best to campaigns based on engagement scores.

Query Summary:(4)

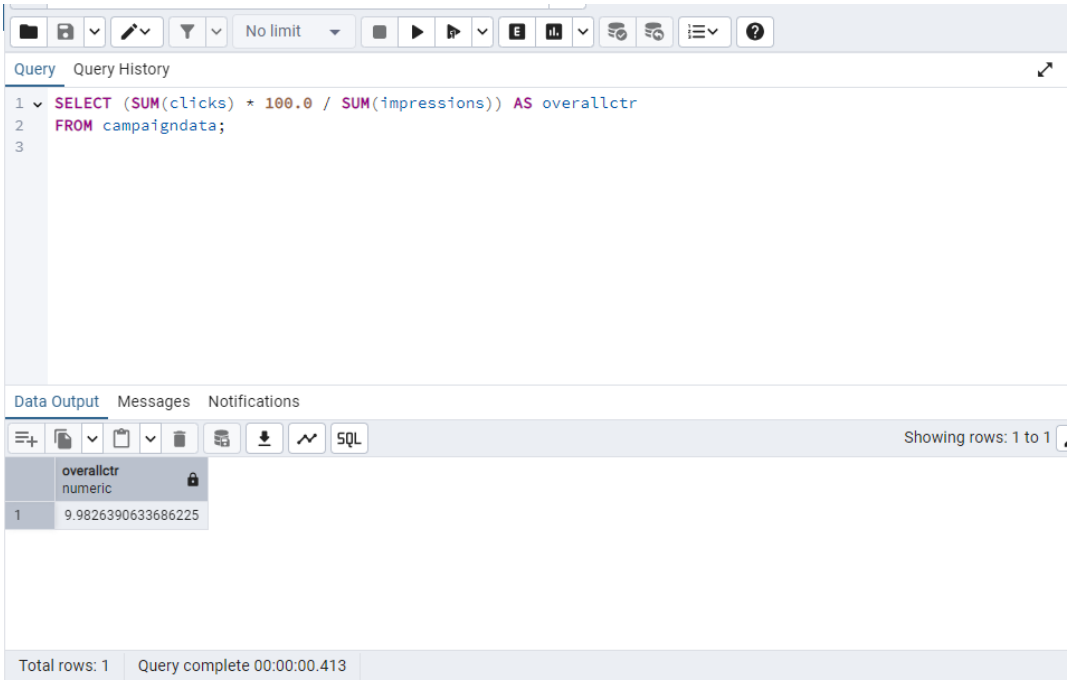
A query was executed on the **campaign_data** table to calculate the **average engagement score** for different target audience groups. The results were then sorted in descending order to identify the highest-engaging demographic.

The dataset contains **five** target audience groups with their respective average engagement scores.

Findings:(4)

I. **Men aged 18-24** had the highest average engagement score **(5.51)**, indicating they were the most interactive audience.
II. **Women aged 25-34** followed closely with an average engagement score of **5.49**, indicating strong interaction with campaigns.
III. **Men aged 25-34** ranked third with an engagement score of **5.49**, showing similar levels of engagement as women in the same age group.
IV. **The "All Ages" group** had a slightly lower engagement score of **5.48**, suggesting that campaigns targeted at a general audience may not be as effective as age-specific targeting.
V. **Women aged 35-44** had the lowest engagement score **(5.48**), suggesting slightly lower interaction levels in this demographic.

5. OVERALL CTR (CLICK-THROUGH RATE)



Query Objective: (5)

The goals of this query are to determine the overall Click-Through Rate (CTR) across all marketing campaigns, to assess how effectively the marketing campaigns are converting impressions into clicks. And to provide insights that can help optimize future campaign strategies for higher engagement.

Query Summary:(5)

A query was executed on the **campaign_data** table to calculate the overall Click-Through Rate (CTR) by aggregating the total number of clicks and dividing it by the total impressions across all marketing campaigns.

The formula used for CTR is: ***CTR = (∑ clicks/∑impressions) × 100***

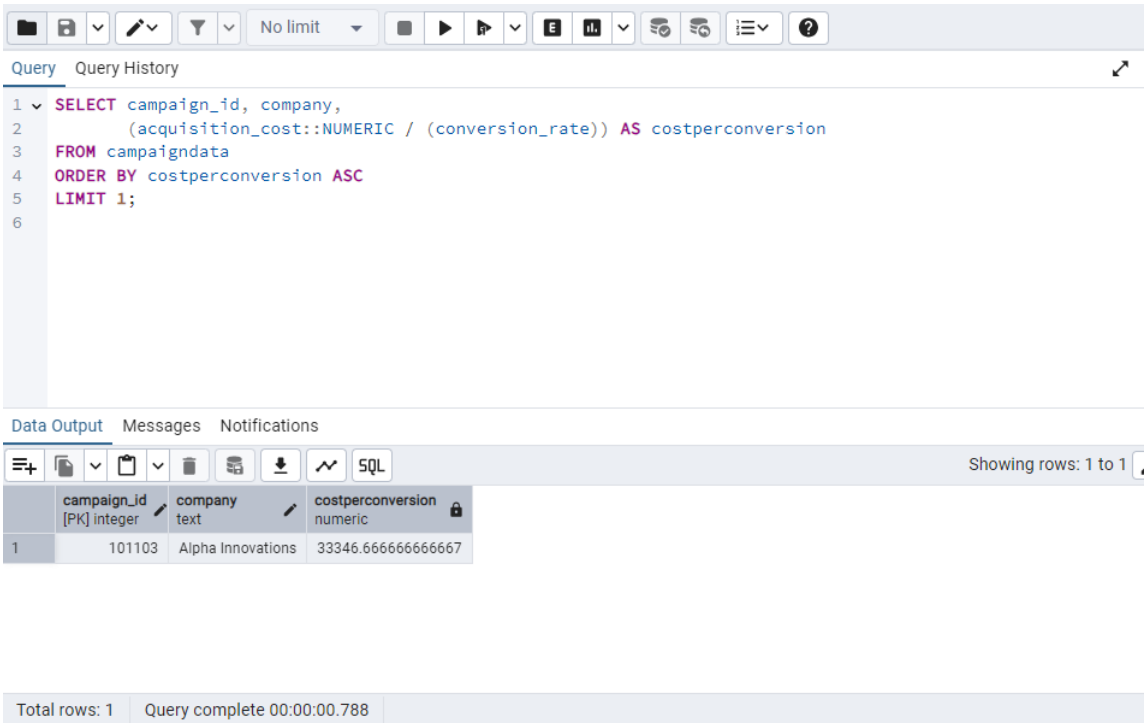
This metric provides an understanding of the percentage of users who clicked on an advertisement after seeing it.

The result of the query shows that the **overall CTR is 9.98%.**

Findings: (5)

i. A **CTR of 9.98%** suggests that the marketing campaigns are **effective in driving engagement**, but there is still room for improvement.
ii. **Factors influencing CTR**, such as ad placement, design, messaging, and target audience selection, should be reviewed to optimize performance.
iii. **A/B testing** of different ad creatives and copy can help identify what resonates best with the audience to further improve CTR.
iv. If the goal is to increase CTR, strategies such as **better targeting, improved call-to-action (CTA), and optimizing ad relevance** should be considered.

6. MOST COST-EFFECTIVE CAMPAIGN



Query Objective: (6)

The objective of this analysis is to identify the most cost-effective marketing campaign by calculating the **cost per conversion** for each campaign and selecting the one with the lowest value. Cost per conversion is a key metric in evaluating the efficiency of a campaign in generating conversions while minimizing costs.

Query Summary:(6)

A SQL query was executed to determine the most cost-effective campaign by computing the cost per conversion using the formula:

Cost per Conversion = (Acquisition Cost/Conversion Rate)

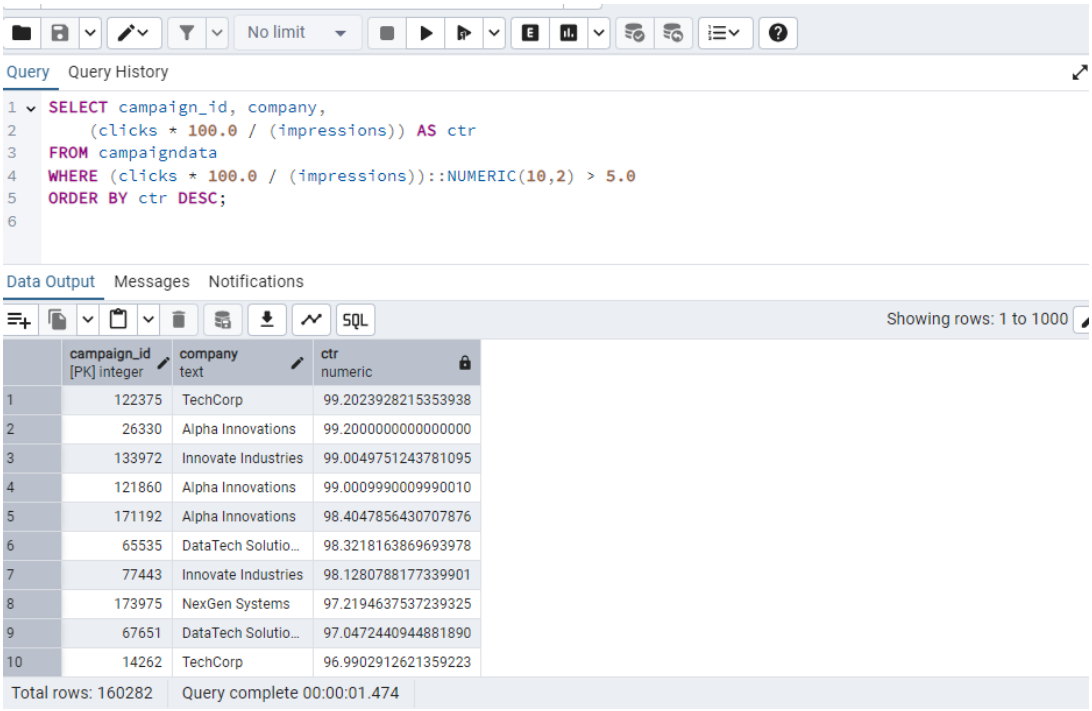
The results were sorted in ascending order, and the campaign with the lowest cost per conversion was selected.

Findings; (6)

i. The most cost-effective campaign is **Campaign id: 101103** by **Alpha Innovations**.

ii. The cost per conversion for this campaign is **$33,346.67**.

7. CAMPAIGNS WITH CTR ABOVE 5% THRESHOLD



Query Objective: (7)

The objective of this analysis is to identify and **evaluate campaigns with a Click-Through Rate (CTR) above 5%** to determine which campaigns are highly engaging. CTR is a key metric used to measure the effectiveness of an ad campaign in attracting user interaction.

Query Summary:(7)

A SQL query was executed to compute the **CTR** for each campaign using the formula:

$$CTR = (Clicks/Impressions) \times 100$$

The query **filtered out campaigns with a CTR of 5% or below** with the condition WHERE (clicks × 100.0 / NULLIF (impressions, 0)) > 5, this ensures only campaigns with CTR above **5%** are considered.

Results are sorted in descending order (ORDER BY ctr DESC) of CTR to highlight top performers first.

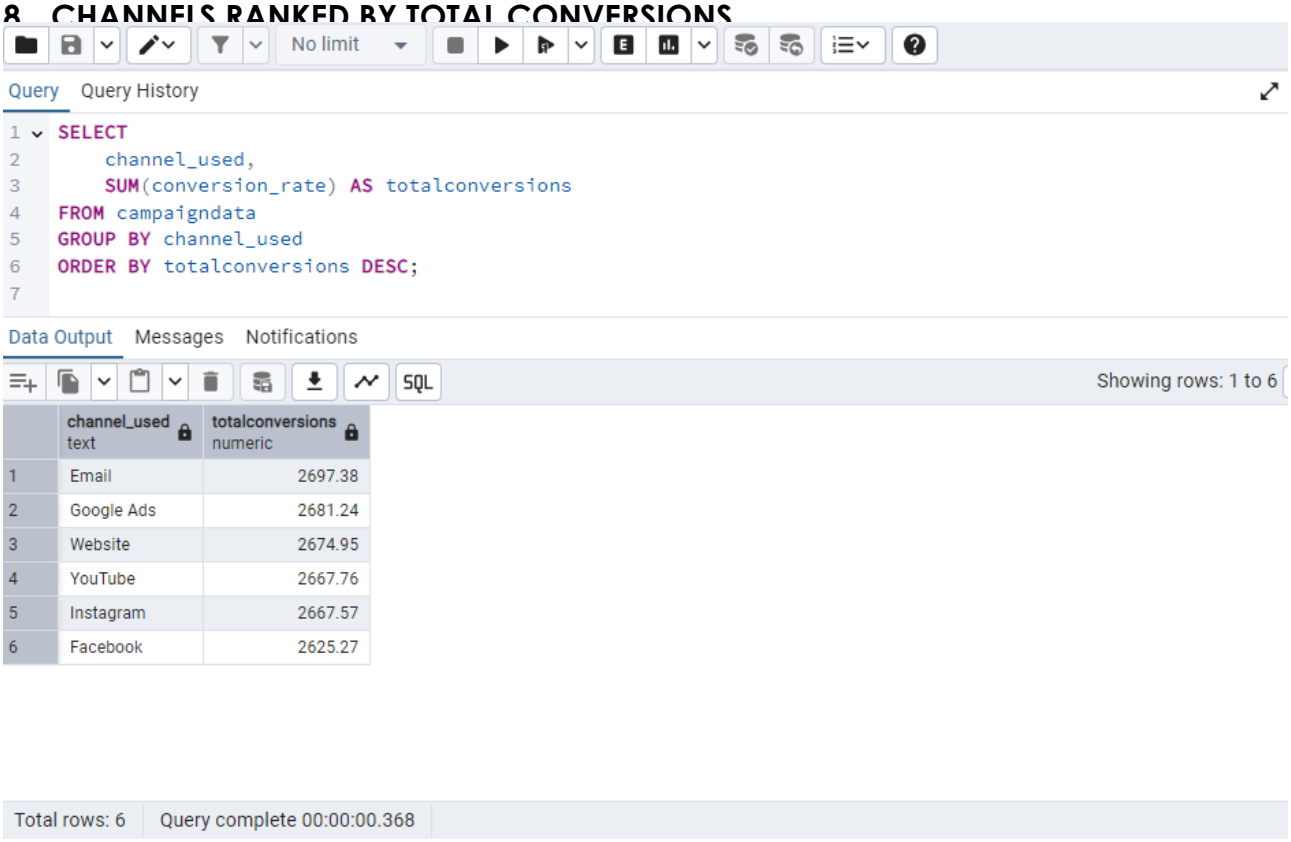
Findings: (7)

The **top campaign (id: 122375 - TechCorp)** achieved the highest CTR of **99.20%,** indicating exceptionally high engagement.

Companies such as **Alpha Innovations, Innovate Industries, and DataTech Solutions** had multiple high-CTR campaigns, showing consistent success in engagement strategies.

The majority of campaigns with high CTR values have a CTR close to or above **99%**, indicating strong targeting or highly relevant ad placements.

8. CHANNELS RANKED BY TOTAL CONVERSIONS



```
SELECT
    channel_used,
    SUM(conversion_rate) AS totalconversions
FROM campaigndata
GROUP BY channel_used
ORDER BY totalconversions DESC;
```

Data Output | Messages | Notifications

Showing rows: 1 to 6

	channel_used text	totalconversions numeric
1	Email	2697.38
2	Google Ads	2681.24
3	Website	2674.95
4	YouTube	2667.76
5	Instagram	2667.57
6	Facebook	2625.27

Total rows: 6 | Query complete 00:00:00.368

Query Objective: (8)

The goal of this analysis is to evaluate the performance of different marketing channels based on **total conversions**. This will help in understanding which channels are the most effective in driving conversions and optimizing future marketing strategies.

Query Summary:(8)

A SQL query was executed to calculate total conversions for each marketing channel.

The query groups the data by channel_used, summing the total conversions for each channel and ordering them in descending order (ORDER BY total_conversions DESC) to rank the best-performing channels.

Findings: (8)

i. **Email Marketing** had the highest conversions **(2,697.38),** followed closely by **Google Ads (2,681.24)** and **Website (2,674.95).**
ii. **YouTube, Instagram, and Facebook** also performed well but had slightly lower conversion totals.
iii. The difference between the top six channels is **not significant**, indicating that all channels contribute effectively to conversions.
iv. **Social media platforms (Facebook, Instagram, YouTube)** are performing well but slightly lag behind direct engagement methods like **Email and Websites**.
v. The dominance of **email marketing and websites** implies that direct and owned media channels play a crucial role in conversion success.

MEANINGFUL INSIGHTS EXTRACTED FROM THE CAMPAIGN_DATA:

1. The best-performing campaigns is **Display** with ROI **of 8.00** – this indicates it **generated significantly more revenue compared to their ad spend**.
2. **Email and websites are the top-performing channels**- businesses should continue investing in these high-converting channels while optimizing paid channels (Google Ads, YouTube, Instagram, and Facebook) for better returns.
3. **New York** is the location with the highest total impressions of **221,359,756** – this indicates that the marketing campaigns in this location reached the largest audience.
4. **Foodies** is the customer segment with the highest CTR of **9.999** this indicates they are the most engaged audience, meaning they interact with ads more frequently than other segments.
5. **CTR Benchmarking**: Campaigns performing at 99% CTR are exceptional; evaluating their tactics can help improve weaker campaigns.