

MS805 Group Assignment

Deliverable E — SQL Report

Group: Thu 203

SQL queries that could be useful for various stakeholders

QUERY 1

1.To determine the degree of participation, figure out how many distinct supporters each campaign has.

This query shows us the details of each campaign and the number of people who have donated to this campaign so far. The supporter_count is then displayed for each campaign to emphasize the number of supporters each campaign receives and to motivate people to donate more. This query uses **LEFT JOINS** to fetch the essential information about each campaign, including the number of unique supporters. The **first LEFT JOIN** between the campaign and donation tables connects each donation with its respective campaign. It also ensures that campaigns with no donations also get selected. The **second LEFT JOIN** with the supporter table helps verify the presence of each supporter. The query returns each campaign's total supporters and ranks them in descending order of the supporter count. This is done by grouping the data by campaign details and counting distinct supporter_id.

1	SELECT
2	c.campaign_id,
3	c.campaign_name,
4	c.target_amount,
5	c.total_amount_raised,
6	c.start_date,
7	c.end_date,
8	c.status,
9	COUNT(DISTINCT d.supporter_id) AS supporter_count
10	FROM
11	campaign AS c
12	LEFT JOIN
13	donation AS d ON c.campaign_id = d.campaign_id
14	LEFT JOIN
15	supporter AS s ON d.supporter_id = s.supporter_id
16	GROUP BY
17	c.campaign_id, c.campaign_name, c.target_amount, c.total_amount_raised, c.start_date, c.end_date, c.status
18	ORDER BY
19	supporter_count DESC;

campaign (10r x 8c)								
#	campaign_id	campaign_name	target_amount	total_amount_raised	start_date	end_date	status	supporter_count
1	5	Haiti: Help conflict-affected families	80,000.0	45,000.0	2024-05-01	2025-01-31	A	3
2	7	Afghanistan: Donate emergency support	60,000.0	30,000.0	2024-07-01	2025-01-31	A	3
3	9	Egypt: Support sustainable farming	70,000.0	40,000.0	2024-09-01	2025-03-31	A	2
4	2	Lebanon: Help families in need	75,000.0	30,000.0	2024-02-01	2024-12-31	A	2
5	3	Sudan: Help families fleeing conflict	30,000.0	15,000.0	2024-03-01	2025-05-30	A	2
6	6	Rwanda, Peru, Zambia: Empower women	25,000.0	20,000.0	2024-06-01	2025-12-31	A	1
7	8	Philippines: Strengthen nutrition and food secur...	120,000.0	75,000.0	2024-08-01	2025-02-28	A	1
8	1	Palestine: Give life-saving aid	50,000.0	12,000.0	2024-01-01	2024-12-31	A	1
9	10	Syria: Share with families in need	50,000.0	25,000.0	2024-10-01	2025-04-30	A	1
10	4	Yemen: Give vital aid	100,000.0	50,000.0	2024-04-01	2025-06-30	A	0

Stakeholder Relevance: For teams working on fundraising and marketing, this question is essential. They can better understand what appeals to their audience, concentrate on emulating effective tactics, and direct resources toward initiatives that are likely to get a sizable amount of support by finding campaigns with higher supporter interaction.

QUERY 2

2.To monitor trends in donation size over time, figure out the average monthly donation amount for each campaign.

This query calculates the **average donation amount per campaign** on a **monthly basis**. It joins the donation and campaign tables on campaign_id to calculate the **average donation amount per month** for each campaign. It reveals monthly trends in donation behavior using GROUP BY on campaign_id and month.

```

1  -- average amount a user donates for each campaign
2  SELECT
3      c.campaign_id,
4      c.campaign_name,
5      DATE_FORMAT(d.donation_date, '%Y-%m') AS month,
6      AVG(d.amount) AS avg_donation_amount
7  FROM
8      donation AS d
9  JOIN
10     campaign AS c ON d.campaign_id = c.campaign_id
11 GROUP BY
12     c.campaign_id, month
13 ORDER BY
14     c.campaign_id, month;
15

```

donation (12r × 4c)				
#	campaign_id	campaign_name	month	avg_donation_amount
1	1	Palestine: Give life-saving aid	2024-04	100.0
2	2	Lebanon: Help families in need	2024-05	50.0
3	3	Sudan: Help families fleeing conflict	2024-04	37.5
4	3	Sudan: Help families fleeing conflict	2024-05	60.0
5	5	Haiti: Help conflict-affected families	2024-04	52.5
6	5	Haiti: Help conflict-affected families	2024-05	35.0
7	6	Rwanda, Peru, Zambia: Empower women	2024-05	120.0
8	7	Afghanistan: Donate emergency support	2024-04	50.0
9	7	Afghanistan: Donate emergency support	2024-05	50.0
10	8	Philippines: Strengthen nutrition and food secur...	2024-06	30.0
11	9	Egypt: Support sustainable farming	2024-05	30.0
12	10	Syria: Share with families in need	2024-05	40.0

Stakeholder Relevance: Fundraising and finance teams can use this query to examine donor behavior, pinpoint times when donations are at their highest, and refine future campaign tactics based on typical donation trends.

QUERY 3

3.Each campaign's demographic information (average age, gender distribution), total donations received, number of donations, average gift per supporter, and total recipients supported are all displayed in this query.

This query provides a detailed summary for each campaign, showing the Total Beneficiaries Helped, Average Age of Beneficiaries, Gender Breakdown, Total Donation Amount, Number of Donations and Average Donation Per Supporter. This query combines data from the campaign, beneficiary, and donation tables to give a well-rounded view of each campaign. Using LEFT JOINS, it connects the campaign to beneficiaries and donations which helps us to collect information on the number of unique beneficiaries for each campaign, their average age and gender. Additionally, it also provides information regarding the donations provided such as total donation amount and number of donations.

As the results are grouped by campaign it helps the stakeholders to compare between campaigns using beneficiary and donation data. It also helps them to identify which campaigns have the largest impact.

```
1 -- Query showing info about each campaign, beneficiaries helped, and donation data.
2 SELECT
3     c.campaign_id,
4     c.campaign_name,
5     COUNT(DISTINCT b.beneficiary_id) AS total_beneficiaries,
6     ROUND(AVG(b.age), 1) AS avg_age_of_beneficiaries,
7     SUM(CASE WHEN b.gender = 'F' THEN 1 ELSE 0 END) AS female_beneficiaries,
8     SUM(CASE WHEN b.gender = 'M' THEN 1 ELSE 0 END) AS male_beneficiaries,
9     COALESCE(SUM(d.amount), 0) AS total_donation_amount,
10    COUNT(DISTINCT d.donation_id) AS number_of_donations,
11    ROUND(COALESCE(SUM(d.amount) / NULLIF(COUNT(DISTINCT d.donation_id), 0), 0), 2) AS avg_donation_per_supporter
12 FROM
13     campaign AS c
14 LEFT JOIN
15     beneficiary AS b ON c.campaign_id = b.campaign_id
16 LEFT JOIN
17     donation AS d ON c.campaign_id = d.campaign_id
18 GROUP BY
19     c.campaign_id, c.campaign_name
20 ORDER BY
21     total_donation_amount DESC, total_beneficiaries DESC;
```

campaign (10r x 9c)									
	campaign_id	campaign_name	total_beneficiaries	avg_age_of_beneficiaries	female_beneficiaries	male_beneficiaries	total_donation_amount	number_of_donations	avg_donation_per_supporter
1	3	Sudan: Help families fleeing conflict	3	8.0	3	6	405.0	3	135.0
2	6	Rwanda, Peru, Zambia: Empower women	3	9.3	1	2	360.0	1	360.0
3	2	Lebanon: Help families in need	3	11.7	4	2	300.0	2	150.0
4	1	Palestine: Give life-saving aid	3	9.7	2	1	300.0	1	300.0
5	7	Afghanistan: Donate emergency support	2	9.0	0	6	300.0	3	100.0
6	5	Haiti: Help conflict-affected families	2	17.5	6	0	280.0	3	93.33
7	9	Egypt: Support sustainable farming	3	17.3	4	2	180.0	2	90.0
8	10	Syria: Share with families in need	2	13.5	2	0	80.0	1	80.0
9	8	Philippines: Strengthen nutrition and food secur...	2	6.0	1	1	60.0	1	60.0
10	4	Yemen: Give vital aid	2	19.5	0	2	0.0	0	0.0

Stakeholder Relevance: Impact assessment teams and campaign managers will find this question useful. It provides a thorough understanding of each campaign's financial performance and reach (beneficiaries), empowering teams to analyze demographic reach, gauge campaign efficacy, and make data-driven choices about future campaign planning and resource allocation.

QUERY 4

4.This query shows each campaign's progress toward its financial objective by calculating the proportion of the fundraising target that has been met for ongoing campaigns.

This query provides an overview of all active campaigns, and displays the campaign name, target amount, total amount raised, and the percentage of the target achieved as per each campaign. Calculating the percentage helps indicate how close each campaign to its goal. This information can be useful for the Supporters, Campaign volunteers. This can be crucial for campaign volunteers to monitor progress and assess which campaigns need more attention to meet their targets. Supporters can also use this information to decide which campaigns may need additional support

campaign_id INT	campaign_name VARCHAR	target_amount DECIMAL	total_amount_raised DECIMAL	percentage_achieved DECIMAL
1	Palestine: Give life-saving aid	50000.00	12000.00	24.000000
2	Lebanon: Help families in need	75000.00	30000.00	40.000000
3	Sudan: Help families fleeing conflict	30000.00	15000.00	50.000000
4	Yemen: Give vital aid	100000.00	50000.00	50.000000
5	Haiti: Help conflict-affected families	80000.00	45000.00	56.250000
6	Rwanda, Peru, Zambia: Empower women	25000.00	20000.00	80.000000
7	Afghanistan: Donate emergency support	60000.00	30000.00	50.000000
8	Philippines: Strengthen nutrition and food security	120000.00	75000.00	62.500000
9	Egypt: Support sustainable farming	70000.00	40000.00	57.142857
10	Syria: Share with families in need	50000.00	25000.00	50.000000

Stakeholder Relevance: Teams in charge of campaign management and fundraising will find this question useful. It makes it possible to quickly evaluate the financial success of ongoing campaigns, assisting in determining which ones are on track or might require more assistance to meet their goals.

QUERY 5

5.This query calculates the total donation amount contributed from each location, organized by location and country.

This query aggregates donation totals by location, providing a breakdown of donations per location and country.

This is useful for understanding regional donation trends. Marketing analysts can use this data to determine which regions are most responsive to fundraising efforts, allowing for strategic allocation of resources and targeted campaigns in underrepresented areas.

location VARCHAR	country VARCHAR	total_donations DECIMAL
Florida	USA	140.00
Sydney	Australia	95.00
Mumbai	India	90.00
London	UK	50.00
Toronto	Canada	40.00

Stakeholder Relevance: Teams working on regional strategy and fundraising will find this information useful. The organization can improve donation tactics by location by concentrating outreach, marketing, or event efforts in areas with high support or unrealized potential by finding the locations with the largest donation amounts.