

PROJECT: IMPACT ANALYSIS OF GOODTHOUGHT NGO INITIATIVES

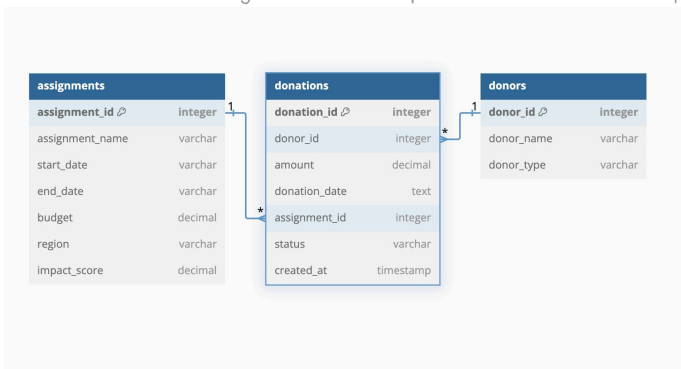


GoodThought NGO has been a catalyst for positive change, focusing its efforts on education, healthcare, and sustainable development to make a significant difference in communities worldwide. With this mission, GoodThought has orchestrated an array of assignments aimed at uplifting underprivileged populations and fostering long-term growth.

This project offers a hands-on opportunity to explore how data-driven insights can direct and enhance these humanitarian efforts. In this project, you'll engage with the GoodThought PostgreSQL database, which encapsulates detailed records of assignments, funding, impacts, and donor activities from 2010 to 2023. This comprehensive dataset includes:

- **Assignments** : Details about each project, including its name, duration (start and end dates), budget, geographical region, and the impact score.
- **Donations** : Records of financial contributions, linked to specific donors and assignments, highlighting how financial support is allocated and utilized.
- **Donors** : Information on individuals and organizations that fund GoodThought's projects, including donor types.

Refer to the below ERD diagram for a visual representation of the relationships between these data tables:



You will execute SQL queries to answer two questions, as listed in the instructions. Good luck!

 Projects Data DataFrame as highest_donation_assignments

```
-- highest_donation_assignments
SELECT
  a.assignment_name,
  a.region,
  ROUND(SUM(d.amount),2) AS rounded_total_donation_amount,
  d2.donor_type
FROM assignments AS a
INNER JOIN donations AS d
ON a.assignment_id=d.assignment_id
INNER JOIN donors AS d2
ON d.donor_id=d2.donor_id
GROUP BY a.assignment_name, a.region, d2.donor_type
ORDER BY rounded_total_donation_amount DESC
LIMIT 5;
```

index	...	↑↓	assignment_name	...	↑↓	regi...	...	↑↓	rounded_total_donation_amount	...	↑↓	donor_type
0			Assignment_3033			East			3840.66			Individual
1			Assignment_300			West			3133.98			Organization
2			Assignment_4114			North			2778.57			Organization
3			Assignment_1765			West			2626.98			Organization
4			Assignment_268			East			2488.69			Individual

Rows: 5

Expand

 Projects Data DataFrame as baby_names

```
SELECT * FROM public.baby_names
```

 Projects Data DataFrame as top_regional_impact_assignments

```
-- top_regional_impact_assignments
WITH assignment_donations AS (
  SELECT
    a.assignment_id,
    a.assignment_name,
    a.region,
    a.impact_score,
    COUNT(d.donation_id) AS num_total_donations
  FROM assignments a
  JOIN donations d ON a.assignment_id = d.assignment_id
  GROUP BY a.assignment_id, a.assignment_name, a.region, a.impact_score
),
ranked_assignments AS (
  SELECT *,
    ROW_NUMBER() OVER (PARTITION BY region ORDER BY impact_score DESC) AS row_num
  FROM assignment_donations
)
SELECT assignment_name, region, impact_score, num_total_donations
FROM ranked_assignments
WHERE row_num = 1
ORDER BY region ASC;
```

...	↑↓	assignme...	...	↑↓	...	↑↓	impa...	...	↑↓	num_total_donat...	...	↑↓
0		Assignment_316			East				10			2
1		Assignment_2253			North				9.99			1
2		Assignment_3547			South				10			1
3		Assignment_3764			West				9.99			1

Rows: 4

Expand

 Projects Data DataFrame as baby

```
SELECT * FROM public.baby_names
```