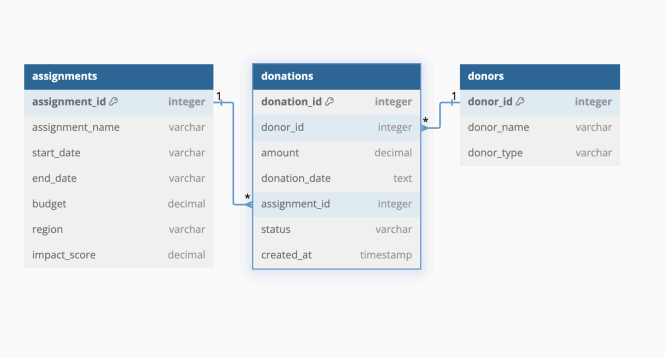
GoodThought NGO has been a catalyst for positive change, focusing its efforts on education, healthcare, and sustainable development to make a significant difference in communities worldwide. With this mission, GoodThought has orchestrated an array of assignments aimed at uplifting underprivileged populations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

```sql
-- highest_donation_assignments
WITH assignment_donor AS (
    SELECT
        assignment_id,
        donor_type,
        ROUND(SUM(amount), 2) AS rounded_total_donation_amount
    FROM donations
    LEFT JOIN donors d
        USING (donor_id)
    GROUP BY
        assignment_id,
        donor_type
)

SELECT
    assignment_name,
    region,
    rounded_total_donation_amount,
    donor_type
FROM assignments a
JOIN assignment_donor ad
    USING (assignment_id)
WHERE rounded_total_donation_amount IS NOT NULL
ORDER BY rounded_total_donation_amount DESC
LIMIT 5
```

index	assignment_name	region	rounded_total_donation_amount
0	Assignment_3033	East	
1	Assignment_300	West	
2	Assignment_4114	North	
3	Assignment_1765	West	
4	Assignment_268	East	

Rows: 5

Expand

Projects Data DataFrame as top_regional_impact_assignments

```sql
-- top_regional_impact_assignments
WITH ranked AS (
    SELECT
        assignment_name,
        assignment_id,
        region,
        impact_score,
        ROW_NUMBER() OVER (PARTITION BY region ORDER BY impact_score DESC) as ranking
    FROM assignments
),
donation_count AS (
    SELECT
        assignment_id,
        COUNT(donation_id) as num_total_donations
    FROM donations
    GROUP BY assignment_id
)

SELECT
    assignment_name,
    region,
    impact_score,
    num_total_donations
FROM ranked
JOIN donation_count
    USING (assignment_id)
WHERE ranking = 1
ORDER BY region ASC;
```

index	assignment_name	region	impact_score
0	Assignment_316	East	
1	Assignment_2253	North	
2	Assignment_3547	South	
3	Assignment_3764	West	

Rows: 4

Expand