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
with dons_all as (
select assignment_id, donor_type, round(sum(amount), 2) as rounded_total_donation_amount
from donors
inner join donations
using(donor_id)
    group by assignment_id, donor_type
)
select assignment_name, region, rounded_total_donation_amount, donor_type
from dons_all
inner join assignments
using(assignment_id)
order by rounded_total_donation_amount desc
limit 5;
```

index	assignment_name	region	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

Projects Data DataFrame as `top_regional_impact_assignments`

```sql
-- top_regional_impact_assignments
WITH don_count AS (
    SELECT assignment_id, COUNT(donation_id) AS num_total_donations
    FROM donations
    GROUP BY assignment_id
    HAVING COUNT(donation_id) >= 1
),
rankes_ass AS (
    SELECT assignment_name, region, impact_score, num_total_donations,
    DENSE_RANK() OVER(PARTITION BY region ORDER BY impact_score DESC, num_total_donations DESC) AS region_rank
    FROM assignments
    JOIN don_count
    USING(assignment_id)
)
    SELECT assignment_name, region, impact_score, num_total_donations
    FROM rankes_ass
    WHERE region_rank = 1
    ORDER BY 2;
```

index	assignment_name	region	impact_score	num_total_donations
0	Assignment_316	East	10	2
1	Assignment_2253	North	9.99	1
2	Assignment_3547	South	10	1
3	Assignment_2794	West	9.99	2

Rows: 4