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

	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	

5 rows

Projects Data DataFrame as `top_regional_impact_assignments`

```sql
-- top_regional_impact_assignments
WITH donation_counts AS (
    SELECT
        assignment_id,
        COUNT(donation_id) AS num_total_donations
    FROM
        donations
    GROUP BY
        assignment_id
),
ranked_assignments AS (
    SELECT
        a.assignment_name,
        a.region,
        a.impact_score,
        dc.num_total_donations,
        ROW_NUMBER() OVER (PARTITION BY a.region ORDER BY a.impact_score DESC) AS
rank_in_region
    FROM
        assignments a
    JOIN
        donation_counts dc ON a.assignment_id = dc.assignment_id
    WHERE
        dc.num_total_donations > 0
)
SELECT
    assignment_name,
    region,
    impact_score,
    num_total_donations
FROM
    ranked_assignments
WHERE
    rank_in_region = 1
ORDER BY
    region ASC;
```

	assignment_name	region	impact_score
0	Assignment_316	East	
1	Assignment_2253	North	
2	Assignment_3547	South	
3	Assignment_2794	West	