DESCRIPTION

Table: Employee

+-------------+---------+

| Column Name | Type |

+-------------+---------+

| id | int |

| name | varchar |

| department | varchar |

| managerId | int |

+-------------+---------+

id is the primary key (column with unique values) for this table.

Each row of this table indicates the name of an employee, their department, and the id of their manager.

If managerId is null, then the employee does not have a manager.

No employee will be the manager of themself.

Write a solution to find managers with at least **five direct reports**.

Return the result table in **any order**.

The result format is in the following example.

Example 1:

Input:

Employee table:

+-----+-------+------------+-----------+

| id | name | department | managerId |

+-----+-------+------------+-----------+

| 101 | John | A | null |

| 102 | Dan | A | 101 |

| 103 | James | A | 101 |

| 104 | Amy | A | 101 |

| 105 | Anne | A | 101 |

| 106 | Ron | B | 101 |

+-----+-------+------------+-----------+

Output:

+------+

| name |

+------+

| John |

+------+

SOLUTION

MySQL:

Option 1:

- Select managerId and direct report counts (>= 50) using COUNT(), GROUPBY AND HAVING
- Create a subquery table t using WITH
- JOIN Employee and t tables ON e.Id = t.managerId and SELECT name

```
WITH t AS (
    SELECT managerId, COUNT(managerId) reports
    FROM Employee
    GROUP BY managerId
    HAVING COUNT(managerId) >= 5)
SELECT e.name
FROM t
JOIN Employee e
ON e.id = t.managerId;
```

Option 2:

- Select managerId and direct report counts using COUNT() and GROUPBY
- Create a subquery table t using WITH
- JOIN Employee and t tables ON e.Id = t.managerId AND t.reports >= 5 and SELECT name

```sql
WITH t AS (
    SELECT managerId, COUNT(managerId) reports
    FROM Employee
    GROUP BY managerId)
SELECT e.name
FROM t
JOIN Employee e
ON e.id = t.managerId AND t.reports >= 5;
```

Option 3:

- Select managerId and direct report counts using COUNT() and GROUPBY
- Create a subquery and SELECT manager Id having direct report counts >= 5 using HAVING and COUNT()
- SELECT name with id from the subquery using WHERE

```sql
SELECT name
FROM Employee
WHERE id IN
    (SELECT managerId
    FROM Employee
    GROUP BY managerId
    HAVING COUNT(managerId) >= 5);
```

PostgreSQL:

- Select managerId and direct report counts (>= 5) using COUNT(), GROUPBY and HAVING
- Create a subquery table t using WITH
- JOIN Employee and t tables ON e.Id = t.managerId and SELECT name

```sql
WITH t AS(
SELECT managerId, COUNT(managerId) reports_count
FROM Employee e
GROUP BY 1
HAVING COUNT(managerId) >= 5)
SELECT e.name
FROM t
JOIN Employee e
ON e.id = t.managerId;
```