Problem List

Description | Accepted | Editorial | Solutions | Submissions

1270. All People Report to the Given Manager

Solved

Premium

Medium | Topics | Companies

SQL Schema | Pandas Schema

Table: Employees

Column Name	Type
employee_id	int
employee_name	varchar
manager_id	int

employee_id is the column of unique values for this table.
Each row of this table indicates that the employee with ID employee_id and name employee_name reports his work to his/her direct manager with manager_id
The head of the company is the employee with employee_id = 1.

Write a solution to find employee_id of all employees that directly or indirectly report their work to the head of the company.

The indirect relation between managers **will not exceed three managers** as the company is small.

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

The result format is in the following example.

Example 1:

Input:
Employees table:

employee_id	employee_name	manager_id
1	Boss	1
3	Alice	3
2	Bob	1
4	Daniel	2
7	Luis	4
8	Jhon	3
9	Angela	8
77	Robert	1

Output:

employee_id
2
77
4
7

Explanation:
The head of the company is the employee with employee_id 1.
The employees with employee_id 2 and 77 report their work directly to the head of the company.
The employee with employee_id 4 reports their work indirectly to the head of the company 4 --> 2 --> 1.
The employee with employee_id 7 reports their work indirectly to the head of the company 7 --> 4 --> 2 --> 1.
The employees with employee_id 3, 8, and 9 do not report their work to the head of the company directly or indirectly.

Seen this question in a real interview before? 1/5

Yes No

Accepted 65,864/78.3K | Acceptance Rate 84.1%

Topics

Companies

Discussion (21)

443 | 21 | 0 Online

Code

Pandas • Auto

```python
import pandas as pd

def find_reporting_people(employees: pd.DataFrame) -> pd.DataFrame:

    # Employees who directly report to head (1)
    level1 = employees[
        (employees["manager_id"] == 1) &
        (employees["employee_id"] != employees["manager_id"])
    ]["employee_id"]

    # Employees whose manager reports to head
    level2 = employees[employees["manager_id"].isin(level1)]["employee_id"]

    # Employees whose manager's manager reports to head
    level3 = employees[employees["manager_id"].isin(level2)]["employee_id"]

    # Combine all levels and remove duplicates
    result = pd.concat([level1, level2, level3]).drop_duplicates()

    result = pd.DataFrame({"employee_id": result})
    result = result.sort_values(by="employee_id")

    return result

```

Saved

Ln 14, Col 56

Testcase | Test Result

Accepted Runtime: 236 ms

Case 1

Input

Employees =

employee_id	employee_name	manager_id
1	Boss	1
3	Alice	3
2	Bob	1
4	Daniel	2