

Amber's conglomerate corporation just acquired some new companies. Each of the companies follows this hierarchy:

Given the table schemas below, write a query to print the company\_code, founder name, total number of lead managers, total number of senior managers, total number of managers, and total number of employees. Order your output by ascending company\_code.

Note:

The tables may contain duplicate records.

The company\_code is string, so the sorting should not be numeric. For example, if the company\_codes are C\_1, C\_2, and C\_10, then the ascending company\_codes will be C\_1, C\_10, and C\_2.

Input Format

The following tables contain company data:

Company: The company\_code is the code of the company and founder is the founder of the company.

Lead\_Manager: The lead\_manager\_code is the code of the lead manager, and the company\_code is the code of the working company.

Senior\_Manager: The senior\_manager\_code is the code of the senior manager, the lead\_manager\_code is the code of its lead manager, and the company\_code is the code of the working company.

Manager: The manager\_code is the code of the manager, the senior\_manager\_code is the code of its senior manager, the lead\_manager\_code is the code of its lead manager, and the company\_code is the code of the working company.

Employee: The employee\_code is the code of the employee, the manager\_code is the code of its manager, the senior\_manager\_code is the code of its senior manager, the lead\_manager\_code is the code of its lead manager, and the company\_code is the code of the working company.

Sample Input

Company Table: Lead\_Manager Table: Senior\_Manager Table: Manager Table: Employee Table:

Sample Output

C1 Monika 1 2 1 2

C2 Samantha 1 1 2 2

Explanation

In company C1, the only lead manager is LM1. There are two senior managers, SM1 and SM2, under LM1. There is one manager, M1, under senior manager SM1. There are two employees, E1 and E2, under manager M1.

In company C2, the only lead manager is LM2. There is one senior manager, SM3, under LM2. There are two managers, M2 and M3, under senior manager SM3. There is one employee, E3, under manager M2, and another employee, E4, under manager, M3.

**Solution:**

SELECT c.company\_code,

c.founder,

COUNT(DISTINCT l.lead\_manager\_code),

COUNT(DISTINCT s.senior\_manager\_code),

COUNT(DISTINCT m.manager\_code),

COUNT(DISTINCT e.employee\_code)

FROM Company c

JOIN Lead\_Manager l ON c.company\_code = l.company\_code

JOIN Senior\_Manager s ON l.lead\_manager\_code = s.lead\_manager\_code

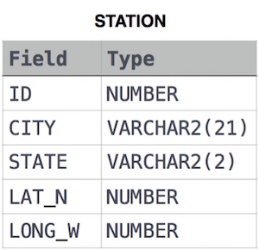
JOIN Manager m ON s.senior\_manager\_code = m.senior\_manager\_code

JOIN Employee e ON m.manager\_code = e.manager\_code

GROUP BY c.company\_code, c.founder

ORDER BY c.company\_code ASC

**Weather Observation Station 20**

A median is defined as a number separating the higher half of a data set from the lower half. Query the median of the Northern Latitudes (LAT\_N) from STATION and round your answer to decimal places.

Input Format

The STATION table is described as follows:

**Solution:**

**SELECT CAST(ROUND(LAT\_N,4) AS DECIMAL(10,4))**

**FROM STATION**

**WHERE LAT\_N = (SELECT DISTINCT PERCENTILE\_CONT(0.5)**

**WITHIN GROUP (ORDER BY LAT\_N) OVER() AS "Median"**

**FROM STATION)**

**The Report**

A screenshot of a number grid

Description automatically generatedYou are given two tables: Students and Grades. Students contains three columns ID, Name and Marks.

Grades contains the following data:A screenshot of a computer

Description automatically generated

Ketty gives Eve a task to generate a report containing three columns: Name, Grade and Mark. Ketty doesn't want the NAMES of those students who received a grade lower than 8. The report must be in descending order by grade -- i.e. higher grades are entered first. If there is more than one student with the same grade (8-10) assigned to them, order those particular students by their name alphabetically. Finally, if the grade is lower than 8, use "NULL" as their name and list them by their grades in descending order. If there is more than one student with the same grade (1-7) assigned to them, order those particular students by their marks in ascending order.

Write a query to help Eve.

**Solution:**

**WITH student\_grade AS (**

**SELECT S.Name AS name, G.Grade AS grade, S.Marks AS marks**

**FROM Students S, Grades G**

**WHERE marks BETWEEN G.Min\_Mark AND G.Max\_Mark**

**)**

**SELECT**

**CASE**

**WHEN grade < 8 THEN NULL**

**ELSE name**

**END,**

**grade,**

**marks**

**FROM student\_grade**

**ORDER BY grade DESC,name;**