第四章作业答案

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Current Section

12.For the database of Figure 4.11, write a query to find those employees with no manager. Note that an employee may simply have no manager listed or may have a null manager. Write your query using an outer join and then write it again using no outer join at all.

employee (*employee_name*, *street*, *city*)
works (*employee_name*, *company_name*, *salary*)
company (*company_name*, *city*)
manages (*employee_name*, *manager_name*)

Figure: Figure 4.11

1. Query using an outer join:

SELECT employee-name FROM employee NATURAL LEFT OUTER JOIN manages WHERE manager-name is null.

这里使用左外连接，因为有些employee可能不在manages表中

2. Query using no outer join:

可以使用全部employee的名单减去有manager的employee的名单

SELECT employee-name FROM employee e WHERE NOT EXISTS (SELECT employee-name FROM manages m WHERE e.employee-name=m.employee-name AND m.manager-name IS NOT NULL).

Current Section

14. Show how to define a view $tot-credits(year, num-credits)$, giving the total number of credits taken by students in each year.

Answer:

CREATE VIEW tot-credits(year,tot-credits) AS (SELECT year,SUM(credits) FROM takes NATURAL JOIN course GROUP BY year).

不同的数据库平台的SQL语句可能会有一点差异，考试或者做作业时建议按照教材上的写法