Homework

6-4: Self Joins and Hierarchical Queries

## Vocabulary

Identify the vocabulary word for each definition below.

Self join = Joins a table to itself

Hierarchical queries = Retrieves data based on a natural hierarchical relationship between rows in a table

LEVEL = Determines the number of steps down from the beginning row that should be returned by a hierarchical query

START WITH = Identifies the beginning row for a hierarchical query

CONNECT BY PRIOR = Specifies the relationship between parent rows and child rows of a hierarchical query

## 

## Try It / Solve It

For each problem, use the Oracle database.

1. Display the employee’s last name and employee number along with the manager’s last name and manager number. Label the columns: Employee, Emp#, Manager, and Mgr#, respectively.

SELECT e.last\_name AS "Employee", e.employee\_ID AS "Emp#",mgr.last\_name as "Manager", mgr.manager\_ID AS "Mgr#"

FROM employees e INNER JOIN employees mgr

ON(e.manager\_id = mgr.employee\_id)

1. Modify question 1 to display all employees and their managers, even if the employee does not have a manager. Order the list alphabetically by the last name of the employee.

SELECT e.last\_name AS "Employee", e.employee\_ID AS "Emp#",mgr.last\_name as "Manager", mgr.manager\_ID AS "Mgr#"

FROM employees e RIGHT OUTER JOIN employees mgr

ON(e.manager\_id = mgr.employee\_id)

ORDER BY e.last\_name

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1. Display the names and hire dates for all employees who were hired before their managers, along with their managers’ names and hire dates. Label the columns Employee, Emp Hired, Manager and Mgr Hired, respectively.

SELECT e.last\_name AS "Employee", e.hire\_date AS "Emp Hired",mgr.last\_name as "Manager", mgr.hire\_date AS "Mgr Hired"

FROM employees e INNER JOIN employees mgr

ON(e.manager\_id = mgr.employee\_id)

WHERE e.hire\_date < mgr.hire\_date

1. Write a report that shows the hierarchy for Lex De Haans department. Include last name, salary, and department id in the report.

SELECT last\_name, salary, department\_id

FROM employees

START WITH first\_name = 'Lex' AND last\_name ='De Haan'

CONNECT BY PRIOR employee\_id = manager\_id;

1. What is wrong in the following statement?

SELECT last\_name, department\_id, salary FROM employees

START WITH last\_name = 'King'

CONNECT BY PRIOR manager\_id = employee\_id;

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1. Create a report that shows the organization chart for the entire employee table. Write the report so that each level will indent each employee 2 spaces. Since Oracle Application Express cannot display the spaces in front of the column, use - (minus) instead.

SELECT LPAD(last\_name, LENGTH(last\_name) + (LEVEL\*2) - 2,'\_') AS "ORG\_CHART"

FROM employees

START with last\_name = 'King'

CONNECT BY PRIOR employee\_id = manager\_id

1. Re-write the report from 6 to exclude De Haan and all the people working for him.

SELECT LPAD(last\_name, LENGTH(last\_name) + (LEVEL\*2) - 2,'\_') AS "ORG\_CHART"

FROM employees

START with last\_name = 'King'

CONNECT BY PRIOR employee\_id = manager\_id AND last\_name != 'De Haan'