Practices for Lesson 7: Displaying Data from Multiple Tables Using Joins

Chapter 7

Practices for Lesson 7: Overview

Practice Overview

This practice covers the following topics:

- Joining tables using an equijoin
- · Performing outer and self-joins
- Adding conditions

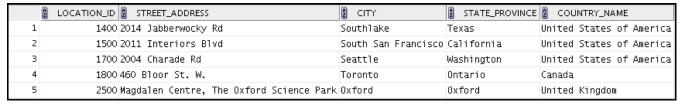
Practice 7-1: Displaying Data from Multiple Tables by Using Joins

Overview

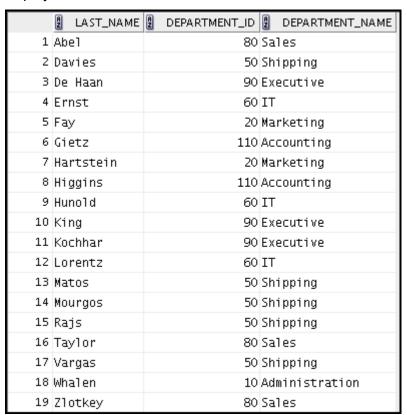
This practice is intended to give you experience in extracting data from multiple tables using the SQL:1999–compliant joins.

Tasks

1. Write a query for the HR department to produce the addresses of all the departments. Use the LOCATIONS and COUNTRIES tables. Show the location ID, street address, city, state or province, and country in the output. Use a NATURAL JOIN to produce the results.



The HR department needs a report of all employees with corresponding departments. Write a query to display the last name, department number, and department name for these employees.



3. The HR department needs a report of employees in Toronto. Display the last name, job, department number, and the department name for all employees who work in Toronto.

2 LAST_NAME	B JOB_ID B	DEPARTMENT_ID 2 DEPARTMENT_NAME
1 Hartstein	MK_MAN	20 Marketing
2 Fay	MK_REP	20 Marketing

4. Create a report to display employees' last names and employee numbers along with their managers' last names and manager numbers. Label the columns <code>Employee</code>, <code>Emp#</code>, <code>Manager</code>, and <code>Mgr#</code>, respectively. Save your SQL statement as <code>lab_07_04.sql</code>. Run the query.

	Employee	EMP#	Manager	2 Mgr#
1	Huno1d	103	De Haan	102
2	Fay	202	Hartstein	201
3	Gietz	206	Higgins	205
4	Lorentz	107	Huno1d	103
5	Ernst	104	Huno1d	103
6	Hartstein	201	King	100
7	Z1otkey	149	King	100
8	Mourgos	124	King	100
9	De Haan	102	King	100
10	Kochhar	101	King	100
11	Higgins	205	Kochhar	101
12	Wha1en	200	Kochhar	101
13	Vargas	144	Mourgos	124
14	Matos	143	Mourgos	124
15	Davies	142	Mourgos	124
16	Rajs	141	Mourgos	124
17	Grant	178	Z1otkey	149
18	Taylor	176	Z1otkey	149
19	Abe1	174	Z1otkey	149

5. Modify lab_07_04.sql to display all employees, including King, who has no manager. Order the results by employee number. Save your SQL statement as lab_07_05.sql. Run the query in lab_07_05.sql.

	2 Employee	2 EMP#	Manager	2 Mgr#
1	King	100	(null)	(nu11)
2	Kochhar	101	King	100
3	De Haan	102	King	100
4	Huno1d	103	De Haan	102
5	Ernst	104	Huno1d	103
6	Lorentz	107	Huno1d	103

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16 Whalen	200 Kochhar	101
17 Hartstein	201 King	100
18 Fay	202 Hartstein	201
19 Higgins	205 Kochhar	101
20 Gietz	206 Higgins	205

6. Create a report for the HR department that displays employee last names, department numbers, and all the employees who work in the same department as a given employee. Give each column an appropriate label. Save the script to a file named lab 07 06.sql.

	A	DEPARTMENT	EMPLOYEE	2 COLLEAGUE
1		20	Fay	Hartstein
2		20	Hartstein	Fay
3		50	Davies	Matos
4		50	Davies	Mourgos
5		50	Davies	Rajs
6		50	Davies	Vargas
7		50	Matos	Davies

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37	90	King	De Haan
38	90	King	Kochhar
39	90	Kochhar	De Haan
40	90	Kochhar	King
41	110	Gietz	Higgins
42	110	Higgins	Gietz

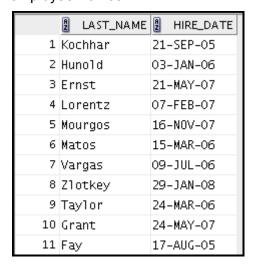
7. The HR department needs a report on job grades and salaries. To familiarize yourself with the JOB_GRADES table, first show the structure of the JOB_GRADES table. Then create a query that displays the name, job, department name, salary, and grade for all employees.

DESC JOB_GRA		Туре
Name	Null	Type
GRADE_LEVEL LOWEST_SAL HIGHEST_SAL		VARCHAR2(3) NUMBER NUMBER



If you want an extra challenge, complete the following exercises:

8. The HR department wants to determine the names of all employees who were hired after Davies. Create a query to display the name and hire date of any employee hired after employee Davies.



9. The HR department needs to find the names and hire dates of all employees who were hired before their managers, along with their managers' names and hire dates. Save the script to a file named lab_07_09.sql.

	LAST_NAME	HIRE_DATE	LAST_NAME_1	HIRE_DATE_1
1	De Haan	13-JAN-01	King	17-JUN-03
2	Higgins	07-JUN-02	Kochhar	21-SEP-05
3	Whalen	17-SEP-03	Kochhar	21-SEP-05
4	Vargas	09-JUL-06	Mourgos	16-N0V-07
5	Matos	15-MAR-06	Mourgos	16-N0V-07
6	Davies	29-JAN-05	Mourgos	16-N0V-07
7	Rajs	17-0CT-03	Mourgos	16-N0V-07
8	Grant	24-MAY-07	Zlotkey	29-JAN-08
9	Taylor	24-MAR-06	Zlotkey	29-JAN-08
10	Abe1	11-MAY-04	Zlotkey	29-JAN-08