EXPRIMENT – 5

SQL query based on Joins II

1. **Write a query in SQL to display all departments including those where does not have any employee.**
   SELECT d.department_id, d.department_name,
       COUNT(e.employee_id) AS num_employees
   FROM   departments d
   LEFT JOIN employees e ON d.department_id = e.department_id
   GROUP BY d.department_id, d.department_name;

DEPARTMENT_ID	DEPARTMENT_NAME	NUM_EMPLOYEES
100	Finance	6
140	Control And Credit	0
50	Shipping	45
70	Public Relations	1
250	Retail Sales	0

80	Sales	34
160	Benefits	0
210	IT Support	0
150	Shareholder Services	0
260	Recruiting	0
270	Payroll	0

27 rows returned in 0.00 seconds   CSV Export

2. **Write a query in SQL to display the first and last name and salary for those employees who earn less than the employee earn whose number is 182.**
   SELECT first_name, last_name, salary
   FROM employees
   WHERE   salary < (SELECT salary FROM employees WHERE employee_id = 182);

FIRST_NAME	LAST_NAME	SALARY
James	Landry	2400
Steven	Markle	2200
TJ	Olson	2100
Ki	Gee	2400
Hazel	Philtanker	2200

5 rows returned in 0.01 seconds   CSV Export

3. **Write a query in SQL to display the first name of all employees including the first name of their manager.**
   SELECT emp.first_name AS employee_first_name,
         mgr.first_name AS manager_first_name
   FROM   employees emp
   LEFT JOIN employees mgr ON emp.manager_id = mgr.employee_id;

EMPLOYEE_FIRST_NAME	MANAGER_FIRST_NAME
Steven	-
Neena	Steven
Lex	Steven
Alexander	Lex
Bruce	Alexander
David	Alexander
Valli	Alexander

Michael	Steven
Pat	Michael
Susan	Neena
Hermann	Neena
Shelley	Neena
William	Shelley

107 rows returned in 0.00 seconds   CSV Export

4. **Write a query in SQL to display the department name, city, and state province for each department.**
    SELECT d.department_name, l.city, l.state_province
    FROM   departments d
    JOIN locations l ON d.location_id = l.location_id;

DEPARTMENT_NAME	CITY	STATE_PROVINCE
IT	Southlake	Texas
Shipping	South San Francisco	California
Administration	Seattle	Washington
Purchasing	Seattle	Washington

Marketing	Toronto	Ontario
Human Resources	London	-
Sales	Oxford	Oxford
Public Relations	Munich	Bavaria

27 rows returned in 0.01 seconds   CSV Export

5. **Write a query in SQL to display the first name, last name, department number and name, for all employees who have or have not any department**.
    SELECT e.first_name, e.last_name, e.department_id,
      COALESCE(d.department_name, 'No Department') AS department_name
    FROM employees e
    LEFT JOIN departments d ON e.department_id = d.department_id;

FIRST_NAME	LAST_NAME	DEPARTMENT_ID	DEPARTMENT_NAME
Steven	King	90	Executive
Neena	Kochhar	90	Executive
Lex	De Haan	90	Executive
Alexander	Hunold	60	IT
Bruce	Ernst	60	IT
Susan	Mavris	40	Human Resources
Hermann	Baer	70	Public Relations
Shelley	Higgins	110	Accounting
William	Gietz	110	Accounting

107 rows returned in 0.01 seconds   CSV Export