**TOPIC 06: SQL Joins**

**Exercises**

**\*\*\* This exercise is performed on HR Schema (HR database) \*\*\***

**\*\* This exercise may include some of the topics examined previously\*\***

1. Write a query in SQL to display the first name, last name, department number, and department name for each employee (table:departments, employees).

**select e.first\_name,e.last\_name,e.department\_id,d.department\_name**

**from employees e**

**join departments d on (e.department\_id=d.department\_id);**

1. Write a query in SQL to display the first and last name, department, city, and state province for each employee (table: employees, departments, locations).

**Select e.first\_name,e.last\_name,d.department\_name,l.city,l.state\_province**

**from employees e**

**join departments d on (e.department\_id=d.department\_id)**

**join locations l on (l.location\_id=d.location\_id);**

1. Write a query in SQL to display the first name, last name, salary, and job grade for all employees (table: employees, job\_grades).

**SELECT last\_name, salary, grade\_level**

**FROM employees, job\_grades;**

1. Write a query in SQL to display the first name, last name, department number and department name, for all employees for departments 80 or 40 (table: departments, employees).

**select e.first\_name,e.last\_name,e.department\_id,d.department\_name from**

**employees e JOIN departments d ON (e.department\_id=d.department\_id)**

**where e.department\_id=40 or e.department\_id=80;**

1. Write a query in SQL to display those employees who contain a letter z to their first name and also display their last name, department, city, and state province (table: departments, employees, locations).

**select e.first\_name,e.last\_name,d.department\_name,l.city,l.state\_province**

**from employees e**

**join departments d on (e.department\_id=d.department\_id)**

**join locations l on (l.location\_id=d.location\_id) where first\_name like '%z%';**

1. Write a query in SQL to display all departments including those where does not have any employee (table: employees, departments).

**select e.first\_name, e.last\_name, e.salary, d.department\_id, d.department\_name**

**from employees e**

**right outer join departments d on (e.department\_id = e.department\_id);**

1. 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 (table: employees).

**select e.first\_name, e.last\_name, e.salary**

**from employees e**

**join employees m on (e.salary < m.salary) and (m.employee\_id = 182);**

1. Write a query in SQL to display the first name of all employees including the first name of their manager (table: employees).

**select e.first\_name as "empl", m.first\_name as "mngr"**

**from employees e join employees m on e.manager\_id = m.employee\_id;**

1. Write a query in SQL to display the department name, city, and state province for each department (table: departments, locations).

**select d.department\_name,l.city,l.state\_province**

**from departments d**

**join locations l on (d.location\_id =l.location\_id);**

1. 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 (table: departments,employees).

**select e.first\_name, e.last\_name, e.department\_id, d.department\_name**

**from employees e**

**left outer join departments d on (e.department\_id = d.department\_id);**

1. Write a query in SQL to display the first name of all employees and the first name of their manager including those who does not working under any manager (table: employees).

**select e.first\_name "empl", m.first\_name "mngr"**

**from employees e**

**left outer join employees m on (e.manager\_id = m.employee\_id);**

1. Write a query in SQL to display the first name, last name, and department number for those employees who works in the same department as the employee who holds the last name as Taylor (table: employees).

**select e.first\_name , e.last\_name , e.department\_id**

**from employees e**

**join employees m on (e.department\_id = m.department\_id)**

**and m.last\_name like '%Taylor%';**

1. Write a query in SQL to display the job title, department name, full name (first and last name ) of employee, and starting date for all the jobs which started on or after 1st January, 1993 and ending with on or before 31 August, 1997 (table: job\_history, employees, jobs).

**select job\_title, department\_name, first\_name || ' ' || last\_name as "empl", start\_date from job\_history**

**join jobs using (job\_id)**

**join departments using (department\_id)**

**join employees using (employee\_id)**

**where start\_date>='01-JAN-1993' and start\_date<='31-AUG-1997';**

1. Write a query in SQL to display job title, full name (first and last name ) of employee, and the difference between maximum salary for the job and salary of the employee (table: employees, jobs).

**select job\_title, first\_name || ' ' || last\_name as “empl”, max\_salary-salary as "salaryDIFF"**

**from employees natural join jobs;**

1. Write a query in SQL to display the name of the department, average salary and number of employees working in that department who got commission (table: employees, departments).

**select department\_name, avg(salary), count(commission\_pct)**

**from departments join employees using (department\_id)**

**group by department\_name;**