# Exercise 1.  Simple SQL Queries

## What This Exercise Is About

This exercise provides an opportunity to write and execute basic SQL statements.

## What You Should Be Able to Do

At the end of the lab, you should be able to:

- Code SELECT statements using four clauses of an SQL SELECT statement.
- Use a SELECT statement to:
  - Retrieve all rows of a table
  - Retrieve specific columns
  - Retrieve rows based on comparisons to numeric or alphanumeric data
  - Retrieve rows based on specific columns containing NULL values
- Code SELECT statements using keywords BETWEEN, IN, LIKE and DISTINCT
- Produce a result table whose rows are sorted in a desired sequence

## Introduction

See the data model at the start of this exercise guide to get the column names and descriptions for each table.

## Required Materials

- Student handout
- *SQL Reference*

# Problem List

## *Problem 1*

List employee number, last name, date of birth, and salary for all employees who make more than $30,000 a year. Sequence the results in descending order by salary.

## *Problem 2*

List last name, first name, and the department number for all employees. The listing should be ordered by descending department numbers. Within the same department, the last names should be sorted in descending order.

## *Problem 3*

List the different education levels in the company in descending order. List only one occurrence of duplicate result rows.

## *Problem 4*

List employees, by employee number, and their assigned projects, by project number. Display only those employees with an employee number less than or equal to 100. List only one occurrence of duplicate rows. Sort the result rows by employee number.

(Use the EMP_ACT table.)

## *Problem 5*

List last name, salary, and bonus of all male employees.

## *Problem 6*

List last name, salary, and commission for all employees with a salary greater than $20,000 and hired after 1979.

## *Problem 7*

List last name, salary, bonus, and commission for all employees with a salary greater than $22,000 and a bonus of $400, or for all employees with a bonus of $500 and a commission lower than $1,900. The list should be ordered by last name.

## *Problem 8*

List last name, salary, bonus, and commission for all employees with a salary greater than $22,000, a bonus of $400 or $500, and a commission less than $1,900. The list should be ordered by last name.

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## *Problem 9*

Using the EMP_ACT table, for all projects that have a project number beginning with AD and have activities 10, 80, and 180 associated with them, list the following:

- Project number
- Activity number
- Starting date for activity
- Ending date for activity

Order the list by activity number within project number.

## *Problem 10*

List manager number and department number for all departments to which a manager has been assigned.

The list should be ordered by manager number.

## *Problem 11*

List employee number, last name, salary, and bonus for all employees that have a bonus ranging from $800 to $1,000.

Sort the report by employee number within bonus, lowest bonus first.

## *Problem 12*

List employee number, last name, salary, and department number for all employees in departments A00 through C01 (inclusive).

Order the results alphabetically by last name and employee number.

## *Problem 13*

List all projects that have SUPPORT as part of the project name. Order the results by project number.

## *Problem 14*

List all departments that have a 1 as the middle character in the department number.

Order the results by department number.

## *Problem 15*

List the last name, first name, middle initial, and salary of the five highest paid non-manager, non-president employees.

Order the results by highest salary first.

## *END OF LAB*