# Practices for Lesson 2: Retrieving Data using the SQL SELECT Statement

Practices for Lesson 2: Overview

Practice Overview

This practice covers the following topics:

Selecting all data from different tables

Describing the structure of tables

Performing arithmetic calculations and specifying column names

Practice 2-1: Retrieving Data Using the SQL SELECT Statement

Overview

In this practice, you write simple SELECT queries. The queries cover most of the SELECT

clauses and operations that you learned in this lesson.

Task 1

Test your knowledge:

The following SELECT statement executes successfully:

True/False

The following SELECT statement executes successfully:

True/False

There are four coding errors in the following statement. Can you identify them?

Task 2

Note the following points before you begin with the practices:

Save all your practice files at the following location:

/home/oracle/labs/sql1/labs

Enter your SQL statements in a SQL Worksheet. To open a new worksheet, click File menu, select New. A New Gallery dialog window appears. Click Database Files under Database Tier on the left pane. Select SQL File on the right pane and click OK.

To save a script in SQL Developer, make sure that the required SQL Worksheet is active, and then from the File menu, select Save As to save your SQL statement as a lab\_<lessonno>\_<stepno>.sql script. When you modify an existing script, make sure that you use Save As to save it with a different file name.

To run the query, click the Run Statement icon in the SQL Worksheet. Alternatively, you can press F9. For DML and DDL statements, use the Run Script icon or press F5.

After you have executed the query, make sure that you do not enter your next query in the same worksheet. Open a new worksheet.

You have been hired as a SQL programmer for Acme Corporation. Your first task is to create some reports based on data from the Human Resources tables.

Your first task is to determine the structure of the DEPARTMENTS table and its contents.

Your next task is to determine the structure of the EMPLOYEES table and its contents.

Determine the structure of the EMPLOYEES table.

The HR department wants a query to display the last name, job ID, hire date, and employee ID for each employee, with the employee ID appearing first. Provide an alias STARTDATE for the HIRE\_DATE column. Save your SQL statement to a file named lab\_02\_5b.sql so that you can dispatch this file to the HR department. Test your query in the lab\_02\_5b.sql file to ensure that it runs correctly.

**Note:** After you have executed the query, make sure that you do not enter your next query in the same worksheet. Open a new worksheet.

The HR department wants a query to display all unique job IDs from the EMPLOYEES table.

Task 3

If you have time, complete the following exercises:

The HR department wants more descriptive column headings for its report on employees. Copy the statement from lab\_02\_5b.sql to a new SQL Worksheet. Name the columns Emp #, Employee, Job, and Hire Date, respectively. Then run the query again.

The HR department has requested a report of all employees and their job IDs. Display the last name concatenated with the job ID (separated by a comma and space) and name the column Employee and Title.

**…**

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

To familiarize yourself with the data in the EMPLOYEES table, create a query to display all the data from that table. Separate each column output by a comma. Name the column THE\_OUTPUT.

**…**

Solution 2-1: Retrieving Data Using the SQL SELECT Statement

Task 1

Test your knowledge:

The following SELECT statement executes successfully:

**True**/False

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**True**/False

There are four coding errors in the following statement. Can you identify them?

The EMPLOYEES table does not contain a column called sal. The column is called

SALARY.

The multiplication operator is \*, not x as shown in line 2.

The ANNUAL SALARY alias cannot include spaces. The alias should read

ANNUAL\_SALARY or should be enclosed within double quotation marks.

A comma is missing after the LAST\_NAME column.

Task 2

You have been hired as a SQL programmer for Acme Corporation. Your first task is to create some reports based on data from the Human Resources tables.

Your first task is to determine the structure of the DEPARTMENTS table and its contents.

To determine the DEPARTMENTS table structure:

To view the data contained in the DEPARTMENTS table:

Your next task is to determine the structure of the EMPLOYEES table and its contents.

Determine the structure of the EMPLOYEES table.

The HR department wants a query to display the last name, job ID, hire date, and employee ID for each employee, with the employee ID appearing first. Provide an alias STARTDATE for the HIRE\_DATE column. Save your SQL statement to a file named lab\_02\_5b.sql so that you can dispatch this file to the HR department. Test your query in the lab\_02\_5b.sql file to ensure that it runs correctly.

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