Practices for Lesson 10: Manipulating Data

Chapter 10

Practices for Lesson 10: Overview

Lesson Overview

This practice covers the following topics:

- Inserting rows into tables
- Updating and deleting rows in a table
- Controlling transactions

Note: Before starting this practice, execute `/home/oracle/labs/sql1/code_ex /cleanup_scripts/cleanup_10.sql script`.

Practice 10-1: Managing Tables by Using DML Statements

Overview

The HR department wants you to create SQL statements to insert, update, and delete employee data. As a prototype, you use the `MY_EMPLOYEE` table before giving the statements to the HR department.

Notes

- For all the DML statements, use the Run Script icon (or press F5) to execute the query. Thus, you get to see the feedback messages on the Script Output tabbed page. For `SELECT` queries, continue to use the Execute Statement icon or press F9 to get the formatted output on the Results tabbed page.
- Execute `cleanup_10.sql` script from `/home/oracle/labs/sql1/code_ex/cleanup_scripts/` before performing the following tasks.

Tasks

1. Create a table called `MY_EMPLOYEE`.
2. Describe the structure of the `MY_EMPLOYEE` table to identify the column names.

```
DESCRIBE my_employee
Name       Null     Type
---------- -------- ------------
ID         NOT NULL NUMBER(4)
LAST_NAME           VARCHAR2(25)
FIRST_NAME          VARCHAR2(25)
USERID              VARCHAR2(8)
SALARY              NUMBER(9,2)
```

3. Create an `INSERT` statement to add the *first row* of data to the `MY_EMPLOYEE` table from the following sample data. Do not list the columns in the `INSERT` clause. *Do not enter all rows yet.*

ID	LAST_NAME	FIRST_NAME	USERID	SALARY
1	Patel	Ralph	rpatel	895
2	Dancs	Betty	bdancs	860
3	Biri	Ben	bbiri	1100
4	Newman	Chad	cnewman	750
5	Ropeburn	Audrey	aropebur	1550

4. Populate the `MY_EMPLOYEE` table with the second row of the sample data from the preceding list. This time, list the columns explicitly in the `INSERT` clause.
5. Confirm your addition to the table.

	ID	LAST_NAME	FIRST_NAME	USERID	SALARY
1	1	Patel	Ralph	rpatel	895
2	2	Dancs	Betty	bdancs	860

6. Write an `INSERT` statement in a dynamic reusable script file to load the remaining rows into the `MY_EMPLOYEE` table. The script should prompt for all the columns (`ID`, `LAST_NAME`, `FIRST_NAME`, `USERID`, and `SALARY`). Save this script to a `lab_10_06.sql` file.
7. Populate the table with the next two rows of the sample data listed in step 3 by running the `INSERT` statement in the script that you created.
8. Confirm your additions to the table.

	ID	LAST_NAME	FIRST_NAME	USERID	SALARY
1	1	Patel	Ralph	rpatel	895
2	2	Dancs	Betty	bdancs	860
3	3	Biri	Ben	bbiri	1100
4	4	Newman	Chad	cnewman	750

9. Make the data additions permanent.

Update and delete data in the `MY_EMPLOYEE` table.

10. Change the last name of employee 3 to Drexler.

11. Change the salary to $1,000 for all employees who have a salary less than $900.
12. Verify your changes to the table.

	ID	LAST_NAME	FIRST_NAME	USERID	SALARY
1	1	Patel	Ralph	rpatel	1000
2	2	Dancs	Betty	bdancs	1000
3	3	Drexler	Ben	bbiri	1100
4	4	Newman	Chad	cnewman	1000

13. Delete Betty Dancs from the `MY_EMPLOYEE` table.
14. Confirm your changes to the table.

	ID	LAST_NAME	FIRST_NAME	USERID	SALARY
1	1	Patel	Ralph	rpatel	1000
2	3	Drexler	Ben	bbiri	1100
3	4	Newman	Chad	cnewman	1000

15. Commit all pending changes.

Control the data transaction to the `MY_EMPLOYEE` table.

16. Populate the table with the last row of the sample data listed in step 3 by using the statements in the script that you created in step 6. Run the statements in the script.

    Note: Perform the steps (17-23) in one session only.

17. Confirm your addition to the table.

	ID	LAST_NAME	FIRST_NAME	USERID	SALARY
1	1	Patel	Ralph	rpatel	1000
2	3	Drexler	Ben	bbiri	1100
3	4	Newman	Chad	cnewman	1000
4	5	Ropeburn	Audrey	aropebur	1550

18. Mark an intermediate point in the processing of the transaction.
19. Delete all the rows from the `MY_EMPLOYEE` table.
20. Confirm that the table is empty.
21. Discard the most recent `DELETE` operation without discarding the earlier `INSERT` operation.
22. Confirm that the new row is still intact.

	ID	LAST_NAME	FIRST_NAME	USERID	SALARY
1	1	Patel	Ralph	rpatel	1000
2	3	Drexler	Ben	bbiri	1100
3	4	Newman	Chad	cnewman	1000
4	5	Ropeburn	Audrey	aropebur	1550

23. Make the data addition permanent.

If you have time, complete the following exercise:

24. Modify the `lab_10_06.sql` script such that the `USERID` is generated automatically by concatenating the first letter of the first name and the first seven characters of the last name. The generated `USERID` must be in lowercase. Therefore, the script should not prompt for the `USERID`. Save this script to a file named `lab_10_24.sql`.

25. Run the `lab_10_24.sql` script to insert the following record:

ID	LAST_NAME	FIRST_NAME	USERID	SALARY
6	Anthony	Mark	manthony	1230

26. Confirm that the new row was added with the correct `USERID`.

	ID	LAST_NAME	FIRST_NAME	USERID	SALARY
1	6	Anthony	Mark	manthony	1230