UNIVERSIDAD AUTÓNOMA DE ZACATECAS
INGENIERÍA DE SOFTWARE
LABORATORIO DE SISTEMAS DE BASE DE DATOS II
FORMATO DE PRÁCTICAS

PRÁCTICA:	**3**
TITULO:	**Manipulating Data**
OBJETIVO:	**Realizar ejercicios sobre los temas del capítulo 9: Manipulating Data**
DURACIÓN:	**4 horas**
FECHA:	
FECHA DE ENTREGA:	

ACTIVIDADES A REALIZAR:

Ejercicio1:

Practices for Lesson 9

In this practice, you add rows to the MY_EMPLOYEE table, update and delete data from the table, and control your transactions. You run a script to create the MY_EMPLOYEE table.

Practice 9-1: Manipulating Data

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.

Note: For all the DML statements, use the Run Script icon (or press [F5]) to execute the query. This way 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.

Insert data into the MY_EMPLOYEE table.

1) Run the statement in the lab_09_01.sql script to build the MY_EMPLOYEE table used in this practice.
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)

5 rows selected
```

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_09_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 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.

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 the time, complete the following exercise:

24) Modify the `lab_09_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_09_24.sql`.

ID	LAST_NAME	FIRST_NAME	USERID	SALARY
6	Anthony	Mark	manthony	1230

25) Run the `lab_09_24.sql` script to insert the following record:

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

	ID	LAST_NAME	FIRST_NAME	USERID	SALARY
1	6	Anthony	Mark	manthony	1230

Ejercicio 2:

DESCRIBE EACH DATA MANIPULATION LANGUAGE (DML) STATEMENT

10. Which of the following commands can be rolled back?

A. COMMIT

B. DELETE

C. INSERT

D. MERGE

E. TRUNCATE

F. UPDATE

11. How can you change the primary key value of a row? (Choose the best answer.)

A. You cannot change the primary key value.

B. Change it with a simple UPDATE statement.

C. The row must be removed with a DELETE and reentered with an INSERT.

D. This is only possible if the row is first locked with a SELECT FOR UPDATE.

12. If an UPDATE or DELETE command has a WHERE clause that gives it a scope of several rows, what will happen if there is an error part way through execution? The command is one of several in a multistatement transaction. (Choose the best answer.)

A. The command will skip the row that caused the error and continue.

B. The command will stop at the error, and the rows that have been updated or deleted will remain updated or deleted.

C. Whatever work the command had done before hitting the error will be rolled back, but work done already by the transaction will remain.

D. The whole transaction will be rolled back.

INSERT ROWS INTO A TABLE

13. If a table T1 has four numeric columns, C1, C2, C3, and C4, which of these statements will succeed? (Choose the best answer.)

A. insert into T1 values (1,2,3,null);

B. insert into T1 values (‘1’,‘2’,‘3’,‘4’);

C. insert into T1 select * from T1;

D. All the statements (A, B, and C) will succeed.

E. None of the statements (A, B, or C) will succeed.

14. Study the result of this SELECT statement:

SQL> select * from t1;

C1 C2 C3 C4

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1 2 3 4

5 6 7 8

If you issue this statement:

insert into t1 (c1,c2) values(select c1,c2 from t1);

why will it fail? (Choose the best answer.)

A. Because values are not provided for all the table’s columns: there should be NULLs for C3 and C4.

B. Because the subquery returns multiple rows: it requires a WHERE clause to restrict th number of rows returned to one.

C. Because the subquery is not scalar: it should use MAX or MIN to generate scalar values.

D. Because the VALUES keyword is not used with a subquery.

E. It will succeed, inserting two rows with NULLs for C3 and C4.

15. Consider this statement:

insert into regions (region_id,region_name)

values ((select max(region_id)+1 from regions), 'Great Britain');

What will the result be? (Choose the best answer.)

A. The statement will not succeed if the value generated for REGION_ID is not unique, because REGION_ID is the primary key of the REGIONS table.

B. The statement has a syntax error because you cannot use the VALUES keyword with a subquery.

C. The statement will execute without error.

D. The statement will fail if the REGIONS table has a third column.

UPDATE ROWS IN A TABLE

16. You want to insert a row and then update it. What sequence of steps should you follow? (Choose the best answer.)

A. INSERT, UPDATE, COMMIT

B. INSERT, COMMIT, UPDATE, COMMIT

C. INSERT, SELECT FOR UPDATE, UPDATE, COMMIT

D. INSERT, COMMIT, SELECT FOR UPDATE, UPDATE, COMMIT

17. If you issue this command:

update employees set salary=salary * 1.1;

what will be the result? (Choose the best answer.)

A. The statement will fail because there is no WHERE clause to restrict the rows affected.

B. The first row in the table will be updated.

C. There will be an error if any row has its SALARY column NULL.

D. Every row will have SALARY incremented by 10 percent, unless SALARY was NULL.

DELETE ROWS FROM A TABLE

18. How can you delete the values from one column of every row in a table? (Choose the best answer.)

A. Use the DELETE COLUMN command.

B. Use the TRUNCATE COLUMN command.

C. Use the UPDATE command.

D. Use the DROP COLUMN command.

19. Which of these commands will remove every row in a table? (Choose one or more correct answers.)

A. A DELETE command with no WHERE clause

B. A DROP TABLE command

C. A TRUNCATE command

D. An UPDATE command, setting every column to NULL and with no WHERE clause

CONTROL TRANSACTIONS

20. User JOHN updates some rows and asks user ROOPESH to log in and check the changes before he commits them. Which of the following statements is true? (Choose the best answer.)

A. ROOPESH can see the changes but cannot alter them because JOHN will have locked the rows.

B. ROOPESH will not be able to see the changes.

C. JOHN must commit the changes so that ROOPESH can see them and, if necessary, roll them back.

D. JOHN must commit the changes so that ROOPESH can see them, but only JOHN can roll them back.

21. User JOHN updates some rows but does not commit the changes. User ROOPESH queries the rows that JOHN updated. Which of the following statements is true? (Choose the best answer.)

A. ROOPESH will not be able to see the rows because they will be locked.

B. ROOPESH will be able to see the new values, but only if he logs in as JOHN.

C. ROOPESH will see the old versions of the rows.

D. ROOPESH will see the state of the state of the data as it was when JOHN last created a SAVEPOINT.

22. Which of these commands will terminate a transaction? (Choose three correct answers.)

A. COMMIT

B. DELETE

C. ROLLBACK

D. ROLLBACK TO SAVEPOINT

E. SAVEPOINT

F. TRUNCATE

Ejercicio 3: Para la base de datos "Hotel" elaborar lo siguiente:

a) **Insertar 5 registros a cada una de las tablas (utilizar las secuencias creadas en la práctica anterior).**
b) **Modificar 5 registros a su consideración.**
c) **Elimine 5 registros a su consideración.**
d) **Elaborar 5 simulaciones de control de transacciones a su criterio sobre la misma base de datos.**