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

PRÁCTICA:	**2**
TITULO:	**Creating Other Schema Objects**
OBJETIVO:	**Realizar ejercicios sobre los temas del capítulo 11: Creating Other Schema Objects**
DURACIÓN:	**4 horas**
FECHA:	
FECHA DE ENTREGA:	

ACTIVIDADES A REALIZAR:

Ejercicio 1:

Practices for Lesson 11

Part 1 of this lesson's practice provides you with a variety of exercises in creating, using, and removing views. Complete questions 1–6 of this lesson.
Part 2 of this lesson's practice provides you with a variety of exercises in creating and using a sequence, an index, and a synonym. Complete questions 7–10 of this lesson.

Practice 11-1: Creating Other Schema Objects

Part 1

1) The staff in the HR department wants to hide some of the data in the EMPLOYEES table. Create a view called EMPLOYEES_VU based on the employee numbers, employee last names, and department numbers from the EMPLOYEES table. The heading for the employee name should be EMPLOYEE.
2) Confirm that the view works. Display the contents of the EMPLOYEES_VU view.

	EMPLOYEE_ID	EMPLOYEE	DEPARTMENT_ID
1	200	Whalen	10
2	201	Hartstein	20
3	202	Fay	20
4	205	Higgins	110
5	206	Gietz	110

...

19	205	Higgins	110
20	206	Gietz	110

3) Using your EMPLOYEES_VU view, write a query for the HR department to display all employee names and department numbers.

	EMPLOYEE	DEPARTMENT_ID
1	King	90
2	Kochhar	90
3	De Haan	90
4	Hunold	60
5	Ernst	60

...

19	Higgins	110
20	Gietz	110

4) Department 50 needs access to its employee data. Create a view named DEPT50 that contains the employee numbers, employee last names, and department numbers for all employees in department 50. You have been asked to label the view columns EMPNO, EMPLOYEE, and DEPTNO. For security purposes, do not allow an employee to be reassigned to another department through the view.

5) Display the structure and contents of the DEPT50 view.

```
DESCRIBE dept50
Name                          Null     Type
----------------------------- -------- ------------
EMPNO                         NOT NULL NUMBER(6)
EMPLOYEE                      NOT NULL VARCHAR2(25)
DEPTNO                                 NUMBER(4)
```

EMPNO	EMPLOYEE	DEPTNO
124	Mourgos	50
141	Rajs	50
142	Davies	50
143	Matos	50
144	Vargas	50

6) Test your view. Attempt to reassign Matos to department 80.

Part 2

7) You need a sequence that can be used with the PRIMARY KEY column of the DEPT table. The sequence should start at 200 and have a maximum value of 1,000. Have your sequence increment by 10. Name the sequence DEPT_ID_SEQ.

8) To test your sequence, write a script to insert two rows in the DEPT table. Name your script lab_11_08.sql. Be sure to use the sequence that you created for the ID column. Add two departments: Education and Administration. Confirm your additions. Run the commands in your script.

9) Create a nonunique index on the NAME column in the DEPT table.

10) Create a synonym for your EMPLOYEES table. Call it EMP.

Ejercicio 2:

The following questions will help you measure your understanding of the topic content. Read all the choices carefully because there might be more than one correct answer. Choose all the correct answers for each question.

CREATE PRIVATE AND PUBLIC SYNONYMS

1. What are distinguishing characteristics of a public synonym rather than a private synonym?

(Choose two correct answers.)

A. Public synonyms are always visible to all users.

B. Public synonyms can be accessed by name without a schema name qualifier.

C. Public synonyms can be selected from without needing any permissions.

D. Public synonyms can have the same names as tables or views.

2. Consider these three statements:

create synonym s1 for employees;

create public synonym s1 for departments;

select * from s1;

Which of the following statements is correct? (Choose the best answer.)

A. The second statement will fail because an object S1 already exists.

B. The third statement will show the contents of EMPLOYEES.

C. The third statement will show the contents of DEPARTMENTS.

D. The third statement will show the contents of the table S1, if such a table exists in the current schema.

3. A view and a synonym are created as follows:

create view dept_v as select * from dept;

create synonym dept_s for dept_v;

Subsequently the table DEPT is dropped. What will happen if you query the synonym DEPT_S? (Choose the best answer.)

A. There will not be an error because the synonym addresses the view, which still exists, but there will be no rows returned.

B. There will not be an error if you first recompile the view with the command ALTER VIEW DEPT_V COMPILE FORCE;

C. There will be an error because the synonym will be invalid.

D. There will be an error because the view will be invalid.

E. There will be an error because the view will have been dropped implicitly when the

table was dropped.

CREATE, MAINTAIN, AND USE SEQUENCES

4. A sequence is created as follows:

create sequence seq1 maxvalue 50;

If the current value is already 50, when you attempt to select SEQ1.NEXTVAL what will happen? (Choose the best answer.)

A. The sequence will cycle and issue 0.

B. The sequence will cycle and issue 1.

C. The sequence will reissue 50.

D. There will be an error.

5. You create a sequence as follows:

create sequence seq1 start with 1;

After selecting from it a few times, you want to reinitialize it to reissue the numbers already generated. How can you do this? (Choose the best answer.)

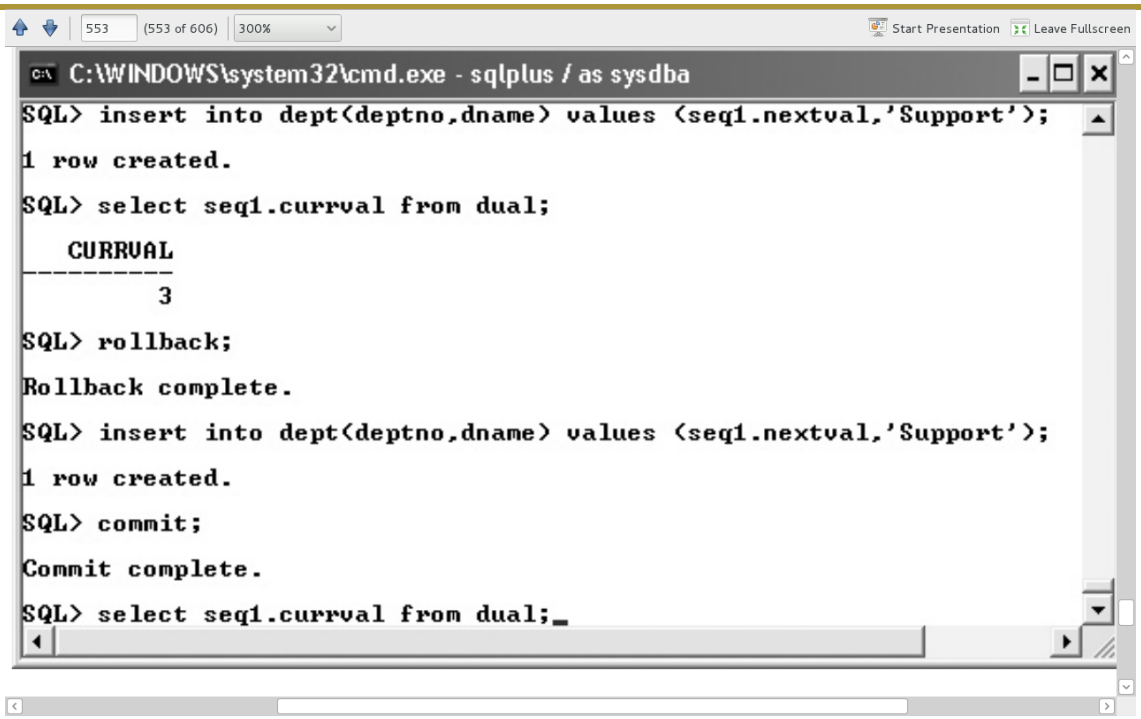
A. You must drop and re-create the sequence.

B. You can't. Under no circumstances can numbers from a sequence be reissued once they have been used.

C. Use the command ALTER SEQUENCE SEQ1 START WITH 1; to reset the next value to 1.

D. Use the command ALTER SEQUENCE SEQ1 CYCLE; to reset the sequence to its starting value.

Study the following exhibit:



6. Assuming that the sequence SEQ1 was created with the option ORDER and INCREMENT BY set to 1, what value will be returned by the final SELECT statement? (Choose the best answer.)

A. 2

B. 3

C. 4

D. It will depend on whether any other sessions are selecting from the sequence while the statements in the exhibit are being run.

CREATE AND MAINTAIN INDEXES

7. A UNIQUE constraint on a column requires an index. Which of the following scenarios is correct? (Choose one or more correct answers.)

A. If a UNIQUE index already exists on the column, it will be used.

B. If a NONUNIQUE index already exists it will be used.

C. If a NONUNIQUE index already exists on the column, a UNIQUE index will be created implicitly.

D. If any index exists on the column, there will be an error as Oracle attempts to create another index implicitly.

8. You have created an index with this statement:

create index ename_i on employees(last_name,first_name);

How can you adjust the index to include the employees' birthdays, which is a date

type column called DOB? (Choose the best answer.)

A. Use ALTER INDEX ENAME_I ADD COLUMN DOB;

B. You can't do this because of the data type mismatch.

C. You must drop the index and re-create it.

D. This can only be done if the column DOB is NULL in all existing rows.

Ejercicio 3:

Consider the following:

SHOP (shop_id, address)

PRODUCT (product_id, pname, price)

DATE (day_id, day[as date])

CHANNEL (channel_id, cname)

Figure 1 show an entity-relationship diagram for a simple system designed to store and analyze sales. The columns for the fact table SALES are as follows:

■ SALE_ID System-generated primary key

■ CHANNEL_ID Foreign key to CHANNELS

■ PRODUCT_ID Foreign key to PRODUCTS

■ SHOP_ID Foreign key to SHOPS

■ DAY_ID Foreign key to DAYS

■ QUANTITY The quantity of the product sold

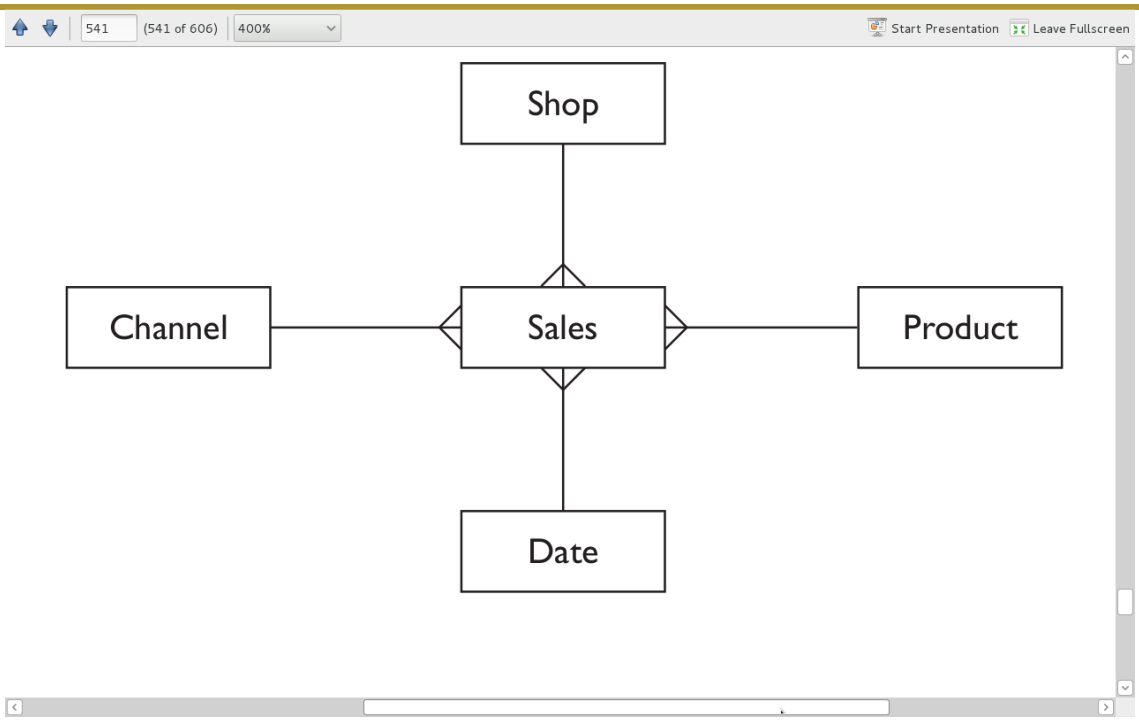


Figure 1. Sales Entity relationship

It is expected that there will be several million SALES rows per year. The dimension tables are as follows:

PRODUCT A list of all products, including price (a few hundred)

CHANNEL Possible sales methods, such as walk-in, Internet, and telephone

SHOPS Details of all the shops (no more than a couple of dozen)

DATE. Days for which sales are being stored: 365, identified by day number

a) Write code to create the tables (only columns data type specifications);
b) Create indexes (choose appropriate type);
c) Create constraints (all that it needs).
d) Create sequences to be used for primary keys where necessary.
e) Create short name synonymous for each table.

Ejercicio 4:

Del ejercicio 3 de la Práctica 1, elabore las secuencias, índices (hacer el análisis de cada columna) y sinónimos que considere necesarios.