Database Programming with SQL

14-3: Managing Constraints

Practice Activities

Objectives

* List four different functions that the ALTER statement can perform on constraints
* Write ALTER TABLE statements to add, drop, disable, and enable constraints
* Name a business function that would require a DBA to drop, enable, and/or disable a
* constraint or use the CASCADE syntax
* Query the data dictionary for USER\_CONSTRAINTS and interpret the information returned

Vocabulary

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| --- | --- |
| Disable constraints | To deactivate an integrity constraint |
| Cascade clayse | Disables dependent integrity constraints |
| Alter table | To add, modify, or drop columns from a table |
| Enable constraint | To activate an integrity constraint currently disabled |
| Drop constraint | Removes a constraint from a table |
| Drop column | Allows user to delete a column from a table |
| Cascade constraints | Defines the actions the database server takes when a user  attempts to delete or update a key to which existing foreign keys  point |

Try It / Solve It

Using Oracle Application Express, click the SQL Workshop tab in the menu bar. Click the Object

Browser and verify that you have a table named copy\_d\_clients and a table named copy\_d\_events. If you don’t have these tables in your schema, create them before completing the exercises below.

Here is how the original tables are related. The d\_clients table has a primary key client\_number. This has a primary-key constraint and it is referenced in the foreign-key constraint on the d\_events table.

1. What are four functions that an ALTER statement can perform on constraints?

Add, Modify (doar pentru NOT NULL), Enable si Disable

2. Since the tables are copies of the original tables, the integrity rules are not passed onto the new

tables; only the column datatype definitions remain. You will need to add a PRIMARY KEY

constraint to the copy\_d\_clients table. Name the primary key copy\_d\_clients\_pk . What is the

syntax you used to create the PRIMARY KEY constraint to the copy\_d\_clients.table?

alter table copy\_d\_events

add constraint copy\_d\_clt\_client\_number\_pk PRIMARY KEY (client\_number)

select \*

from user\_constraints

where lower(table\_name) = 'copy\_d\_clients' and constraint\_type = 'P'

3. Create a FOREIGN KEY constraint in the copy\_d\_events table. Name the foreign key

copy\_d\_events\_fk. This key references the copy\_d\_clients table client\_number column. What is

the syntax you used to create the FOREIGN KEY constraint in the copy\_d\_events table?

**ALTER TABLE  copy\_d\_events**

**ADD CONSTRAINT copy\_d\_eve\_client\_number\_fk FOREIGN KEY (client\_number) REFERENCES  copy\_d\_clients (client\_number) ENABLE;**

SELECT \*

FROM user\_constraints

WHERE LOWER(table\_name) = 'copy\_d\_events' and constraint\_type = 'R';

4. Use a SELECT statement to verify the constraint names for each of the tables. Note that the

tablenames must be capitalized.

**SELECT constraint\_name, constraint\_type, table\_name**

**FROM user\_constraints**

**WHERE table\_name = UPPER('copy\_d\_events') ;**

a. The constraint name for the primary key in the copy\_d\_clients table is COPY\_D\_CLIENT\_NUMBER\_PK.

b. The constraint name for the foreign key in the copy\_d\_events table is \_\_??\_\_\_\_\_\_\_\_\_\_\_\_\_.

5. Drop the PRIMARY KEY constraint on the copy\_d\_clients table. Explain your results.

ALTER TABLE copy\_d\_events

DROP CONSTRAINT COPY\_D\_CLT\_CLIENT\_NUMBER\_PK CASCADE

6. Add the following event to the copy\_d\_events table. Explain your results



INSERT INTO copy\_d\_events(client\_number,id,name,event\_date,description,cost,venue\_id,package\_code,theme\_code)

VALUES(7125,140,'Cline Bas Mitzvah',TO\_DATE('15-Jul-2004','dd-Mon-yyyy'),'Church and Private Home formal',4500,105,87,77);

7Create an ALTER TABLE query to disable the primary key in the copy\_d\_clients table. Then add

the values from #6 to the copy\_d\_events table. Explain your results.

Alter table copy\_d\_clinets

disable constraint CONSTRAINT COPY\_D\_CLT\_CLIENT\_NUMBER\_PK

INSERT INTO copy\_d\_events(client\_number,id,name,event\_date,description,cost,venue\_id,package\_code,theme\_code)

VALUES(7125,140,'Cline Bas Mitzvah',TO\_DATE('15-Jul-2004','dd-Mon-yyyy'),'Church and Private Home formal',4500,105,87,77);

8. Repeat question 6: Insert the new values in the copy\_d\_events table. Explain your results.

INSERT INTO copy\_d\_events(client\_number,id,name,event\_date,description,cost,venue\_id,package\_code,theme\_code)

VALUES(7125,140,'Cline Bas Mitzvah',TO\_DATE('15-Jul-2004','dd-Mon-yyyy'),'Church and Private Home formal',4500,105,87,77);

9. Enable the primary-key constraint in the copy\_d\_clients table. Explain your results.

ALTER TABLE copy\_d\_clients

enable constraint COPY\_D\_CLT\_CLIENT\_NUMBER\_PK

10. If you wanted to enable the foreign-key column and reestablish the referential integrity between

these two tables, what must be done?

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11. Why might you want to disable and then re-enable a constraint?

12. Query the data dictionary for some of the constraints that you have created. How does the data

dictionary identify each constraint type?