Database Programming with PL/SQL

3-1: Review of SQL DML

Practice Activities

Vocabulary

|  |  |
| --- | --- |
| DELETE | Statement used to remove existing rows in a table. |
| INSERT | Statement used to add new rows to a table. |
| MERGE | Statement used to INSERT and/or UPDATE a target table, based on matching values in a source table. |
| UPDATE | Statement used to modify existing rows in a table. |
| DDL | When you create, change, or delete an object in a database. |
| DML | When you change data in an object (for example, by inserting or deleting rows) |

1. Evaluate the following SQL statement.

DELETE FROM students;

This SQL statement will:

false A. Not execute due to wrong syntax

false B. Delete the first row from STUDENTS

true C. Delete all rows from STUDENTS

false D. None of the above

2. Evaluate the following SQL statement.

INSERT INTO STUDENTS (id, last\_name, first\_name)

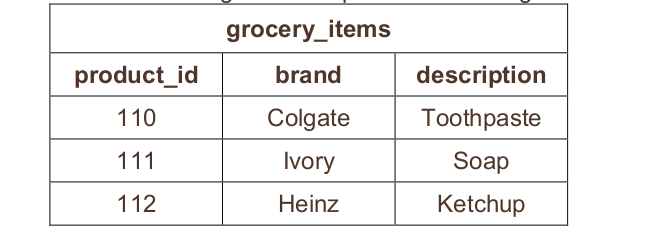
VALUES (29,'Perez','Jessica');

This SQL statement:

true A. Does an explicit insert

false B. Does an implicit insert

Use the following table for questions 3 through 8.



3. Write a SQL statement to create the above table.

create table grocery\_items (

product\_id NUMBER CONSTRAINT grocery\_items\_pk\_on PRIMARY KEY ENABLE,

brand VARCHAR2(50),

description VARCHAR2(50))

4. Write and execute three SQL statements to explicitly add the above data to the table.

insert into grocery\_items (product\_id, brand, description)

values (110, 'Colgate', 'Toothpaste')

insert into grocery\_items (product\_id, brand, description)

values (111, 'Ivory', 'Soap')

insert into grocery\_items (product\_id, brand, description)

values (112, 'Heinz', 'Ketchup')

5. Write and execute a SQL statement that will explicitly add your favorite beverage to the table.

insert into grocery\_items (product\_id, brand, description)

values (113, 'Ginger Ale', 'Bere')

6. Write and execute a SQL statement that modifies the description for Heinz ketchup to “tomato

catsup”.

update grocery\_items

set description = 'tomato catsup'

where brand = 'Heinz'

7. Write and execute a SQL statement that will implicitly add your favorite candy to the table.

insert into grocery\_items (product\_id, brand, description)

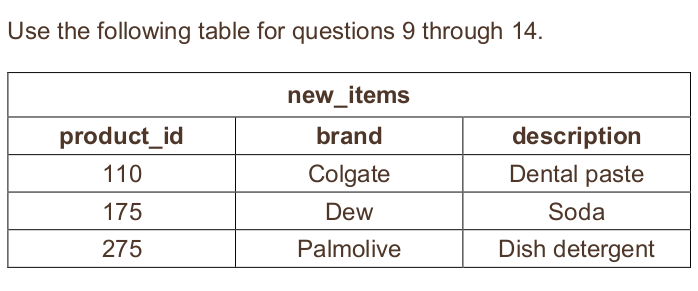
values (114, 'Ed, Edd n Eddy', 'Jaw Breakers')

8. Write and execute a SQL statement that changes the soap brand from “Ivory” to “Dove.”

update grocery\_items

set brand = 'Dove'

where brand = 'Ivory'

9. Write and execute SQL statements to create the new\_items table and populate it with the data in

the table.

create table new\_items (

product\_id NUMBER CONSTRAINT new\_items\_pk\_on PRIMARY KEY ENABLE,

brand VARCHAR2(50),

description VARCHAR2(50))

insert into new\_items (product\_id, brand, description)

values (110, 'Colgate', 'Dental Paste')

insert into new\_items (product\_id, brand, description)

values (175, 'Dew', 'Soda')

insert into new\_items (product\_id, brand, description)

values (275, 'Palmolive', 'Dish Detergent')

10. Write a SQL statement that will update the grocery\_items table with the brand and description

from the new\_items table when the product ID values match. If they don’t match, add a new row to

the grocery\_items table. DO NOT EXECUTE YOUR STATEMENT YET.

MERGE into grocery\_items G

USING new\_items N

ON (G.product\_id = N.product\_id)

WHEN NOT MATCHED THEN

INSERT (G.product\_id, G.brand, G.description)

VALUES (N.product\_id, N.brand, N.description)

11. How many rows will be updated by the SQL statement in question 10?

7 rows

12. How many rows will be inserted by the SQL statement in question 10?

2 rows

13. Which of the following is true about the SQL statement in question 10?

A. new\_items is the source table and grocery\_items is the target table.true

B. grocery\_items is the source table and new\_items is the target table.false

14. Execute the SQL statement you wrote in question 10, and then SELECT all data from the

grocery\_items table to verify your answers to questions 11 and 12.

select \* from grocery\_items

order by product\_id