First and last name

....

Question 1/10   *(1 p.)*

Which of the following is a use case for a trigger in PostgreSQL?

    A. To automatically update a last_modified column to the current timestamp.
    B. To speed up query execution.
    C. To create new tables dynamically.
    D. To manage database connections.

Question 2/10   *(1 p.)*

What is a row-level trigger in PostgreSQL?

    A. A trigger that operates on the entire table at once.
    B. A trigger that is executed for each row affected by the triggering event.
    C. A trigger that activates only when a specific row is queried.
    D. A trigger that aggregates data across multiple rows.

Question 3/10   *(1 p.)*

In PostgreSQL, which function is typically used inside a trigger to access the new row being inserted or modified?

    A. NEW()
    B. CURRENT_ROW()
    C. THIS()
    D. NEW

Question 4/10   *(1 p.)*

A 'statement-level' trigger in PostgreSQL runs:

    A. Once for each row affected by the triggering event.
    B. Only once, regardless of the number of rows affected by the triggering event.
    C. Multiple times in random order during the execution of the triggering event.
    D. Continuously until manually stopped.

Question 5/10   *(1 p.)*

Can a trigger in PostgreSQL call a function written in a language other than SQL or PL/pgSQL?

    A. Yes, any language supported by PostgreSQL can be used.
    B. No, only SQL can be used in triggers.
    C. No, only PL/pgSQL can be used in triggers.
    D. Yes, but only if the language has explicit support for triggers.

Question 6/10 *(1 p.)*

What is a role in PostgreSQL?

- A. A predefined set of database configurations.
- B. A specific type of database index.
- C. An entity that can own database objects and have database privileges.
- D. A SQL function for data manipulation.

Question 7/10 *(1 p.)*

In PostgreSQL, a role with LOGIN privilege is equivalent to:

- A. A database user.
- B. A database administrator.
- C. A schema owner.
- D. A table owner.

Question 8/10 *(1 p.)*

How can you assign a role the ability to create databases in PostgreSQL?

- A. By granting the role the CREATEDB privilege.
- B. By making the role a member of the db_owner group.
- C. By granting the role the CREATE privilege.
- D. By setting the role as a superuser.

Question 9/10 *(1 p.)*

In PostgreSQL, which command is used to change a role's attributes?

- A. CHANGE ROLE
- B. MODIFY ROLE
- C. ALTER ROLE
- D. UPDATE ROLE

Question 10/10   *(3 p.)*

Table Structure:
accounts(id SERIAL PRIMARY KEY, user_name VARCHAR, balance DECIMAL)

Initial Data:
INSERT INTO accounts(user_name, balance) VALUES ('Alice', 300), ('Bob', 150);

Perform a transaction where Alice tries to transfer $200 to Bob. The transfer should only occur if Alice has enough balance. What are their final balances (write the answer first for Alice, second for Bob in the format 50, 100)?

```
BEGIN;
-- Check Alice's balance
DO $$
DECLARE
  alice_balance DECIMAL;
BEGIN
  SELECT balance INTO alice_balance FROM accounts WHERE user_name = 'Alice';
  IF alice_balance >= 200 THEN
    UPDATE accounts SET balance = balance - 200 WHERE user_name = 'Alice';
    UPDATE accounts SET balance = balance + 200 WHERE user_name = 'Bob';
  END IF;
END $$;
COMMIT;
```

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