Assignment 4 - PostgreSQL Advanced Level

1. Transactions & ACID
    a. Write a transaction that:
        i. Inserts a new user
        ii. Updates user status
        iii. Commits only if both operations succeed
    b. Write a transaction that:
        i. Inserts data into two tables
    c. Rolls back if any statement fails
2. Security Basics
    a. Create database roles for:
        i. db_admin
        ii. app_owner
        iii. app_user
        iv. app_readonly
    b. Grant appropriate privileges using:
        i. GRANT
    c. Revoke privileges using:
        i. REVOKE
    d. Demonstrate:
        i. Schema-level security
        ii. Table-level security
    e. Revoke all default privileges from:
        i. PUBLIC role on database
        ii. PUBLIC role on schema
    f. Grant appropriate privileges on the schema to:
        i. app_user
        ii. app_readonly
    g. Table & Object Privileges
        i. Grant permissions to app_user to:
            1. SELECT
            2. INSERT

3. UPDATE
4. DELETE

on all tables in schema hc.

ii. Grant permissions to app_readonly to:

1. SELECT only

on all tables in schema hc.

iii. Prevent app_user from:

1. Dropping tables
2. Truncating tables