CIT 21400

Spring 2024

MySQL Homework-5

Use SQL to make the following changes to StayWell. After each change, execute an appropriate query to show that the change was made correctly. For any exercises that use commands not supported by your version of SQL, write the command to accomplish the task.

1. Create a view named SMALL_PROPERTY. It consists of the property ID, office number, bedrooms, floor, monthly rent, and owner number for every property whose square footage is less than 1,250 square feet.
   a. Write and execute the CREATE VIEW command to create the SMALL_PROPERTY view.
   b. Write and execute the command to retrieve the office number, property ID, and monthly rent for every property in the SMALL_PROPERTY view with a monthly rent of $1150 or more.
   c. Write and execute the query that the DBMS actually executes.
   d. Does updating the database through this view create any problems? If so, what are they? If not, why not?

2. Create a view named PROPERTY_OWNERS. It consists of the property ID, office number, square footage, bedrooms, floors, monthly rent, and owner's last name for every property in which the number of bedrooms is three.
   a. Write and execute the CREATE VIEW command to create the PROPERTY_OWNERS view.
   b. Write and execute the command to retrieve the property ID, office number, monthly rent, square footage, and owner's last name for every property in the PROPERTY_ OWNERS view with a monthly rent of less than $1675
   c. Write and execute the query that the DBMS actually executes.
   d. Does updating the database through this view create any problems? If so, what are they? If not, why not?

3. Create a view named MONTHLY_RENTS. It consists of two columns: The first is the number of bedrooms, and the second is the average monthly rent for all properties in the PROPERTY table that have that number of bedrooms. Use AVERAGE_RENT as the column name for the average monthly rent. Group and order the rows by number of bedrooms.
   a. Write and execute the CREATE VIEW command to create the MONTHLY_RENTS view.
   b. Write and execute the command to retrieve the square footage and average fee for each square footage for which the average fee is greater than $1,100.
   c. Write and execute the query that the DBMS actually executes.
   d. Does updating the database through this view create any problems? If so, what are they? If not, why not?

4. Write, but do not execute, the commands to grant the following privileges:
    a. User Oliver must be able to retrieve data from the PROPERTY table.
    b. Users Crandall and Perez must be able to add new owners and properties to the database.
    c. Users Johnson and Klein must be able to change the monthly rent of any unit.
    d. All users must be able to retrieve the office number, monthly rent, and owner number for every property.
    e. User Klein must be able to add and delete service categories.
    f. User Adams must be able to create an index on the SERVICE_REQUEST table.
    g. Users Adams and Klein must be able to change the structure of the PROPERTY table.
    h. User Klein must have all privileges on the OFFICE, OWNER, and PROPERTY tables.
5. Write, but do not execute, the command to revoke all privileges from user Adams
6. Create the following indexes:
    a. Create an index named OWNER_INDEX1 on the STATE column in the OWNER table.
    b. Create an index named OWNER_INDEX2 on the LAST_NAME column in the OWNER table.
    c. Create an index named OWNER_INDEX3 on the STATE and CITY columns in the OWNER table. List the states in descending order.
7. Delete the OWNER_INDEX 3 index from the OWNER table.