

SQL Queries II

Wednesday, October 21, 2015 12:46 PM

Continuation from SQL Queries I

Table Updates and Domains

In the first part of this exercise, we are going to modify tables Room and Booking. Consider the following additional requirements

1. Create the following domains:
 - a. Room types could be for instance: Standard, Deluxe, Suite, Single, Double (choose at least 3 different types)
 - b. Hotel numbers that are present in the Hotel table.
 - c. Room prices between \$50.00 and \$500.00.
 - d. Room numbers between 1 and 9999
2. Re-create or modify the Room table using the above domains.
3. Modify the Booking table (allowing only guests that are present in the Guest table)
 - a. Add a constraint to the Booking table that the dateFrom must precede the dateTo.
 - b. Add a constraint to the Booking table that the same room cannot be double booked. (This one is tricky!)
4. Answer the following:
 - a. Given that we already have data inside these tables, is it better to regenerate the table or just update it? Consider the situation when the table has not 20, but 20 million records.
 - b. What are the pros and cons of updating the table vs. re-creating it from scratch?
 - c. What could you do if you were not allowed to re-create a table from scratch, i.e., you can only modify it?

CREATE Domain syntax

```
CREATE DOMAIN DomainName [AS] DataType  
    [DEFAULT defaultOption] [CHECK (searchCondition)];
```

ALTER Table syntax

```
ALTER [ONLINE | OFFLINE] [IGNORE] TABLE tbl_name  
    [alter_specification [, alter_specification] ...]  
    [partition_options]
```

Queries

In this second part, we are going to complete various queries to retrieve data from our tables.

SELECT Query syntax

```
SELECT  [DISTINCT | ALL] { * | [columnExpression [AS  
newName]] [,...]}  
FROM      TableName [alias] [,...]  
[WHERE     condition]  
[GROUP BY  columnList  
  [HAVING  condition] ]  
[ORDER BY  columnList]
```

CURRENT_DATE returns the current date in the time zone that is local to the user.

Write SQL statements to perform the following:

1. Display all information in the hotel relation.
2. List the names and address of guests from Seattle. (The guestAddress includes the city, state, etc.)
3. Modify your query (2) to do the listing alphabetically by name
4. Determine the number of hotels in the database.
5. Determine how many different guests have made bookings for some part of March 2009.
6. Count how many hotels there are in each city.
7. List the hotelNo and average price of 'Standard' rooms at each hotel.
8. List the name of all guests currently staying at the Hilton (use CURRENT_DATE – see below).
9. Count the number of rooms in each hotel in Las Vegas along with the name of the hotel.
10. Count the number of current bookings at each hotel and display with the hotel name and city. List only the hotels with at least 20 current bookings.
11. List the rooms that are currently unoccupied at the Hilton.

Submission

- Submit all your queries in a txt file or MSWord document in Canvas at the end of the today's class
- One submission per team please
- Include the names of all your team members in your file