Lab Sheet "9"

Old Queries, New Database

This is not a "labsheet" in the sense of being aligned with a particular lab sessoin, but it does introduce a fresh database that forms part of the standard cs1106/6503 DB repertiore. As such you should familiarise yourself with it.

The database for today's lab is a simplified hotels reservation database that has the following schema.

```
hotels(hotel_num, hotel_name, city)
rooms(room_num, hotel_num, room_type, price)
bookings(hotel_num, guest_num, arr_date, dep_date, room_num)
guests(guest_num, guest_name, guest_address)
```

The data in the DB is sparse. In order to test your queries you will need to add suitable data to verify that your queries are correct.

1. List full details of all hotels in Cork
2. List names and addresses of all guests living in Limerick ordered by name.
3. List the ids of all double rooms priced lower than €70.00, in ascending order of price.
4. List bookings for which no dep_date has been specified.
5. How many hotels are there in total?
6. List the ids of each hotel with the number of rooms it has for less than €70.00.
7. List the names of each hotels with the number of rooms it has for less than €70.00.
8. How many hotels are there that have double rooms for under €70.00?
9. What is the average price per room over all?
10. What is the average price per room in Cork?
11. What is the average price per double room in Cork?
12. How many bookings have been made for November for each hotel? (Count a booking if the arrival date occurs within that month.)
13. List the price and type of all rooms in the "Hotel Splendide".
14. List the names all the hotels in Galway together with the number of number of rooms in each.
15. List all the guests with a booking at the "Hotel Splendide" for the month of January.
16. List all pairs of (different) hotels that have the same name.

17. List the names of all the guests currently currently staying at the "Hotel California", ordered by checkout date. (Hint: look up the function DATE('now').)

18. List all customers who have separate bookings for two distinct hotels in two different cities for the same dates.

19. List by name all guests who have stayed at the "Hotel California" on more than three occasions.

20. Determine the occupancy of the "Hotel California" for New Year's Day. (The occupancy is the ratio of the number of bookings to the total number of rooms.)

21. Which guest has made the greatest number of bookings in 2012?

22. Which hotel has had the greatest number of guests stay during 2012?

23. Find all pairs of guests that share the same address.

24. What day during 2012 saw the greatest number of guests arrive?

25. What was the longest stay by any guest during 2012? (Hint: Look up the JulianDay() function; using SQLite CAST feature might also be helpful.)

26. Find all the available rooms in Hotel Magnifique on 1 January 2014. List both the rooms and the prices.