# SEMINAR 14

Implement an application with a graphical user interface, which simulates booking rooms in a hotel.

1. The information about all rooms is in a table in a relational database. Each room has a *number*, *a type* (single, double, family, apartment, double sea view, double garden view, etc), a *description* and a *price per night*.
2. Another table contains the clients, each identified by *id*, *name* and *email address*.
3. A third table contains the bookings: client id, room number, booking period (start and end dates).
4. When the application is launched, a new window is created for each client and another window for the hotel staff. The clients' windows will show all rooms, with number, type and price per night. The staff window will show all rooms, all bookings and the total price of all bookings starting with the present date.
5. When a room is selected in the client's window, its description will be shown in another control (e.g. text field/area).
6. The clients can make bookings by selecting a room type and a period (start and end dates). The application will search if there are any rooms of that type available in the given period and if so, a booking will be added. If there are more available rooms of that type, a random one will be added to the booking. If there are no available rooms (of that type), a message will be shown to the client. The total price for the stay is shown to the client.
7. Whenever a new booking is made by a client, the staff window will automatically update to reflect this (with no additional action needed). This means that the booking will automatically show in the list/table of bookings and the total price will be automatically updated.
8. The staff can select a room and all bookings for that room will be shown, sorted chronologically, by booking period.
9. When the application closes, the bookings table will be updated.