

## C3- S6 – PRACTICE



We want to manage a hotel rooms and customers.

- The hotel has a name and an address

### Customers

A customer has a first name, last name, and an address

An address is composed of the city name, street and country. **The address must be an immutable object.**

On Customer class, it should be possible to:

- Change the customer address
- Check if the customer is equal to another customer (same first name, last name, address)
- It is not possible to change customer first and last name

### Rooms

The hotel is composed of rooms

- Each room has a room ID, and a number of beds.
- Each room can contain many customers.

Important:

- A customer cannot be in 2 different rooms!! (if the customer is already in the hotel, he/she cannot book a room)
- A room cannot contain more customer than the max number of beds in the room

**Q1** - Create the UML model, with the right attributes, visibilities, and relations between each classes

**Q2** - Code the 4 classes: Address, Hotel, Customer, and Room

**Q3** – Code the getter/setter and the equal methods on Customer and Address classes

**Q4** – Implement the following methods on Hotel class:

`customerIsInHotel(customer : Customer) : boolean`

Return true if the customer is already in the hotel (in one the rooms)

`registerCustomer(customer : Customer, room: Room) : boolean`

- If the customer is NOT in the hotel and if the room is not full, then add the customer to the room and return true
- Otherwise return false