



NATIONAL UNIVERSITY of COMPUTER
EMERGING SCIENCES, ISLAMABAD

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OBJECT ORIENTED PROGRAMMING

SEMESTER PROJECT

COURSE INSTRUCTOR:	Hassan Raza
LAB INSTRUCTOR:	Abdul Haleem
TEACHING ASSISTANT:	Tanzeel Ahmed

Hotel Management System

One line Description of Project

Design and Develop a **Console** based Hotel Management System.

Overview of Project

This project will facilitate the Hotel owner in the Hotel to keep record of rooms and reservations and create a report on regular basis.

Project Detail

The Hotel for which you are creating this project has 5 floors and each floor has 50 rooms.

Following are types of rooms:

1. Standard

- a. This category usually means the most basic room type offered by the hotel. It has basic, standard amenities and furnishings. A standard room in a Four Seasons hotel is without question much more deluxe than a standard in, say, a Holiday Inn, but there may be higher categories from which to choose. Standard rooms in hotels with higher categories often have no view or have a poor view over the dumpster or parking lot.
- b. Price is Rs.300 / 24 Hours
- c. This Hotel contains total of 50 rooms of this type, 10 on each floor.

2. Moderate

- a. Usually a slight bit better than standard, but still not deluxe. It may refer to the room view as well as the size and type of furnishings offered.

- b. Price is Rs. 500 / 24 Hours
- c. This Hotel contains total of 50 rooms of this type, 10 on each floor

3. Superior

- a. This category is always subject to interpretation. It's supposed to mean superior to a standard room in both size and furnishings, but it often refers to just the view. Some hotels have only Superior rooms; the categories then are defined by the view and location of the room.
- b. Price is Rs. 1000 / 24 Hours
- c. This Hotel contains total of 50 rooms of this type, 10 on each floor.

4. Junior Suite

- a. A "junior" suite is typically a larger room with a separate seating area. Sometimes it's got a small divider between the part of the room that the bed is in and the seating area, but it is not two separate rooms.
- b. Price is Rs. 2000 / 24 Hours
- c. This Hotel contains total of 50 rooms of this type, 10 on each floor

5. Suite

- a. A Suite is usually two or more rooms clearly defined; a bedroom and a living or sitting room, with a door that closes between them. Many hotels use the word "suite" to define any room with a sofa in it so be sure to check thoroughly if what you really want are the two or more separate rooms.
- b. Price is Rs. 5000 / 24 Hour

c. This Hotel contains total of 50 rooms of this type, 10 on each floor.

This Hotel records following information of its customer

- Full Name
- Age
- Gender
- ID card-Number
- Balance in Rupees (If paid in advance, balance will be zero)
- Total Days to reserve
- Floor Number on which reserved room is
- Room Type
- Room Number
- Check in time and date
- Checkout time and date
- Time remaining in the Hotel (in Hours, should be calculated on runtime automatically)

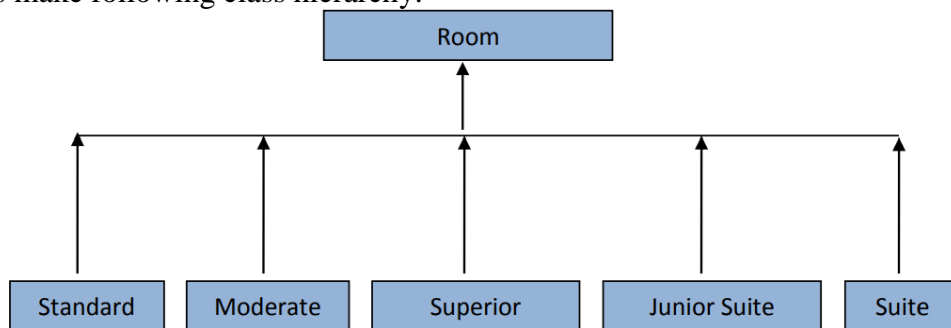
[Menu/Option](#)

```
[ HOTEL MANAGEMENT SYSTEM -> Menu ]
1 . Press 1 to Reserve a room
2 . Press 2 to Checkin a customer/visitor
3 . Press 3 to Uview Reserved Rooms
4 . Press 3 to see detail report
5 . Press 5 to exit
```

- ✧ If room is reserved it should not be reserved again until customer checkout or reserve time is ended.
- ✧ When room is reserved, it should ask customer if he/she is old customer or new customer.
 - If new customer, then record all the above mentioned things and give customer a room.
 - If old customer, then search old customer name in the database (file) and retrieve all his/her info and give him/her a room.
- ✧ **NOTE:** There is a lot of difference in Reserve and Check in a customer.
- ✧ In Detail Report you've to give daily base statistics for example
 - How many customers have checked in today
 - How many have checked out today
 - How many rooms have been reserved and their types
 - How many are empty and their types.
- ✧ You also have to save all the information in the files. There is no restriction on the file format.

Class Design

For Rooms make following class hierarchy:



You Must use all concepts of classes including operator overloading, inheritance, polymorphism etc.

Only one global variable is allowed in whole project.

Data Storage

× InFiles

- All the data should be saved in files.
- Filing section contains almost 50 % marks of the whole project.
- If I close the program and run it again, it should read all the records and old data that were saved last time.
- You can use any format for filing.
- All the information of room should be saved in rooms.dat file
- All the information of customers should be saved in customers.dat file

Submission Guidelines:

- Project will be done individually.
- You will have to submit hierarchy and design of classes drawn on a page. Also the implementation of project in C++.
- Code should be properly commented
- Use proper terminologies for your variables/arrays declaration.
- Every student should be present at the time of demo. Any absent student will get zero marks in the project.
- If caught any cheating, etc. or not able to explain during the demo will give you zero credit.
- Copying and sharing of code among students will result zero credit in the project.
- Zero credit for not following above guideline.
- In case of any ambiguity feel free to contact lab instructor and start working on project from today.