



Computer Science Department
Comp1331 Project

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| Individual work project. | Due Date: Sun. 12/5/2024 by 11:59 pm on <i>ITC</i> |
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In this project, you are required to write a project for a hotel management system: Phase 1 will be as follows:

Write a java program that keeps displaying the main menu containing the following options:

- a. Show All Rooms
- b. Show Available rooms (isOccupied = false)
- c. Change room details
- d. Search by room type
- e. Search by capacity
- f. Quit

1) Class name: Room.java.

a) A room has the following details

- (1) Integer Room number
- (2) Integer Floor number (from 1 to 5)
- (3) String Room Type (Standard, Family, Suite)
- (4) Boolean isOccupied
- (5) Integer capacity
- (6) Double pricePerNight
- (7) Rooms on the first 20 rooms (1 to 20) are standard, rooms: 21 to 40 are Family, and rooms: 41 to 50 are Suite. All rooms have isOccupied = false, and capacity = 2, pricePerNight=100. Room numbers are numbered from 101 to 110 with floor number=1, 201 to 210 with floor number =2, 301 to 310 with floor number =3, 401 to 410 with floor number =4, and 501 to 510 with floor number=5.

b) Write appropriate setters and getters for the room class, and toString method.

c) Write appropriate methods to validate correct room numbers, room types, and capacities (assume valid capacity is from 1 to 10).

2) Class name: RoomManagement.java: Room Management System which includes a one dimensional array of rooms of the Room Class (array size = 50). The Room management system allows the following behavior:

- a) Show all rooms.
- b) Show Available rooms.
- c) Change room details: to allow to change the following room details at the same time: room type, isOccupied, capacity, pricePerNight.
- d) Search by room type
- e) Search by capacity

3) Create a Driver class that allow shows the menu above and creates a RoomManagement object and when selecting Room Management System allows the above behavior. All keyboard input should occur in the driver class.

IMPORTANT: What you need to turn in:

- 1- Your project folder (containing all your project files (*.java files) should be compressed (.rar) and saved as ***proj_youridnumber_yourLabsectionnumber.rar*** (for example if your student id number is 1221234 and your lab **section** is section 9 then the project folder should be called ***proj_1221234_s9.rar***). Turn in your project by ***replying to the course coordinator's message*** on itc under the lab meta section and attaching your project .rar file (***proj_youridnumber_yourLabsection.rar***).
- 2- You must include your full name, student id number, and lab section number in a comment at the beginning of each of your .java code files.

Late Projects will NOT be accepted for any reason.

Project Files that are not compressed correctly or cannot be opened will not be graded and will receive a zero grade.