CSC 143 Project II

Hotel Reservation/Management

Purpose: The purpose of this assignment is to help you incorporate concepts we learned in CSC 143 and get a taste of working as a software developer or a project manager. The topic is chosen to focus especially on OOP, your own data structures – linked list and binary tree, and your chance of learning a whole lot more will be inevitable.

Background:

We want to update your previous group project to use your own data structures – linked list, binary tree, and so on. Your program should be able to make a reservation for and be able to state when the guests have checked out of a room.

Deliverables and Due Dates:

* **Project proposal by Thursday, February 14, 2019**
* **Poster session on Thursday, February 28, 2019**
* **All submissions due on Wednesday, March 6, 2019**

Task: To complete the project, you should:

1. Write the project proposal with your team members and submit on Canvas
   1. The project proposal is the core of your project. Spending enough time on your proposal will certainly pay off in the end. Most software engineers spend at least 50% of their project allocation time on planning and designing the system.
   2. List of things you may want to include in your proposal: Title, what you hope to accomplish and how you intend to achieve them, design flow, what your final demo will feature (MUST features and NICE-TO-HAVE features), and how you will implement (i.e., data structures, algorithms, inputs and outputs)
   3. You **need to include the project plan**: Describe a high level timeline for your project, consisting of major milestones and their short descriptions (1-2 sentences). This will help you to scope the work and determine the number of team members you might need.
   4. Type your proposal and submit on Canvas under Proposal of Project
2. Implement the application
3. Poster session – no presenter, no demo!
4. Submit all files

Grading Criteria

* (10 pts) Project Proposal
* (30 pts) Poster session
  + You must make a poster to present what you have done.
  + Illustrate your application design, database, and data structure on your poster.
  + Top five who received the most votes will receive 5 extra credit points
* (40 pts) **Final Submission**
  + Algorithm and Coding efficiency
  + Coding Style
  + Project quality
    - Minimum requirements (Must-have features)
      * Use your own data structure classes – linked list and binary tree
      * Guest information with a proper data structure class
      * Room Type and different guest numbers with a data structure class
      * View room availability
      * Make a reservation
      * Modify/Cancel the reservation
      * Billing/View Folio
    - Must use extensive user input validation, Static methods and OOP (at least two custom classes).
    - Key point here is “it works." Otherwise nothing matters. This is what a real software engineer deals with. My suggestion is “starting simple and making sure key features work bullet proof” and then adding additional features.
    - How much you make your previous project better. (This doesn’t matter how good your previous project was.)

Assumptions

* User interactions should be implemented on the command line prompt.
* Actual Client-Server communication is not necessary.
* A single Java process would represent client and server at the same time.
* You can implement your own DB in memory using arrays or as a file.

Some of the requirements that you should strive to meet while undertaking this project include:

* Prompt for user’s current requirements (room preference and dates of booking).
* Match user’s requirements with currently available rooms. A hotel will likely have several variably priced room types – penthouse suites, large rooms with king size beds, single bed rooms, etc.
* Assign a room to user and record preferences for future use.

If you can include a recorded preference to automatically check the user into a room that fits his/her requirements on future visits, then you are really on top of the game!

Important Announcement for Project

* The project time will be given in the regular class time.
* If you leave the classroom without instructor’s permission or absent from the project time, your score will be **taken off 3 pts every time**.
* Working together is fine but you **must submit your final poster and submission individually**.