Mangesh Raut

Mbr63 14530829

CS501-001 – Project 2 Planning

This is a hotel management system that may be used to manage tasks such as maintaining customer information, booking rooms of various types, ordering meals for rooms, unbooking rooms, and displaying the bill. It can also be used to view various room amenities and availability. It's a menu-driven application system that runs until the user closes it.

When the software terminates, file handling is used to save the hotel's state (client details, booked rooms, meals ordered) in a file so that the old information is not lost when the program is restarted. When the application restarts, it scans the file to determine the hotel's previous status. The writing of the file was done in a different thread so it could be done in parallel. If a user tries to book a room that has already been reserved, a user-defined exception is thrown. To cope with any unforeseen exception, appropriate handling is done.

In this project I use classes and objects, Inheritance, File Handling with Objects, Array List, implementing Interface, User Defined Exception, and Exception Handling, which covers all the parts that we learn in this course.

The input would be given by the user for the multiple interactions after running the code. Users have good and valid choices to interact with the system. example Display room details, availability, book, order food, checkout, and exit. The output will be the result of interactions upon the user's behavior, responding very well to the user’s request and having fun running this system.

Diagram

Description automatically generated

For example, Single room is hotel and Double room has single room.

UML of each class

Doubleroom Class Serializable Class

Graphical user interface, diagram

Description automatically generatedGraphical user interface

Description automatically generated

Graphical user interface

Description automatically generatedHolder Class Hotel Class

A picture containing text

Description automatically generated

Graphical user interface, application

Description automatically generatedMain Class

Notavailable Class

Text

Description automatically generated

Singleroom Class Write Class

Graphical user interface, diagram

Description automatically generated

A picture containing graphical user interface

Description automatically generated

Project UML \*

Graphical user interface

Description automatically generated

Pseudocode for a user facing console program:

Main.java

In the main program, I try to catch exceptions that will occur during the runtime. Then I use a file to save the details of the hotel management system, which keeps the data safe. Scanner for the user's input and user interactions. For printing the messages, the print method is the perfect thing to use here to show the messages of the system. The Switch case is used for multiple choices like the Enter your choice for display room details and checking availability, etc., while the loop is for the wish, which will depend on user inputs while running till the user wants something. The thread is for making connections between other classes and having interactions between them. It will create a new hotel thread.

Hotel.java

It does not have a main method, but most user interactions have these classes for the inner details, such as after selecting a choice, then entering a name, contact number, and so on. case for choices for doubleroom and singleroom classes to check if the details match or not. For booking a room, the user needs to put in the room number. The book room has features like a double room or a single room. Then availability is for checking whether rooms are available or not. Checkout for the food and room booking Checkout send the used room person's name. order needs to book the room first, then show the menu for more details.

Output \*

\*\*\* Welcome to Hotel Management System \*\*\*

\*\*\* DREXEL UNIVERSITY CCI CS-501 PROJECT 2 \*\*\*

Enter your choice :

1.Display room details

2.Display room availability

3.Book

4.Order food

5.Checkout

6.Exit

Choose room type :

1.Luxury Double Room

2.Deluxe Double Room

3.Luxury Single Room

4.Deluxe Single Room

Room Number –

The first three options required room type, and the fourth and fifth required room number.