Hotel Class

Private int floors

Private int numberOfRooms

Private Room[][] rooms

Public Hotel()

Public Room[] findFreeRoom(Date enter, Date enter, Room[] searchRoom)

Public boolean availability (Room[] rooms)

Public String noAvailableRoomWarning()

Public Room[] showAvailableRoom(Room[] rooms)

Public Reservation createReservation(Date enter, Date out, Room[] rooms)

Public Reservation selectRoomFeatures(Room aRoom, int[] features)

Public String showReservationDetails(Reservation r)

Public Reservation makeBooking(String name, String last, int id, int phoneNumber, Reservation r)

Public Reservation makePayment( String name, long cardNumber, int month, int year, int cvc, Reservation r)

Public Boolean verifyPayment(Reservation r)

Public String paymentNotAcceptedWarning()

Public Reservation findReservation(String code)

Public Boolean reservationExists(Reservation r)

Public String noExistingReservationWarning()

Public Boolean removeReservation(Reservation r)

Public String removedVerificationMessage()

Room Class

Private int roomNumber

Private int roomCapacity

Private int defaultPrice

Private ReservationNode reservations

Public Room(int roomNo, int capacity, int price)

Public Reservation setSelections(int[] features, Reservation r)

Public boolean removeReservation(String code)

Public Reservation addReservation(String name, String last, int id, int phoneNumber, Reservation r)

Public ReservationNode getReservations()

Public int getRoomNo()

Public int getCapacity()

Public int getDefaultPrice()

Public void setDefaultPrice(int price)

ReservationNode Class

Public Reservation r

Public ReservationNode next

ReservationNode()

Reservation Class

Private Date enter

Private Date out

Private Room[] rooms

Private Customer c

Private String code

Private String[][] roomFeatures

Private boolean isPayed

Public Reservation()

Public void createReservation(Date enter, Date out, Room[] rooms)

Public boolean updateReservation(Room aRoom, int[] features)

Public void verifyPayment(Boolean payed)

Public Date getEnterDate()

Public Date getOutDate()

Public Customer getCustomer()

Public String getCode()

Public int getTotalPrice()

Public String showDetails()

Public Boolean getPayed()

Public void setCustomer(Customer c)

User Class

Private name

Private lastName

Private long id

Public User(String name, String lastName, long id)

Public void setName(String name)

Public void setLastName(String lastName)

Public void setId(long id)

Public String getName()

Public String getLastName()

Public long getId()

Receptionist Class implements User Class

Private String password

Public Receptionist(String name, String lastName, long id, String password)

Public void setPassword(String pw)

Public String getPassword()

Public Boolean checkPassword(String pw)

Customer Class implements User Class

Private long phoneNumber

Public Customer(String name, String lastName, long id, long phoneNumber)

Public void setphoneNumber(long phoneNumber)

Public long getPhoneNumber()

Hotel Class

Attributes:

Private int floors

This attribute defines the number of floors the hotel has.

Private int numberOfRooms

This attribute defines the number of rooms in each floor the hotel has

Private Room[][] rooms

This attribute defines the rooms that the hotel has. The order of the room is such that:

Each line represents a floor and each room object in a line represents a room in that floor.

And the room numbers are composed of floor number and the Ith room in that floor.

For example, the room with room number 503 is in the 5th floor and in the 3rd order in that

Floor and it is represented as rooms[floor-1][order-1], i.e. room[4][2] .

Constructors:

Public Hotel(int floors, int numOfRooms)

This constructor has two parameter : floors and numOfRooms. When this constructor is

Is called, it assigns these two parameter values two Hotel object’s floor and numberOfRooms values. Then it creates new Room[][] double array with given parameters and assign rooms attribute to this new double array.

Methods:

Public Room[] findFreeRoom(Date enter, Date out, Room[] searchRoom)

This method is to find available room(s) between the given enter and out dates. It takes three parameters enter, out and searchRoom. Enter and out are the given Date objects. searchRoom is a room array initialized when the user selects the number of rooms to reserve in User Interface with the size user enters through buttons. The objects in the searchRoom array has capacity values which are also input from the user. Then this method iteratively searches available rooms for the given time interval. If it finds available room(s) then it creates a new array from that room(s) and returns it. Else it returns NULL.

Public boolean availability (Room[] rooms)

This method is to check whether the Room array returned from findFreeRoom is empty or not.

Public String noAvailableRoomWarning()

This method is called when the availability method returns false. It gives an error message specifying that there is no available room(s) between the given time interval.

Public Room[] showAvailableRoom(Room[] rooms)

This method is called when the availability method returns true. It returns the Room[] array given as parameter.

Public Reservation createReservation(Date enter, Date out, Room[] rooms)

This method is created when the user sees the available rooms and continues to make booking. It creates a temporary reservation with the given time interval and the available Room array. This method is called to make changes on an imaginary made reservation.

Public Reservation selectRoomFeatures(Reservation r, room aRoom, int[] features)

This method is called when the user selects features that he wants in the rooms he choosed. It calls the setSelections() method of the room and updates the features and the price. Then, it returns the reservation r given as parameters as modified.

Public String showReservationDetails(Reservation r)

This method is to show the details of a given reservation with all attributes which are not NULL or empty.

Public Reservation makeBooking(String name, String last, int id, int phoneNumber, Reservation r)

This method is called when the user clicks on “Make Booking” button on the reservation details page when making booking. It updates the given reservation r with the given name, last, id and phoneNumber parameters and adds the reservation r to the reservation lists in of the rooms that the reservation r has. Then it returns the modified reservation r.

Public Reservation makePayment( String name, long cardNumber, int month, int year, int cvc, Reservation r)

This method is called after the user clicks on “Make Payment” button on the reservation details page when making booking. Before this method, makeBooking() method is called and reservation r is updated. Then this method is called to take credit card information and make payment. According to the result of payment it updates the isPayed attribute of the reservation r and returns the reservation r.

Public Boolean verifyPayment(Reservation r)

This method called after the makePayment() method. It is to check whether the given reservation r’s fee is payed or not.

Public String paymentNotAcceptedWarning()

This method is called if the verifyPayment() method returns false. It gives an error message specifying that the payment is not accepted.

Public Reservation findReservation(String code)

This method is called when the user wants to find a reservation made before. It

Public Boolean reservationExists(Reservation r)

Public String noExistingReservationWarning()

Public Boolean removeReservation(Reservation r)

Public String removedVerificationMessage()