# Hotel Reservations App

## Project Requirements

This project entails creating an that allows a user to create their own account by entering in their email address with their desired password. All validation checks have been set into place to ensure proper username and passwords are stored in the Java collection files. A user should be able to book a room, view available rooms while the system constantly checks for room availability to ensure the app performs accurately. There is also an Admin side of the system to ensure proper management of rooms and room availability. This user can view and create new rooms.

## User Scenarios

**Creating a customer account.** The user needs to first create a customer account before they can create a reservation.

**Searching for rooms.** The app should allow the user to search for available rooms based on provided check-in and checkout dates. If the application has available rooms for the specific date range, a list of the corresponding rooms will be displayed to the user for choosing.

**Booking a room.** Once the user has chosen a room, the app will allow them to book the room and create a reservation.

**Viewing reservations.** After booking a room, the app allows customers to view a list of all their reservations.

## Admin Scenarios

Display all customer accounts.

Viewing all of the rooms in the hotel.

Viewing all of the hotel reservations.

Adding a room to the hotel application.

## Reserving a Room – Requirements

**Avoid conflicting reservations.** A single room may only be reserved by a single customer per check-in and check-out date range.

**Search for recommended rooms.** If there are no available rooms for the customer's date range, a search will be performed that displays recommended rooms on alternative dates. The recommended room search will add seven days to the original check-in and check-out dates to see if the hotel has any availabilities and then display the recommended rooms/dates to the customer.  
Example: If the customers date range search is 1/1/2020 – 1/5/2020 and all rooms are booked, the system will search again for recommended rooms using the date range 1/8/2020 - 1/12/2020. If there are no recommended rooms, the system will not return any rooms.

## Room Requirements

**Room cost.** Rooms will contain a price per night. When displaying rooms, paid rooms will display the price per night and free rooms will display "Free" or have a $0 price.

**Unique room numbers.** Each room will have a unique room number, meaning that no two rooms can have the same room number.

**Room type.** Rooms can be either single occupant or double occupant (Enumeration: SINGLE, DOUBLE).

## Customer Requirements

**A unique email for the customer.** RegEx is used to check that the email is in the correct format. (i.e. name@domian.com)

**A first name and last name.**

## Error Requirements

The Hotel Reservations application handles all exceptions gracefully (user inputs included) meaning:

No crashing. The application does not crash based on user input.

No unhandled exceptions. The app has a “try” and “catch” block that are used to capture exceptions and provide useful information to the user. There are no unhandled exceptions.