



**PES UNIVERSITY**

**(Established under Karnataka Act No. 16 of 2013)**

**Object Oriented Analysis and Design using Java  
(UE20CS352)**

**Mini Project**

**PROJECT TITLE:**

**HOTEL MANAGEMENT SYSTEM USING JAVA**

**TEAM MEMBERS:**

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**Submitted to:**

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## **Problem statement:**

A hotel management system using Java is a software solution designed to automate various operations and processes in a hotel, such as room reservations, check-ins, check-outs, billing, inventory management and food ordering system.

The system will have different modules such as check-in, check-out, food ordering, and billing, all of which will be accessible through a user-friendly interface. It will also be designed to work with different types of users, such as managers, receptionists, and customers. The admin role can view prices of rooms/dishes and edit the values or append new data into the database.

Some of the key features in the hotel management system are:

**Reservation module:** This module will allow users to make room reservations online or over the phone. It will also enable users to check room availability, view room rates, and select room types. This module will enable users to check guests in, assign rooms, and record guest details such as name, address, and contact information.

**Check-out module:** This module will enable users to check guests out, generate invoices, and process payments. It will also allow users to update room availability status and track room occupancy rates.

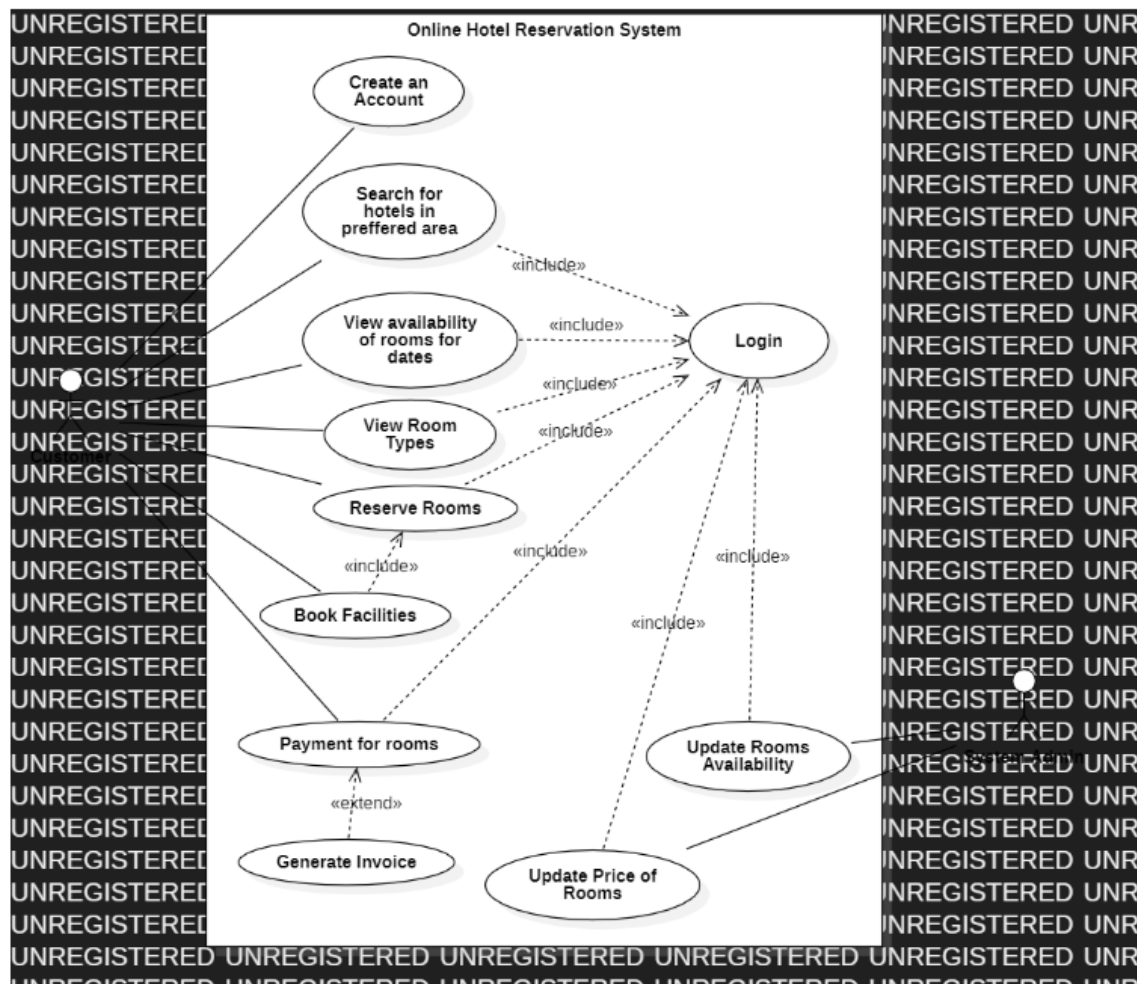
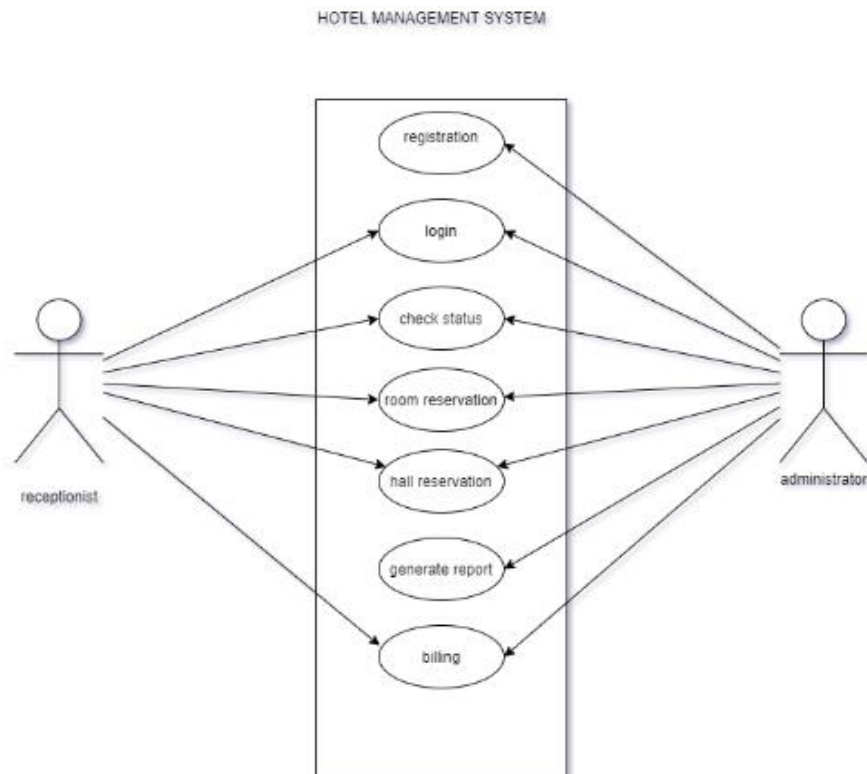
**Restaurant module:** This module will allow users to manage guest requests for room service, housekeeping, and maintenance. It will also enable users to update room status and inventory levels.

**Billing module:** This module will enable users to generate invoices, process payments, and track revenue. It will also allow users to generate financial reports, such as profit and loss statements and occupancy rates.

The software can also manage dishes, manage rooms and also has a login module.

Overall, the e-commerce application using Java project is a robust and scalable solution for building an online marketplace. It leverages Java's powerful features and offers a user-friendly interface for both buyers and sellers.

## Models:



## Design Patterns:

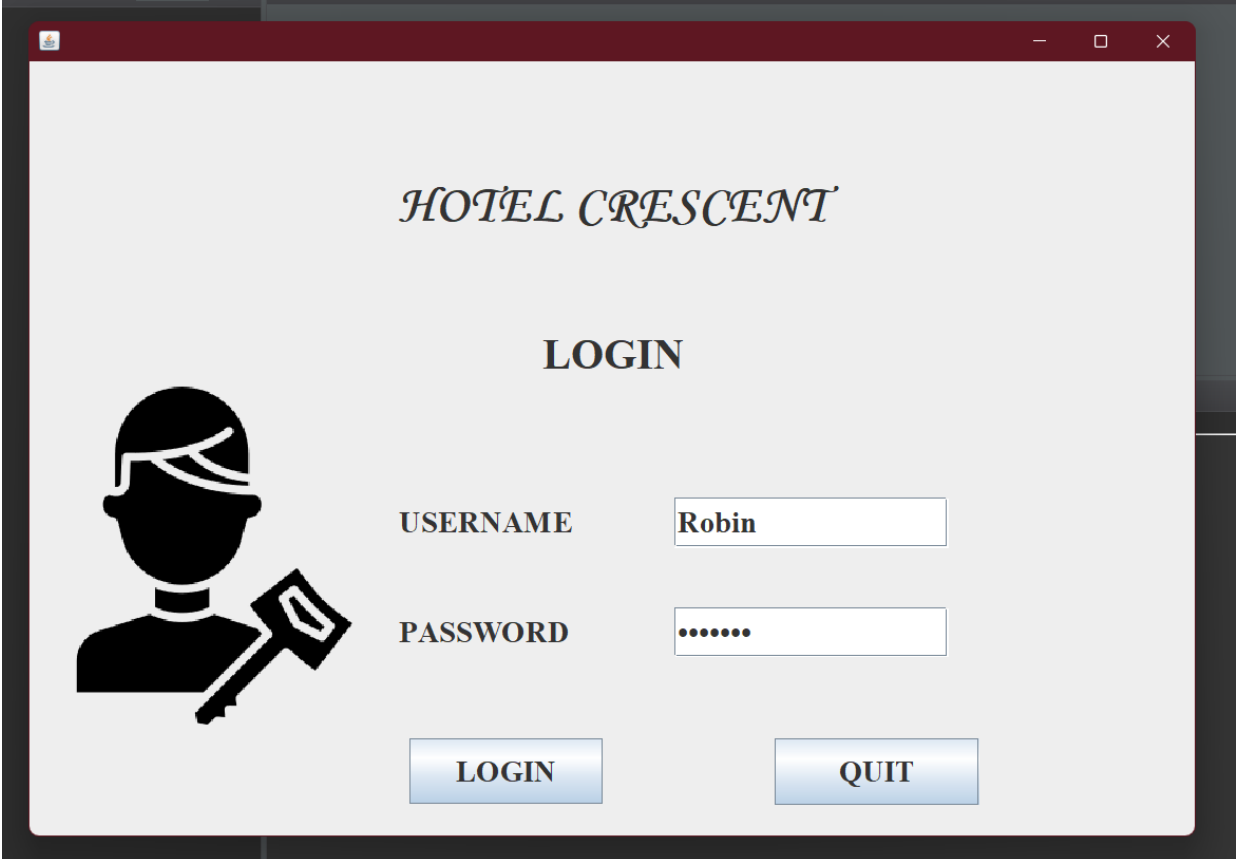
1. **Model-View-Controller (MVC):** The repository follows the Model-View-Controller pattern. The model layer contains the data access objects (DAOs) and entity classes, which represent the data and provide a layer of abstraction. The view layer contains the user interface (UI) classes, which interact with the user and display information. The controller layer contains the controller classes, which act as intermediaries between the model and view layers and handle user input.
2. **Factory Method Pattern:** The system uses the Factory Method pattern in the 'RoomFactory' class, which creates instances of different types of rooms based on the input provided.

## Design Principles:

1. **Single Responsibility Principle (SRP):** The System follows the Single Responsibility Principle, as each class has only one responsibility. For example, the Guest class is responsible for representing a hotel guest, the Room class is responsible for representing a hotel room, and the Hotel class is responsible for managing the hotel's operations.
2. **Open-Closed Principle (OCP):** The system follows the Open-Closed Principle, as it allows for extension without modification. For example, new types of rooms can be added to the Room class without modifying the existing code.
3. **Liskov Substitution Principle (LSP):** The system follows the Liskov Substitution Principle, as it allows for subclasses to be substituted for their superclasses without affecting the program's behavior.
4. **Interface Segregation Principle (ISP):** The system follows the Interface Segregation Principle, as each interface defines only the methods that are necessary for its specific purpose.

## Screenshots:


### 1. User Login



A screenshot of a web application window titled "HOTEL CRESCENT" with a "LOGIN" section. On the left is an icon of a person with a key. The "USERNAME" field contains "Robin" and the "PASSWORD" field contains seven dots. There are "LOGIN" and "QUIT" buttons at the bottom.

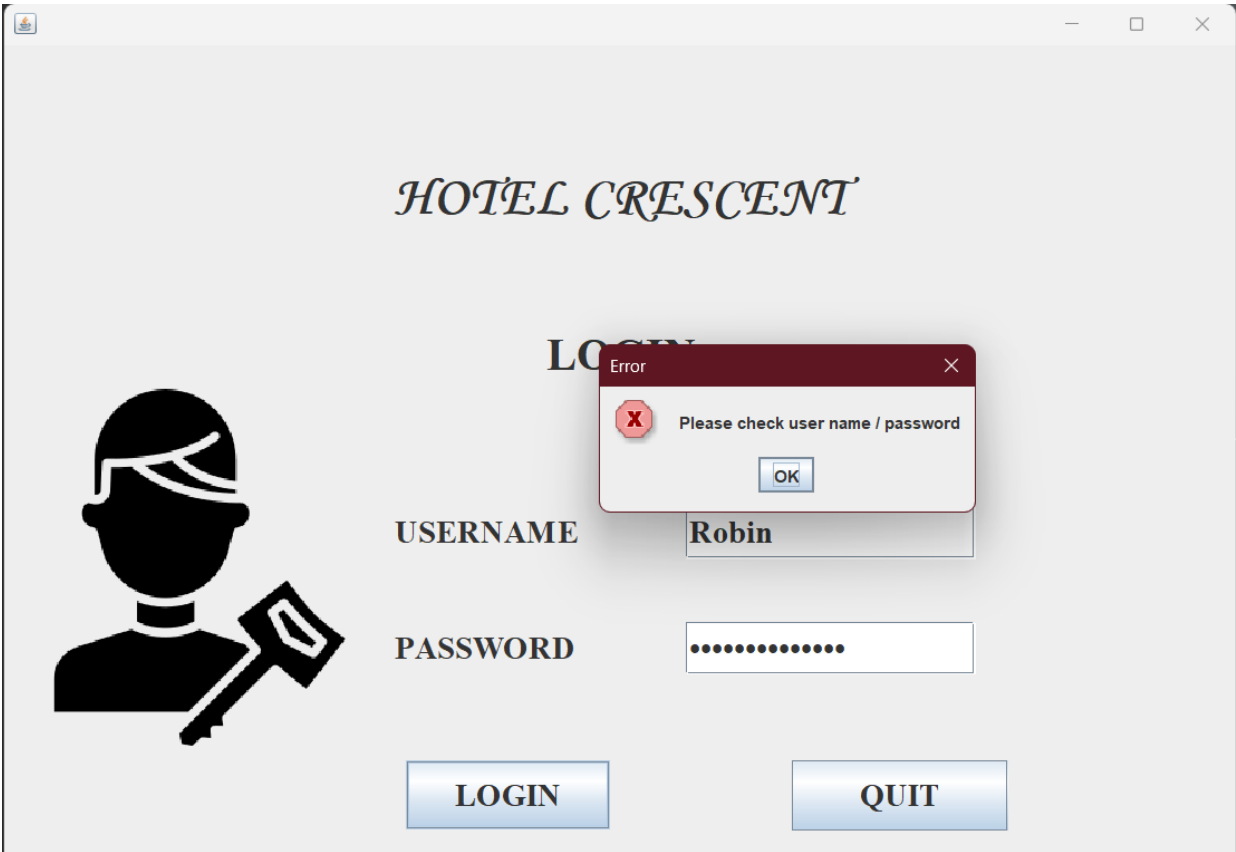
*HOTEL CRESCENT*

**LOGIN**



USERNAME


PASSWORD



A screenshot of the same "HOTEL CRESCENT" login window, but with an error message displayed. The error message box says "Error" and "Please check user name / password" with an "OK" button. The "USERNAME" field still contains "Robin" and the "PASSWORD" field contains seven dots. The "LOGIN" and "QUIT" buttons are still present.

*HOTEL CRESCENT*

**LOGIN**



USERNAME

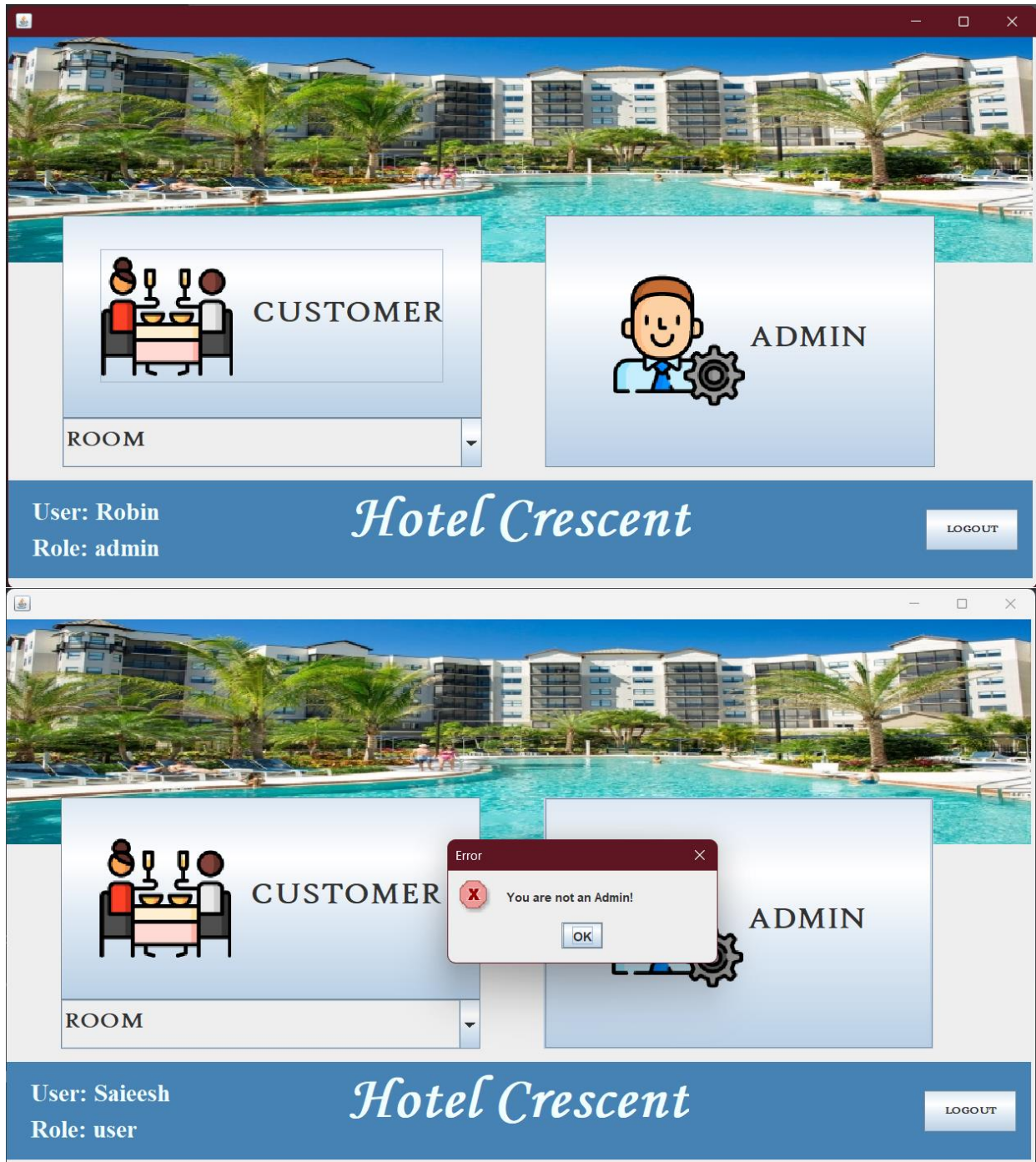
PASSWORD

Error

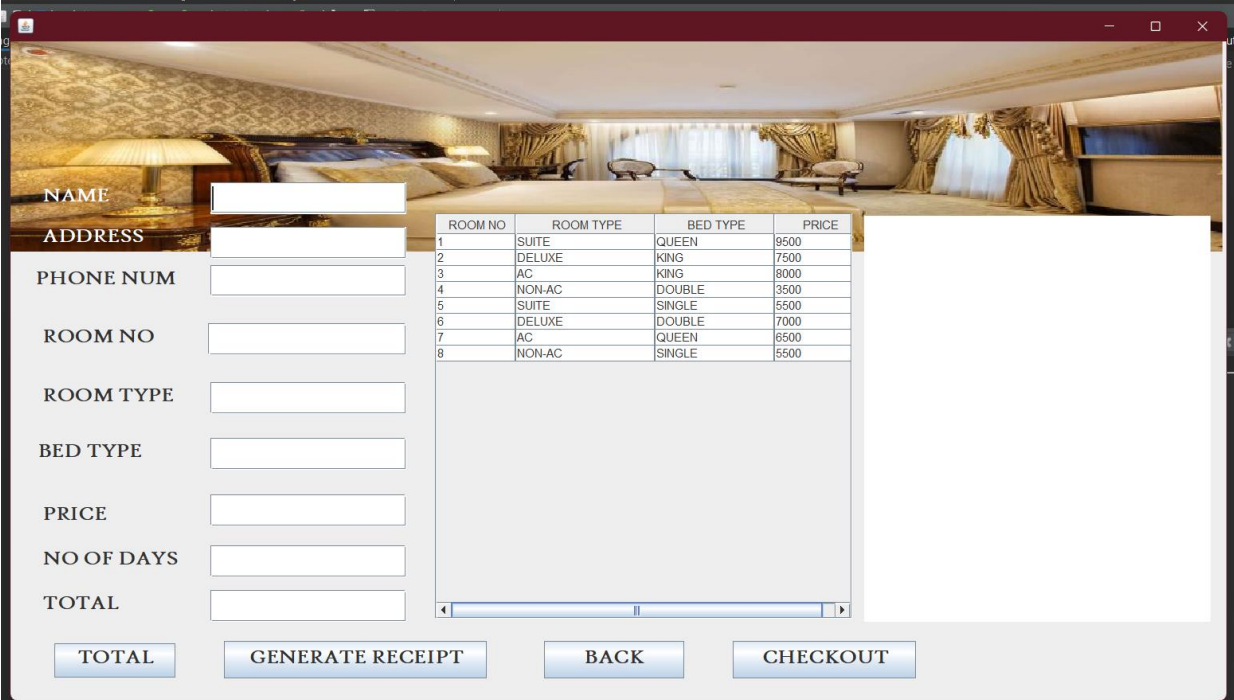
Please check user name / password

OK

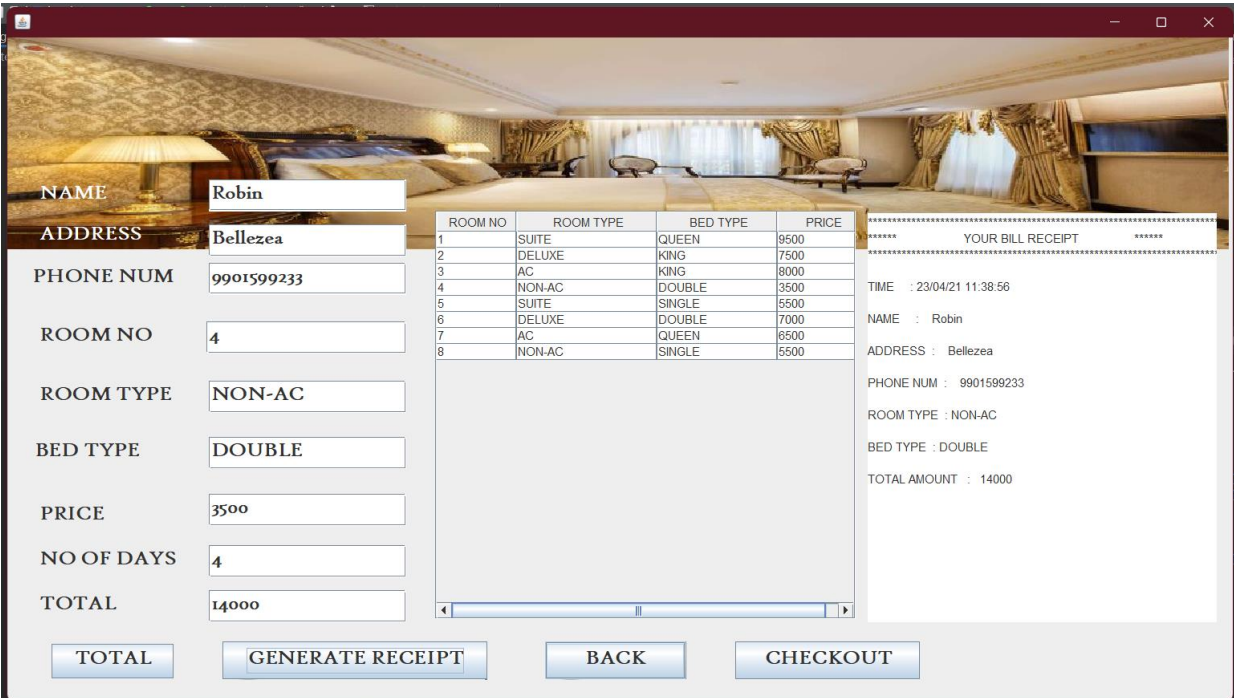
## 2. UI Page



### 3. Room Booking



ROOM NO	ROOM TYPE	BED TYPE	PRICE
1	SUITE	QUEEN	9500
2	DELUXE	KING	7500
3	AC	KING	8000
4	NON-AC	DOUBLE	3500
5	SUITE	SINGLE	5500
6	DELUXE	DOUBLE	7000
7	AC	QUEEN	6500
8	NON-AC	SINGLE	5500



ROOM NO	ROOM TYPE	BED TYPE	PRICE
1	SUITE	QUEEN	9500
2	DELUXE	KING	7500
3	AC	KING	8000
4	NON-AC	DOUBLE	3500
5	SUITE	SINGLE	5500
6	DELUXE	DOUBLE	7000
7	AC	QUEEN	6500
8	NON-AC	SINGLE	5500

\*\*\*\*\* YOUR BILL RECEIPT \*\*\*\*\*

TIME : 23/04/21 11:38:56

NAME : Robin

ADDRESS : Bellezea

PHONE NUM : 9901599233

ROOM TYPE : NON-AC

BED TYPE : DOUBLE

TOTAL AMOUNT : 14000



## 4. Food ordering

SELECT DISH	SELECT DRINK
CHOCOLATE FONDUE	ARIZONA TEA

NAME:

ADDRESS:

PHONE NUM:

COST OF MEAL:

COST OF DRINKS:

TOTAL:

DISH NAME	PRICE
SHAHI PANEER	500
CHOCOLATE FONDUE	200
MANCHOW SOUP	400
PANEER MANCHURIAN	350
PIRI-PIRI CHICKEN	600

DRINK NAME	PRICE
PINA-COLADA	250
ARIZONA TEA	150
CAPPUCINO	180
ESPRESSO	250
MELON JUICE	100

TOTAL GENERATE RECEIPT CHECKOUT BACK

SELECT DISH	SELECT DRINK
PANEER MANCHURI...	MELON JUICE

NAME: Ritvik

ADDRESS: JP Nagar

PHONE NUM: 3923298323

COST OF MEAL: 350

COST OF DRINKS: 100

TOTAL: 450

DISH NAME	PRICE
SHAHI PANEER	500
CHOCOLATE FONDUE	200
MANCHOW SOUP	400
PANEER MANCHURIAN	350
PIRI-PIRI CHICKEN	600

DRINK NAME	PRICE
PINA-COLADA	250
ARIZONA TEA	150
CAPPUCINO	180
ESPRESSO	250
MELON JUICE	100

Message: New Customer Added OK

YOUR BILL RECEIPT

TIME : 23/04/21 11:41:03

NAME : Ritvik

ADDRESS : JP Nagar

PHONE NUM : 3923298323

ORDERED DISH : PANEER MANCHURIAN

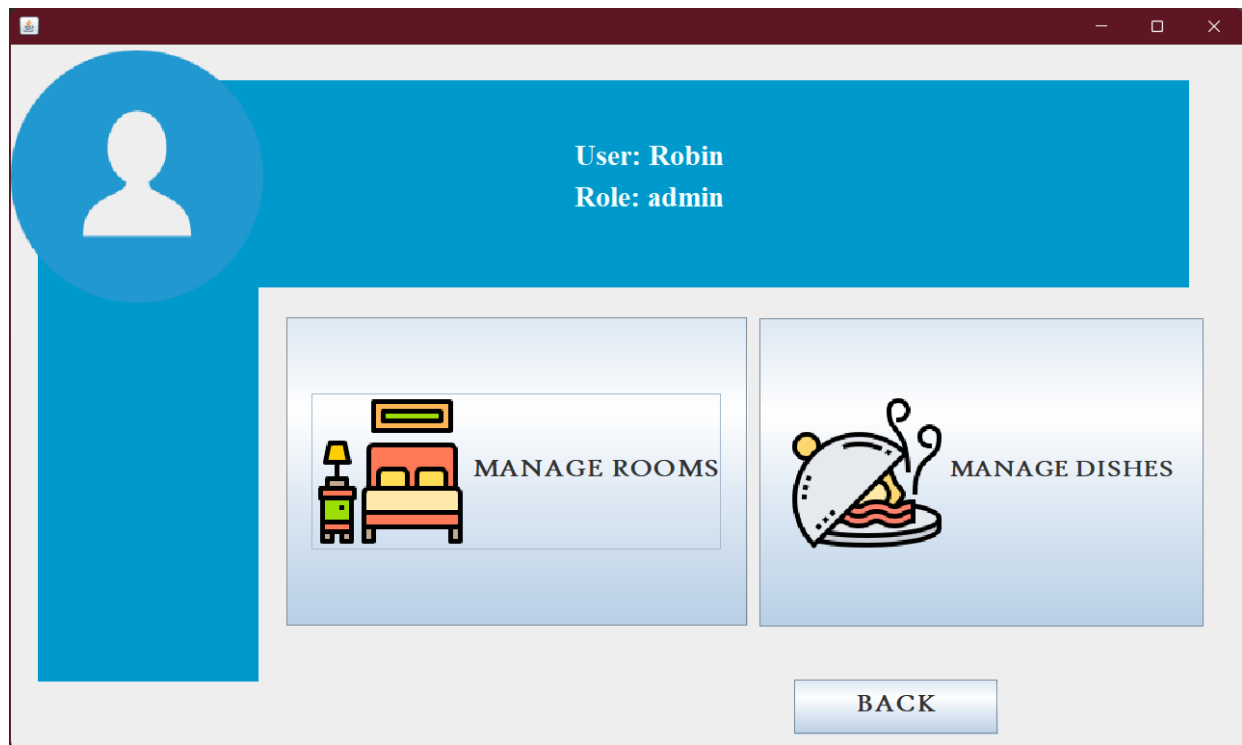
ORDERED DRINK : MELON JUICE

TOTAL AMOUNT : 450

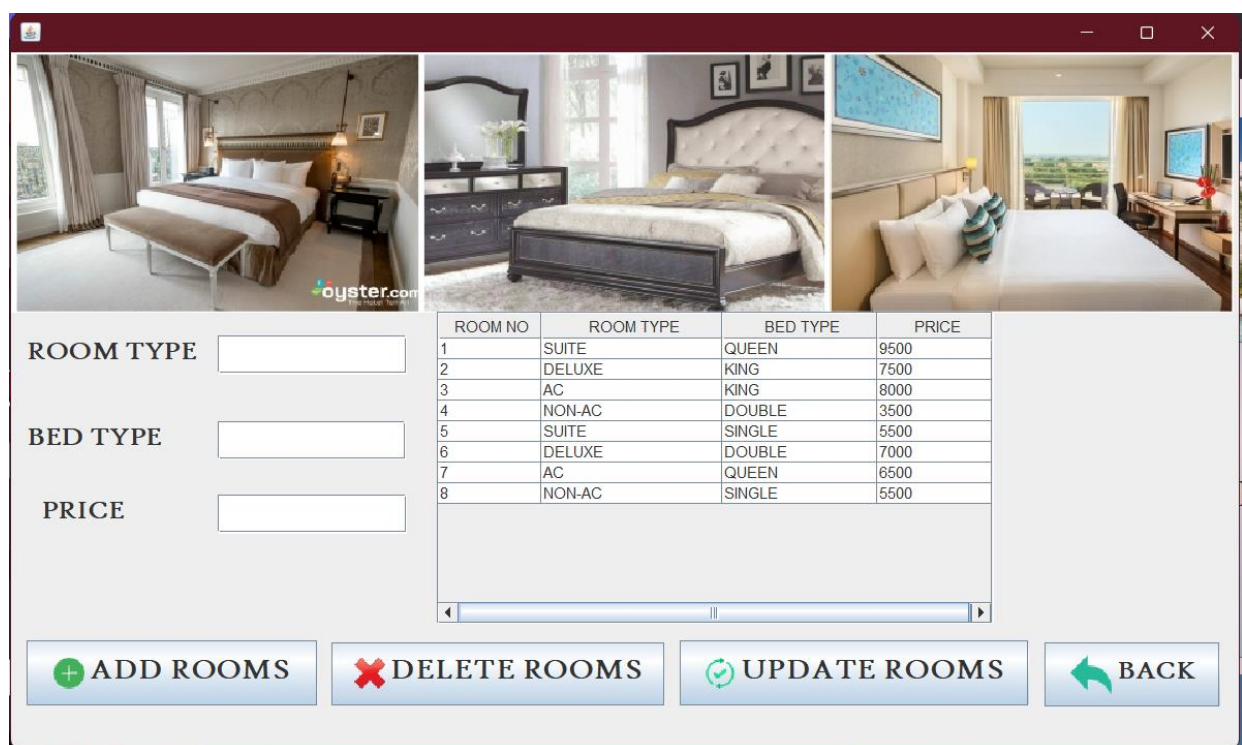
TOTAL GENERATE RECEIPT CHECKOUT BACK



## 5. Admin interface



## 6. Admin editing room details



## 7. Admin editing food details



The screenshot shows a web application window with a dark red header. Below the header are three images: a bowl of soup, a plate of food, and several cocktails. The main content area has three input fields on the left for 'DISH NAME', 'DISH PRICE', and 'DISH TYPE'. To the right is a table with 10 rows of dish data. At the bottom are four buttons: '+ ADD DISH', 'X DELETE DISH', 'UPDATE DISH', and 'BACK'.

DISH NO	DISH NAME	DISH TYPE	PRICE
1	SHAHI PANEER	MEAL	500
2	CHOCOLATE FONDUE	MEAL	200
3	MANCHOW SOUP	MEAL	400
4	PANEER MANCHURIAN	MEAL	350
5	PIRI-PIRI CHICKEN	MEAL	600
6	PINA-COLADA	DRINK	250
7	ARIZONA TEA	DRINK	150
8	CAPPUCCINO	DRINK	180
9	ESPRESSO	DRINK	250
10	MELON JUICE	DRINK	100

### Github link:

[https://github.com/Obsarian/OOAD-Project\\_Hotel-Management-System](https://github.com/Obsarian/OOAD-Project_Hotel-Management-System)