

HOTEL MANAGEMENT SYSTEM

Group-5

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CSE311
Database Management System

Sec:2

Course Instructor: ITN

Introduction

The “Hotel Management System” is the framework within which all aspects of the proper management of an ideal hotel are carried out. These aspects involve managing information about the various customer services, room services and facilities, managers and other employees, customers, booking, checking out facilities, transaction and other lavish services etc. This system provides an efficient way of managing the hotel service system. This system also allows the customer to choose their desired options efficiently which includes choosing their preferred rooms, bookings, checking outs and billings in an ideal hotel. This project is based on the management of the staffs and customers and billing of services in a hotel. The first activity of this project starts with a welcome page along with the options of viewing the hotel services, admin login and user login. Admin login can only be managed and used by the hotel authority/manager. User login is also managed by hotel authorities/manager but used by the customers. Hotel authorities/manager will manage the information of other employees and customers, any kind of changes of the information of the hotel and managing the money transactions. Customers can take a look at the hotel overview and services, select the services, book rooms and checkouts.

Background Research

There are many existing solutions similar to our project. Those are doing the similar operation closest to our project operation but not efficiently, like- Hotel Management System in Java project usually does not have database connection. So, most of the time the project has to operate locally with a certain hardware where the project operation is limited only to few authorities and not easily accessible. That is why, we have come with an alternative solution to make this project work in an efficient way. Database connection is playing as a game changer here to serve the project globally in an efficient way and making it a web application that can be accessed both locally and globally.

In Java projects which do not have database connection have to store information in a comma separated file which has to be located in the same schema. So, the read and write operation of these projects are inefficient and unorganized. But using a web application which has a database connection, makes the information store, read and write operations more efficient and organized. We can fetch the data from the connected database easily compared to the Java projects not having a database connection.

Facing these types of complexity previously, we have designed this web-based application “Hotel Management System”.

Resources/Technologies

Front End: HTML+CSS

Database interaction: PHP (Backend language), MySQL

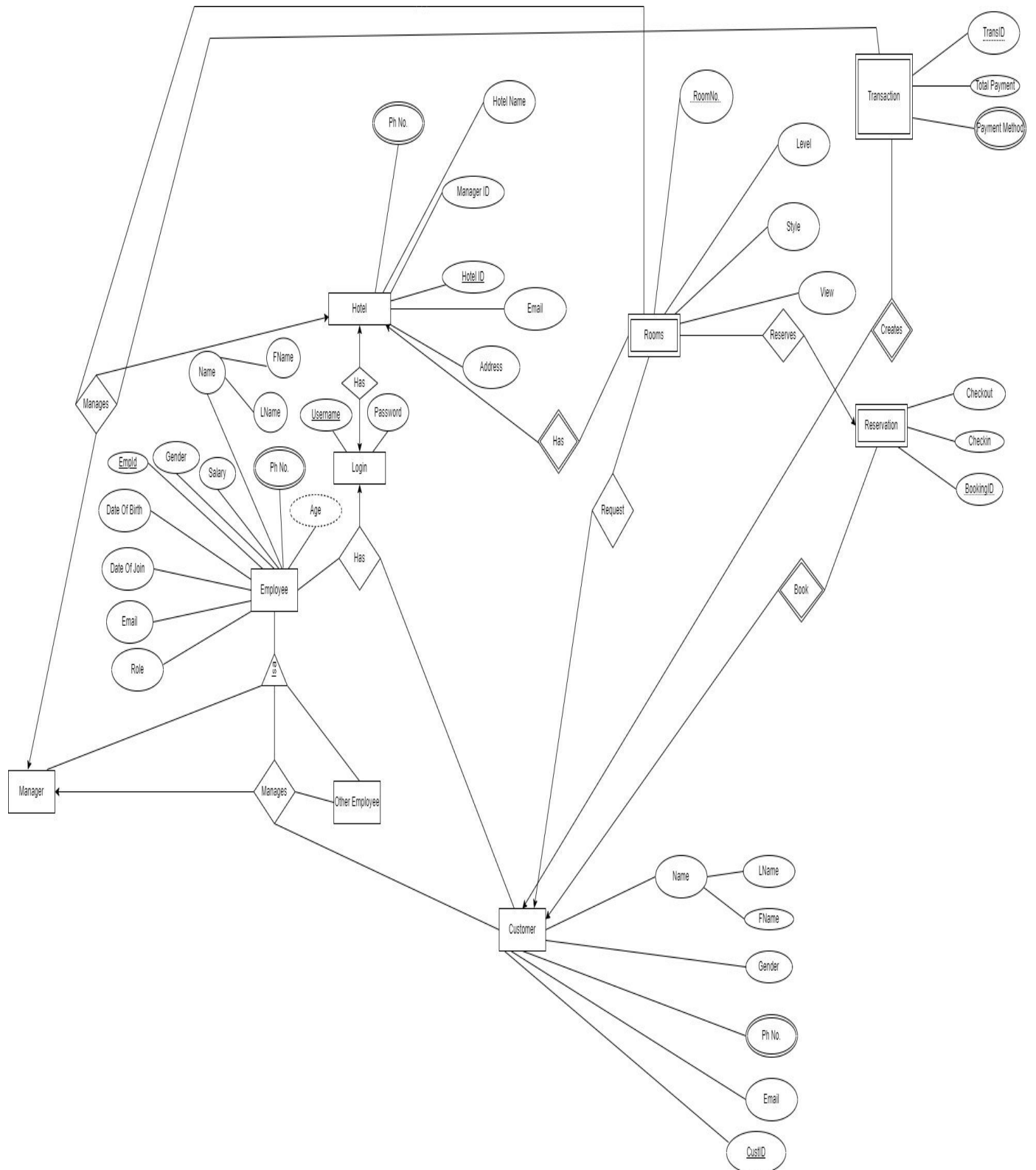
Project Design

Features

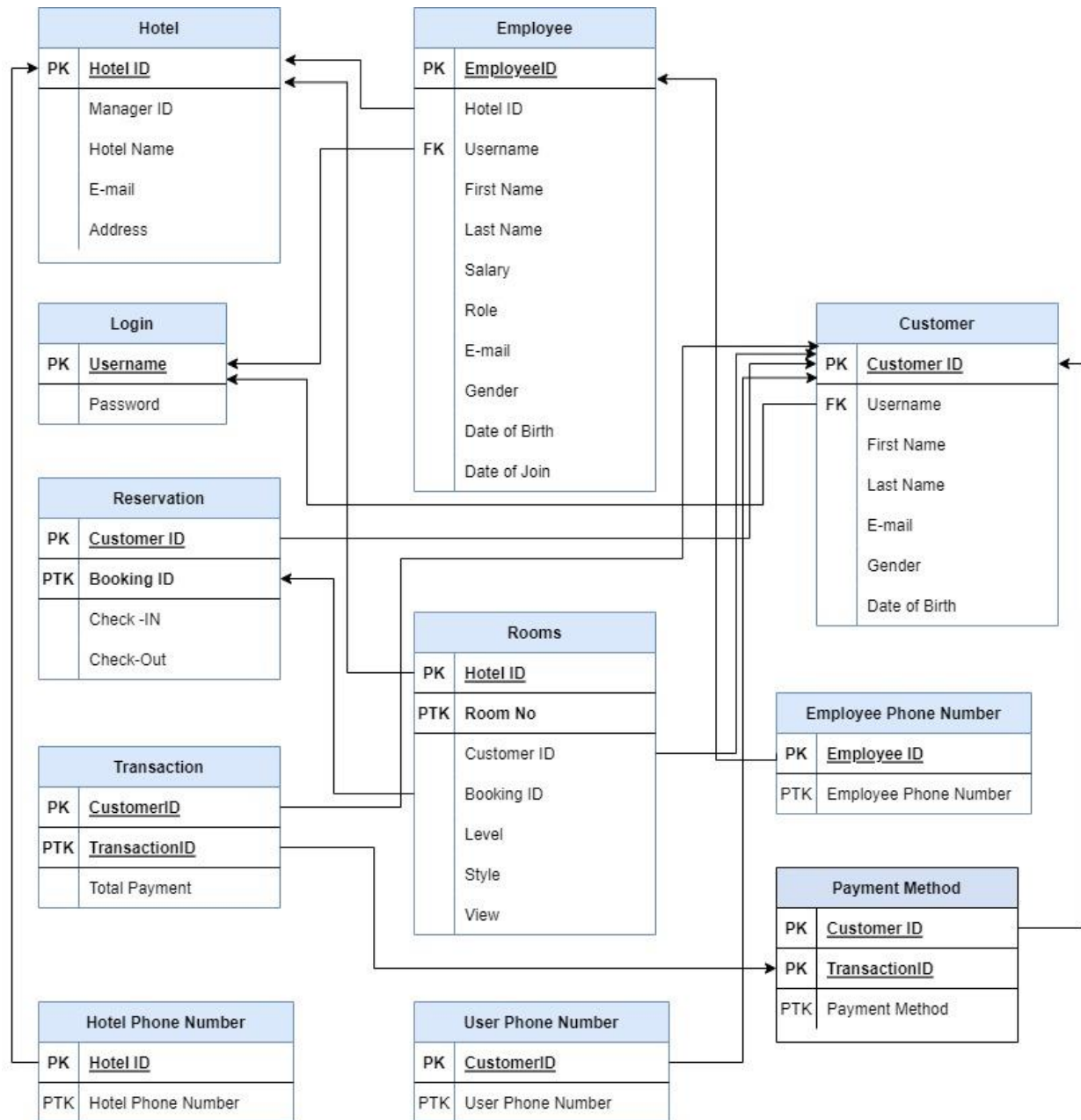
- Welcome Page
 - Admin Login
 - User Login
 - Viewing Rooms
 - Our Gallery
- Admin Signup-
 - New Manager Creation
- Admin Login-
 - Admin Dashboard
 - Room Information
 - Adding Rooms
 - Removing Rooms
 - Booking Requests
 - Confirm Bookings

- Employee Information
- Booking History
- Payment
- Logout
- Recovering Admin Password
- Employee Information also has its unique features-
 - Add Employee
 - Search Employee
 - Search with Employee ID
 - Search with Name
 - ❖ Search with First Name
 - ❖ Search with Last Name
 - Search with Employee Role
 - Search with Employee Phone No.
 - Show Employee List
 - Delete Employee
- User Signup
 - New Customer Account Creation
- User Login
 - Customer Account Dashboard
 - Customer Information
 - Booking a Room
 - Showing a Room Booking Status
 - Booking History
 - Logout
 - Recovering User Password

ER Diagram



Relational Table



Our project is a Hotel Management System where all the information is stored in database and the users can see the empty room for rent. There are two types of entities.

Strong Entities: Hotel, Login, Employee, Manager, Other Employees, Customers

Weak Entities: Rooms, Reservation, Transaction

Every entity has some attributes.

Hotel: HotelID (PK), HotelName, ManagerID, E-mail, Address, PhoneNo. (Multivalued)

Login: Username (PK), Password

Employee: EmployeeID(PK), Name(Composite Attribute), E-mail, Age(Derived), Gender, Salary, Date Of Birth, Date of Join, Role, PhoneNo. (Multivalued)

Employee has an ISA relation with the Manager and Other Employee.

Customer: CustID(PK), Name(Composite Attribute), E-mail, Gender, PhoneNo.(Multivalued)

Rooms: RoomNo (Partial Key), Level, Style, View

Reservation: BookingID (Partial Key), CheckIn, CheckOut

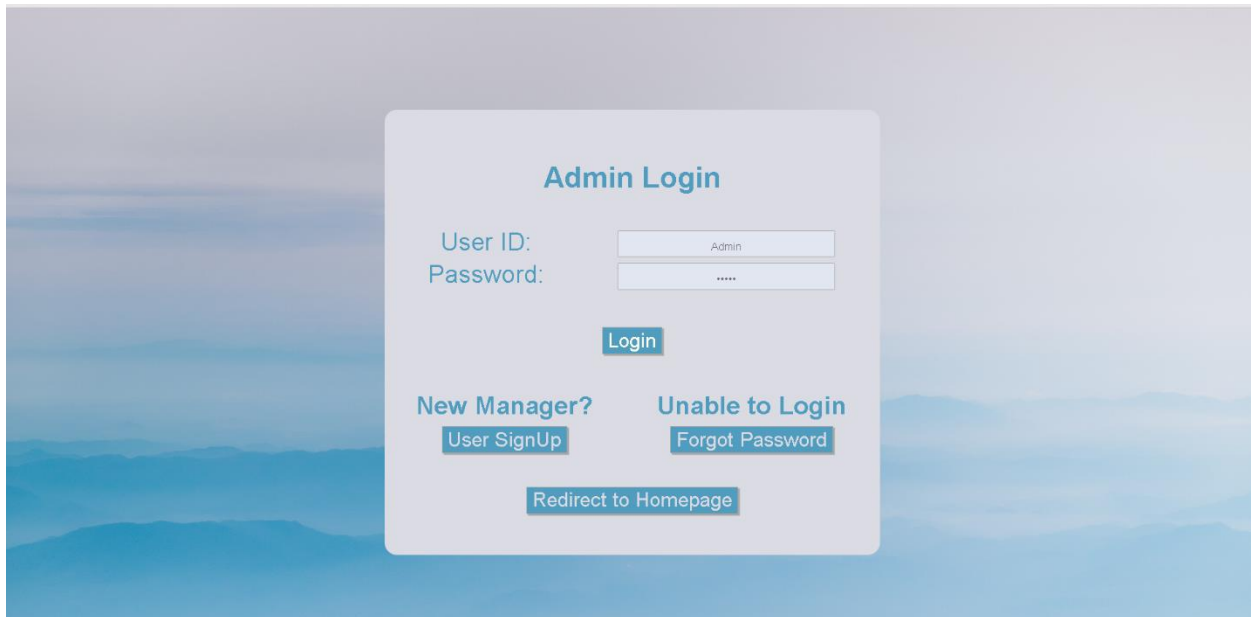
Transaction: TransID (Partial Key), Payment, PaymentMethod (Multivalued)

Every entity has some relationships with each other

- Hotel has Login (1:1)
- Login has Employee (1:M)

- Login has Customer (1:M)
- Employee has ISA relationship with Manager and Other Employee
- Manager manages Hotel (1:1)
- Manager manages Transaction (1:M)
- Manager manages Other Employee (1:M)
- Manager manages Customer (1:M)
- Manager manages Rooms (1:M)
- Hotel has Rooms (1:M) [Weak Relationship]
- Customer requests Rooms (1:M)
- Customer books Reservation (1:M) [Weak Relationship]
- Customer Creates Transaction (1:M) [Weak Relationship]
- Rooms reserves Reservation (M:1)

Snapshots



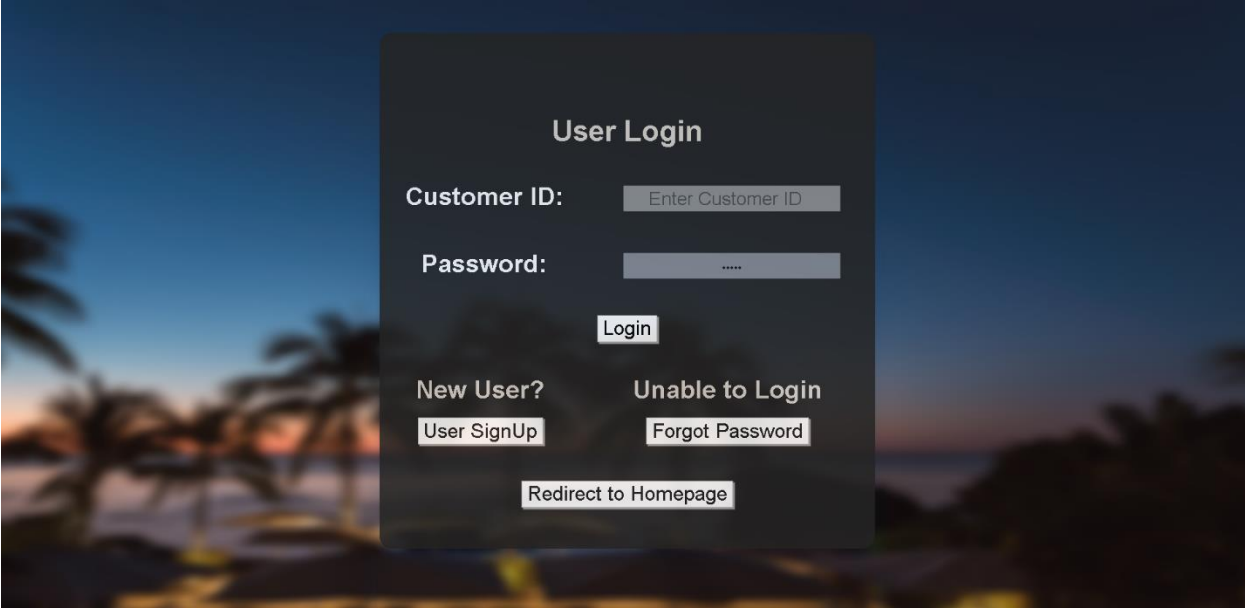
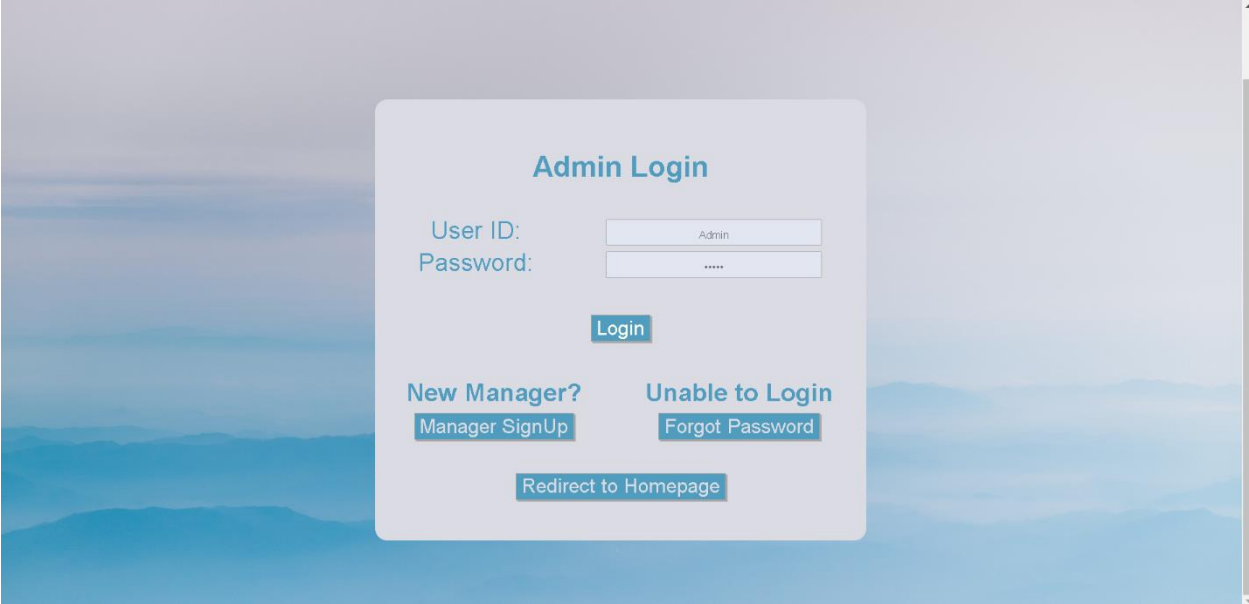


IMAGE GALLERY





HOTEL WALDORF ASTORIA

Rooms Info

Add Room

Remove Rooms

Booking Requests

Confirmed Bookings

Employee Information

Booking History

Payment

Logout

Remove Rooms

Room Type	Available Rooms	Occupied Rooms	Price
Single bed	6	4	1000
Double bed	7	3	1800
Four bed	5	0	3000

Select room type:

Select

Enter number of rooms to remove:

Submit

localhost/Hotel-Management-System-main2/confirmed_bookings.php

HOTEL WALDORF ASTORIA

Rooms Info

Add Room

Remove Rooms

Booking Requests

Confirmed Bookings

Employee Information

Booking History

Payment

Logout

Admin Room Status

Booking ID	Name	Room Type	Check-in Date	Check-out Date	Price
10043	Readuanul	Single bed	2022-08-31	2022-09-10	24200

Enter Booking ID:

Confirm

Cancel Booking

HOTEL WALDORF ASTORIA

- Rooms Info
- Add Room
- Remove Rooms
- Booking Requests
- Confirmed Bookings
- Employee Information
- Booking History
- Payment
- Logout

Confirmed Bookings

Booking ID	Name	Room Type	Check-in Date	Check-out Date	Price
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Modify Stay

Enter Booking ID:

Enter new Check-Out date:

HOTEL WALDORF ASTORIA

- Add Employee
- Search Employee
- Employee List
- Delete Employee
- Admin Dashboard



HOTEL WALDORF ASTORIA

Rooms Info

Add Room

Remove Rooms

Booking Requests

Confirmed Bookings

Employee Information

Booking History

Payment

Logout

Payment

Booking ID	Name	Room Type	Check-in Date	Check-out Date	Price
------------	------	-----------	---------------	----------------	-------

Enter Booking ID:

HOTEL WALDORF ASTORIA

HELLO, Readuamul Fahim

My Info

Book A Room

Show Booking Status

Payment

Booking History

Logout

Room Details

Room Type	Number of beds	Price
Single Bedded	1	1000
Double Bedded	2	1800
Four Bedded	4	3000

Select room type:

Enter check in date:

Enter check-out date:

Features

Service Cost per day

[My Info](#)[Book A Room](#)[Show Booking Status](#)[Booking History](#)[Logout](#)

Room Booking Status

Booking ID	Name	Room Type	Check-in Date	Check-out Date	Room Status	Price
10043	Readuanul	Single bed	2022-08-31	2022-09-10	Waiting	24200

Enter Booking ID:

[Cancel Booking](#)

Manager SignUp

Employee ID:

Manager ID:

First Name:

Last Name:

New Password:

Salary:

E-mail:

Gender:

Date of Birth:

Date of Join:

Phone Number:

[Submit](#)[Redirect to Manager Login](#)

Customer SignUp

First Name:

Last Name:

Create New Password:

Email:

Gender:

Date of Birth:

Customer ID:

Phone No:

Submit

Redirect to Customer Login Page

[Redirect to Customer Login Page](#)

The image is a composite graphic. On the left is a vertical teal sidebar with white text links: "Rooms Info", "Add Room", "Remove Rooms", "Booking Requests", "Confirmed Bookings", "Employee Information", "Booking History", "Payment", and "Logout". The main area has a background image of a scenic mountain lake at sunset or sunrise. Overlaid on this is a white rounded rectangle containing a table titled "Rooms Info".

Room Type	Available Rooms	Occupied Rooms	Price
Single bed	6	4	1000
Double bed	7	3	1800
Four bed	5	0	3000

In the bottom right corner, there is an inset image showing a modern hotel room interior with a large bed, white linens, and bedside lamps.

Room Type	Available Rooms	Occupied Rooms	Price
Single bed	6	4	1000
Double bed	7	3	1800
Four bed	5	0	3000

- My Info
- Book A Room
- Show Booking Status
- Booking History
- Logout

Booking History

Booking ID	Name	Room Type	Check-in Date	Check-out Date	Price
------------	------	-----------	---------------	----------------	-------

Enter Booking ID:

View Details

Conclusion

This project is using database management system to store all kind of information and making the read, write and store operation more efficient. It is also making the project globally servable to any clients for this particular field. This will help managing the hotel more smartly and orderly.

This project can be improved much more if we can conduct the “Forgot Password” operation using email or mobile texting. For example- if a user forgets the password and try to recover the password using the “Forgot Password” operation, he/she will receive and OTP code via email or text. It will provide more security to the users. This web development can be made compact and more polished by adding this system.

Contributions

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