



## CIS 235 PROJECT MILESTONE (1): Project Proposal & ER-Diagram

**Project Group Number:** Group (5)

**Section Number:** Group (5)

**Project Title:** FLOW HOTEL

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**Obtained Marks:** /5



## Project Proposal (1 Mark)

### Description:

Suppose that after the requirements collection and analysis phase, the database designers provide the following description of the miniworld—the part of the hotel management system that will be represented in the database:

- The hotel system is organized into rooms. Each room has a unique RoomID, a view type, a status (available or occupied), a price, and a room type. We keep track of which reservations include each room.
- A guest can make a reservation, which contains details such as the check-in date, check-out date, and room type. A guest can have multiple reservations over time.
- We store each guest's username, password, contact information, first name, and last name. A guest can log in to the system to view available rooms, make, modify, or cancel reservations, access invoices, and request additional services.

- The system tracks loyalty programs, where a guest can earn and redeem points. Each loyalty program has a name and a points balance associated with the guest's stays.
- We manage invoices for each reservation, storing payment status, amount, and the guest's name. An invoice is linked to the reservation and reflects the cost of the stay and any additional services used.
- The hotel offers various services, each with a unique ServiceID, name, and number of hours. A guest can request these services, and the system tracks feedback and ratings for each service provided.
- The system allows guests to submit complaints, which contain details such as the complaint type, date, and description. Each complaint is tracked to ensure follow-up and resolution.

### **Entities:**

- User
- Guest
- Room
- Reservation
- LoyaltyProgram
- Invoice
- Complaint
- Feedback
- Service

### **Systems Users (Actors):**

	User Role	Privileges
1	Guest	<ul style="list-style-type: none"> <li>• Log in using Username &amp; Password.</li> <li>• Make, modify, or cancel reservations.</li> <li>• View room types and prices.</li> <li>• Access and pay invoices.</li> <li>• Request services and provide feedback &amp; ratings.</li> <li>• Submit and track complaints.</li> <li>• Earn and redeem loyalty points.</li> </ul>
2	User (Admin/Staff)	<ul style="list-style-type: none"> <li>• Manage guests and reservations, or remove room details.</li> <li>• Monitor room availability and pricing.</li> <li>• Handle invoices and payments.</li> <li>• Manage loyalty programs.</li> <li>• View and respond to complaints and feedback.</li> <li>• Manage and schedule services.</li> </ul>



## ER-Diagram (4 Marks)

### System Requirements & Relationship Between Entities

#### System Requirements

##### 1. Hardware Requirements:

- Server: Stores and manages data related to guests, rooms, invoices, services, and complaints.
- User Devices: Computers or smartphones to access the system.
- Internet Network: Connects all devices to ensure communication between entities.

##### 2. Software Requirements:

- Database System: Stores data related to guests, reservations, rooms, invoices, services, and feedback.
- Hotel Management System: A platform to manage reservations, invoices, loyalty programs, and services.
- Login System: Allows guests and users to log in using a username and password.



### **3. Functional Requirements:**

- Guest Management: Log in, manage accounts, and earn loyalty points.
- Reservation Management: Book rooms, modify check-in and check-out dates.
- Room Management: Display available rooms, types, and prices.
- Invoice Management: View invoices, payments, and outstanding amounts.
- Service Management: Book services, provide ratings, and submit feedback.
- Complaint Management: Submit and track complaints.

### **4. Non-Functional Requirements:**

- Security: Encrypt data to ensure privacy.
- Performance: Execute operations at high speed.
- Availability: The system should be accessible 24/7 without interruptions.

### **Relationship Between Entities**

#### **1. User - Guest**

- A user manages multiple guests.
- Each guest has a username and password.

## 2. Guest - Reservation

- A guest makes multiple reservations.
- Each reservation includes a check-in date, check-out date, and room type.

## 3. Room - Reservation

- Each reservation includes at least one room.
- Each room has a RoomID, type, price, status, and view.

## 4. Guest - Invoice

- A guest has multiple invoices.
- An invoice contains payment details, amount, and date.

## 5. Guest - Loyalty Program

- A guest earns points in the loyalty program.
- Each loyalty program has a name and points.

## 6. Guest - Complaint

- A guest submits multiple complaints.
- Each complaint includes a name, type, and date.

## 7. Guest - Service

- A guest uses multiple services.
- Each service has a ServiceID, name, and hours.

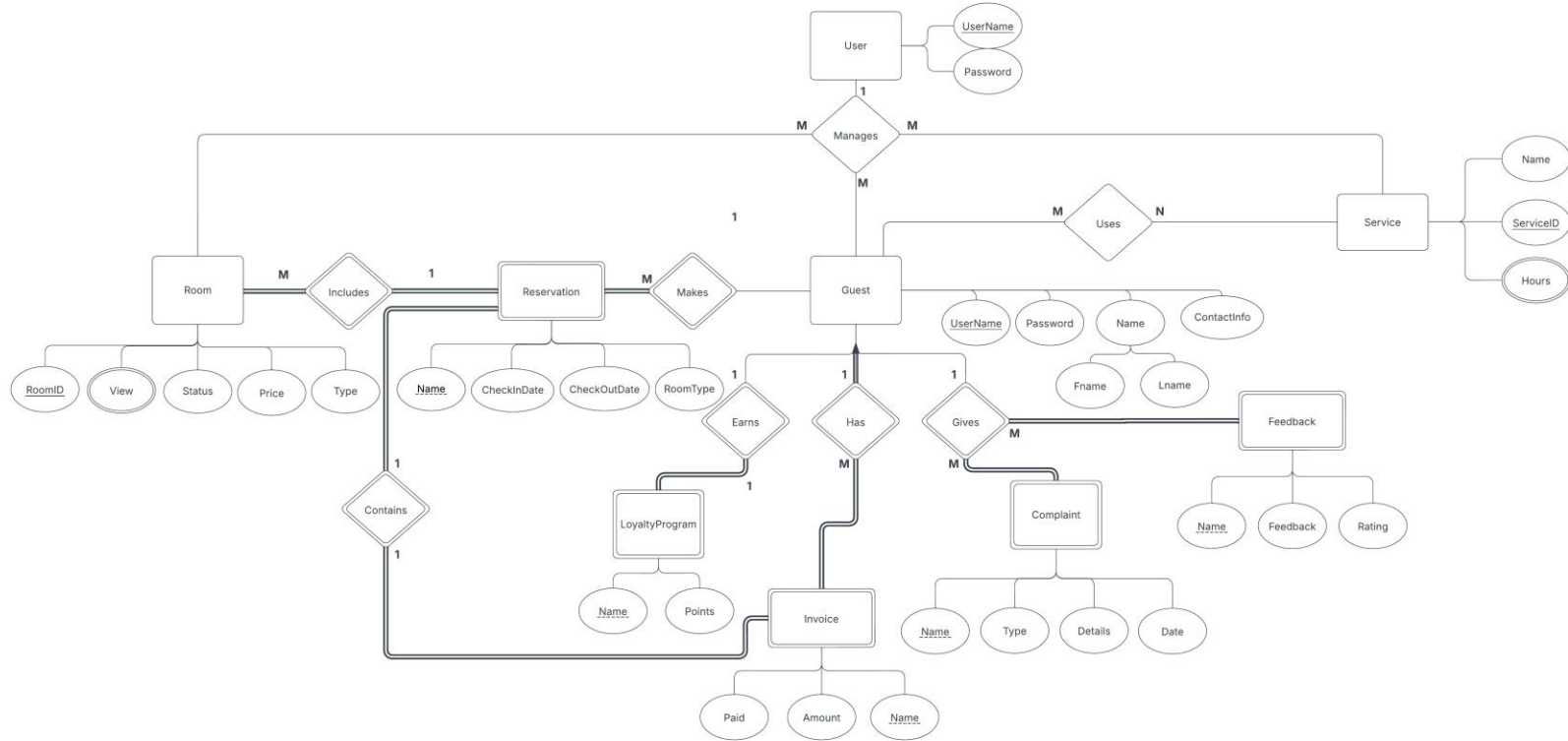
## 8. Guest - Feedback

- A guest gives feedback.
- Each feedback contains a name, rating, and comments.





## ER Diagram:





**Instructor(s) Approval:**  
**Feedback Comments:**

Approved

Not Approved (*needs to be changed*)