Use Case Model for
Hotel Management System

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Objective

To graphically depict a user's interaction with the system.

Theory

Concept

In the Unified Modeling Language (UML), a use case diagram can summarize the details of your system's users (also known as actors) and their interactions with the system. A set of specialized symbols and connectors are used to build these diagrams. A well drawn diagram represents:

- Scenarios in which your system or application interacts with people, organizations, or external systems
- Goals that your system or application helps those entities (known as actors) achieve
- The scope of your system

These diagrams don’t go into much detail and only depict a high level overview of relationships between your system, actors and use cases.

Components

Components of a Use Case Diagram

- **Actors**: The users that interact with a system. It can be a person, an organization, or an outside system that interacts with your application or system. They must be external objects that produce or consume data.
- **System**: A specific sequence of actions and interactions between actors and the system. A system may also be referred to as a scenario.
- **Goals**: The end result of most use cases. A successful diagram should describe the activities and variants used to reach the goal.

Notations

Some common Notations and symbols

- **Use cases**: Horizontally shaped ovals that represent the different uses that a user might have.
- **Actors**: Stick figures that represent the people actually employing the use cases.
- **Associations**: A line between actors and use cases. In complex diagrams, it is important to know which actors are associated with which use cases.
- **System boundary boxes**: A box that sets a system scope to use cases. All use cases outside the box would be considered outside the scope of that system. For example, Psycho Killer is outside the scope of occupations in the chainsaw example found below.
- **Packages**: A UML shape that allows you to put different elements into groups. Just as with component diagrams, these groupings are represented as file folders.

Use case Specification

1. **Login:**
   Actors can use the system after authenticating themselves.
   Path:
   Enter credentials
   Verify credentials
   Allow login else show Error of Invalid credentials

2. **Manage Employees:**
   Manager keeps track of employees, their salaries, feedbacks from customers, etc

3. **View Reports**
   Managers can view reports like financial report, customer information, booking information, and room information.

4. **Verify Customer**
   Once a customer arrives for accommodation, verify its identity using government issued documents and then hand over the room keys.

5. **Address Customers Queries**
   Receptionist handles queries from customers and resolves them with or without the help of other employees. Queries like issues with room and other extra information will be addressed

6. **Book Room**
   After login customer will be able to book a particular type of room. Customer can also see the availability of room before booking it. Once customer has decided a book a room he will be directed to make a payment according to the hotel, room type, food facility and other parameters.
   Ater payment customer will get the payment slip.

7. **Cancel Booking**
   From all the current booking customer will be able to cancel a particular booking under certain conditions based on the number of days between cancellation date and accommodation date. Certain amount will also be deducted to incur the loss of hotel in showing lesser availability of rooms to other customers. Remaining amount will be refunded to the customer.

8. **Update profile**
   After login Customer can update its profile details like name, age, photo.

Figure

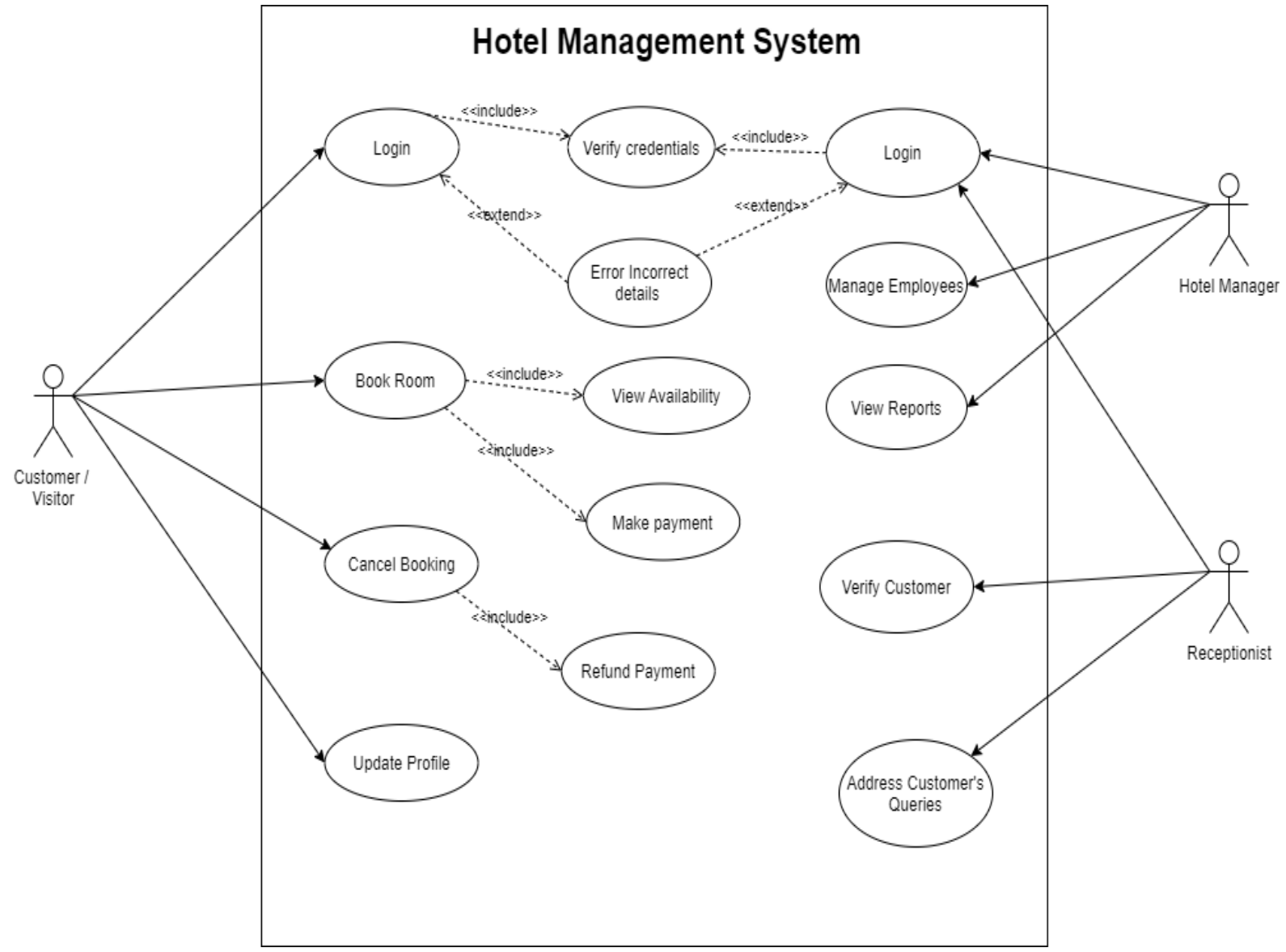

Fig. Use case diagram