Association

Composition

**User**

* user id: int
* username: string
* email: string
* password: string
* role: string
* registerUser(): void
* login(): void
* updateProfile(): void
* viewBookings(): void

**Payment**

* payment id: int
* user id: int
* booking id: int
* payment date: date
* amount: float
* description: string
* processPayment(): void
* generateInvoice(): void
* refundPayment(): void

**Room**

* room id: int
* hotel id: int
* room number: int
* room type: string
* price per night: float
* checkAvailability(): void
* reserveRoom(): void
* releaseRoom(): void

**Booking**

* booking id: int
* user id: int
* hotel id: int
* check in date: date
* check out date: date
* room type: string
* total price: float
* createBooking(): void
* cancelBooking(): void
* viewBookingDeatails(): void

**Hotel**

* hotel id: int
* name: string
* location: string
* rating: int
* description: string
* addHotel(): void
* updateHotelDetails(): void
* getAvailableRooms(): void
* calculateOccupancy(): void

Inheritance

Aggregation