IT314 - Software Engineering

Lab Assignment : Sequence-Diagram , Class-Diagram .

Group no : 9

Group Members :

202201112 - Abhinav
202201131 - Praneel Vania
202201136 - Harsh Shah
202201139 - Krish Sagar
202201155 - Divyarajsinh
202201156 - Aman Mangukiya
202201161 - Shyam Ghetiya
202201170 - Tathya Prajapati
202201183 - Malhar Vaghasiya
202201184 - Utsav Kanani

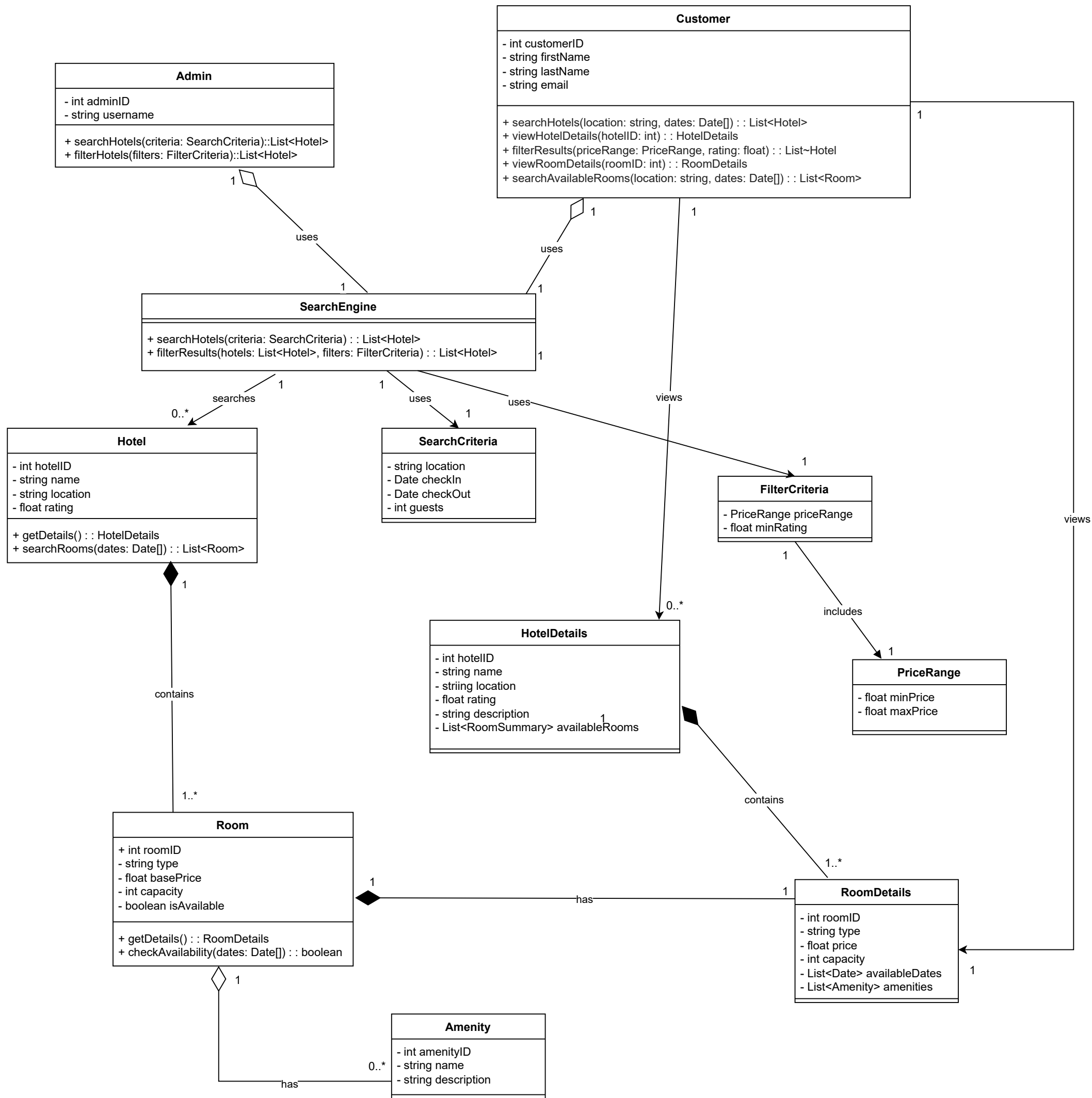# Sprint 2 : Search, Filter and View for Customer

1. Identify Entity/Boundary/Control Objects :

- **Boundary Objects :** Customer, System
- **Entity Objects :** Hotel Database, Room Database
- **Controller Objects :** System (Search Engine)

Class Diagram

Hotel Booking System

Customer
- int customerID
- string firstName
- string lastName
- string email

+ searchHotels(location: string, dates: Date[]) : : List<Hotel>
+ viewHotelDetails(hotelID: int) : : HotelDetails
+ filterResults(priceRange: PriceRange, rating: float) : : List~Hotel>
+ viewRoomDetails(roomID: int) : : RoomDetails
+ searchAvailableRooms(location: string, dates: Date[]) : : List<Room>

Admin
- int adminID
- string username

+ searchHotels(criteria: SearchCriteria)::List<Hotel>
+ filterHotels(filters: FilterCriteria)::List<Hotel>

SearchEngine
+ searchHotels(criteria: SearchCriteria) : : List<Hotel>
+ filterResults(hotels: List<Hotel>, filters: FilterCriteria) : : List<Hotel>

Hotel
- int hotelID
- string name
- string location
- float rating

+ getDetails() : : HotelDetails
+ searchRooms(dates: Date[]) : : List<Room>

SearchCriteria
- string location
- Date checkIn
- Date checkOut
- int guests

FilterCriteria
- PriceRange priceRange
- float minRating

HotelDetails
- int hotelID
- string name
- striing location
- float rating
- string description
- List<RoomSummary> availableRooms

PriceRange
- float minPrice
- float maxPrice

Room
+ int roomID
- string type
- float basePrice
- int capacity
- boolean isAvailable

+ getDetails() : : RoomDetails
+ checkAvailability(dates: Date[]) : : boolean

RoomDetails
- int roomID
- string type
- float price
- int capacity
- List<Date> availableDates
- List<Amenity> amenities

Amenity
- int amenityID
- string name
- string description

uses
uses
views
searches 0..*
uses
uses
views 0..*
includes
contains
contains 1..*
has
has 0..*
1..*

Sequence Diagram (Hotel Booking System)

Customer   System   Hotel Database   Room Database

Search Hotels (Location, Date)

Search Hotels (Location, Date)

List Of Hotels

List Of Hotels

Alt   [Filter Results]

Filter Hotels (Rating, location, pricerange)

Filter Hotels (Rating, location, pricerange)

List Of Hotels

List Of Hotels

View Hotel Details (Hotel Icon)

View HotelDetails (Hotel ID)

Details of the Hotel

Details of the Hotel

Alt   [View Room detail]

View Room Details

View Room Details (Hotel ID)

Return Room Details

Show Room Details

Alt   [Select Room]

View availabe Rooms (Date)

Get availabe Rooms (Date)

Return available Rooms

Show Available Rooms