**Hotel Room Reservation System**

**Client Server Architecture**

REQUEST

RESPONSE

DATABASE

SEARCH

CREATE

VIEW

CANCEL

**Hotel Management System**

**ER Diagram**

A screenshot of a computer

Description automatically generated

**Tables and Queries**

**Customer table:**

CREATE TABLE customer ( customer\_id int AUTO\_INCREMENT PRIMARY KEY,

first\_name varchar(50) NOT NULL,

last\_name varchar(50) NOT NULL,

date\_of\_birth date,

phoneNo varchar(50) ,

email varchar(50));

insert into customer(date\_of\_birth, email, first\_name, last\_name, phone\_no)values

('2001-07-21', 'shiva@gmail.com', 'shiva', 'ranjim', '8688892565'),

('2002-09-23', 'raju@gmail.com', 'raju', 'balguri', '8688892705'),

('2001-08-24', 'nagaraju@gmail.com', 'nagaraju', 'vajja', '8688892517'),

('1998-06-12', 'ramesh@gmail.com', 'ramesh', 'kolupolu', '8683392565'),

('1999-05-23', 'vamshi@gmail.com', 'vamshi', 'vamsitt', '8684392565'),

('2001-07-01', 'srikanth@gmail.com', 'srikanth', 'rangu', '8688892561'),

('2002-09-02', 'rajender@gmail.com', 'rajender', 'rangy', '8688892702'),

('2001-08-03', 'naa@gmail.com', 'naga', 'vojja', '8688892513'),

('1998-06-04', 'rams@gmail.com', 'rams', 'koppu', '8683392564'),

('1999-05-05', 'vashi@gmail.com', 'vashi', 'vait', '8684392545');

**Staff Table:**

CREATE TABLE staff ( staff\_id int AUTO\_INCREMENT PRIMARY KEY,

booking\_id int,

first\_name varchar(50) NOT NULL,

last\_name varchar(50) NOT NULL,

phone\_no varchar(50),

hire\_date date);

INSERT INTO Staff ( first\_name, last\_name,phone\_no, hire\_date) VALUES

( 'Michael', 'Johnson', '+987654321', '2020-01-10'),

( 'Emily', 'Davis', '+123456789', '2019-08-15'),

( 'Christopher', 'Smith', '+1122334455', '2021-05-20'),

( 'Michae', 'Johns', '+984654321', '2020-01-11'),

( 'Emil', 'Dav', '+123456782', '2019-08-16'),

( 'Christ', 'Smit', '+1222334455', '2021-05-22'),

( 'chahal', 'John', '+987652321', '2020-01-20'),

( 'virat', 'kohli', '+133456789', '2019-08-15'),

( 'dhoni', 'ms', '+1132334455', '2021-07-20');

**Hotel Rooms Table**

CREATE TABLE hotel\_rooms ( room\_id int AUTO\_INCREMENT PRIMARY KEY,

room\_type varchar(50),

price\_per\_day int);

insert into hotel\_rooms(price\_per\_day, room\_type)

values('1500', 'AC'),('1500', 'AC'),('1500', 'AC'),('1500', 'AC'),('1500', 'AC'),('1500', 'AC'),('1500', 'AC'),

('1200', 'NON\_AC'),('1200', 'NON\_AC'),('1200', 'NON\_AC'),('1200', 'NON\_AC'),('1200', 'NON\_AC'),('1200', 'NON\_AC'),

('2000', 'DELUX'),('2000', 'DELUX'),('2000', 'DELUX'),('2000', 'DELUX'),('2000', 'DELUX'),('2000', 'DELUX'),('2000', 'DELUX'),('2000','DELUX');

**Reservation Table:**

CREATE TABLE booking\_details (booking\_Id int AUTO\_INCREMENT PRIMARY KEY,

customer\_Id varchar(50),

staff\_Id varchar(50),

checkin\_date date,

checkout\_date date,

no\_of\_rooms int,

total\_price double,

FOREIGN KEY (staff\_Id) REFERENCES staff(staff\_id),

FOREIGN KEY (customer\_Id) REFERENCES customer(customer\_id));

Insert into reservation (customer\_Id , staff\_id, check\_in\_date, check\_out\_date, no\_of\_rooms, total\_price)

Values (‘1’, ‘1’, ‘2025-10-10’, ‘2025-10-12’, ‘2’, ‘4000.0’)

(‘1’, ‘1’, ‘2025-10-13’, ‘2025-10-14’, ‘2’, ‘4000.0’)

(‘2’, ‘2’, ‘2025-10-15’, ‘2025-10-16’, ‘2’, ‘4000.0’)

(‘3’, ‘3’, ‘2025-10-19’, ‘2025-10-20’, ‘2’, ‘4000.0’)

(‘4’, ‘4’, ‘2024-10-10’, ‘2024-10-10’, ‘2’, ‘4000.0’)

(‘5’, ‘5’, ‘2024-10-13’, ‘2024-10-15’, ‘2’, ‘4000.0’)

**Reservation Details Table:**

CREATE TABLE room\_details ( r\_id int AUTO\_INCREMENT PRIMARY KEY ,

booking\_Id int,

room\_Id int,

status varchar(50),

FOREIGN KEY (`room\_Id`) REFERENCES `hotel\_rooms`(`room\_id`),

FOREIGN KEY (`booking\_Id`) REFERENCES `booking\_details`(`booking\_Id`)

);

Insert into reservation\_details (booking\_id, room\_id, status)

Values(‘1’, ‘1’, ‘occupied’)

(‘1’, ‘2’, ‘occupied’)

(‘2’, ‘1’, ‘occupied’)

(‘2’, ‘2’, ‘occupied’)

(‘3’, ‘1’, ‘occupied’)

(‘3’, ‘2’, ‘occupied’)

|  |  |  |
| --- | --- | --- |
|  | **End Points** | **Descreption** |
| **01** | **Room Search** | Customers can search rooms in a hotel for provided date range and room type (optional).  **Acceptance criteria:**  It will return the available rooms for the search criteria as a json structure |
| **02** | **Room Booking** | Customer will book a room with hotel, date, room type choice, customer details with no of room’s information.  **Acceptance criteria**:  It will return the status of the booking either success or failure with reason |
| **03** | **View Reservation** | Customer can view a reservation details by providing reservation number  **Acceptance criteria:**  It will return all the reservation details of that reservation if it is valid or return proper error message |
| **04** | **Cancel Reservation** | Customer can cancel reservation by providing reservation details.  **Acceptance criteria:**  It will cancel the reservation and free the booked room for future booking**.** |

**End Points**

1. **Search API(GET)**

Url : http://localhost:3307/api/search-rooms/available

**Request Payload**  
{  
fromDate:2024-03-20

toDate:2024-03-24  
}

**Response** **Payload**  
{

RoomType: AC  
price: 1500  
totalAvailableRooms:7

}

{  
RoomType: NON\_AC  
price :1200  
totalAvailableRooms:6  
}

{  
RoomType: DELUX  
price:2000  
totalAvailableRooms:8  
}

1. **Reservation API (POST)**

Url : http://localhost:3307/reservations/api/reserve-rooms

**Request Payload**

CheckInDate : 2025-02-20

checkOutDate : : 2025-02-25

noOfAcRooms : 2

noOfAcRooms : 2

noOfDeluxRooms : 2

}

**Response Payload**

**{**

Room Reserved Successfully with booking id 1

Status:200

**}**

1. **View API (GET)**

Url : http://localhost:3307/view-api/view-reservation

**Request payload**

**{**

bookingId :1 **}**

**Response Payload**

**{**

checkInDate : 2025-02-20

checkOutDate : : 2025-02-25

noOfRooms : 6

acRooms : 2

nonAcRooms : 2

deluxRooms :2

totalprice : 8400.0

**}**

1. **Cancel API (PUT)**

Url : http://localhost:3307/api/cancel-reservation/cancel-rooms

**Request payload**

/Cancel-Room/

{

bookingId=1;

acRooms: 2

nonAcRooms: 2

deluxRooms : 2

}

**Response Payload**

{

Room Cancelled Successfully

Status:200

}

RESPONSE