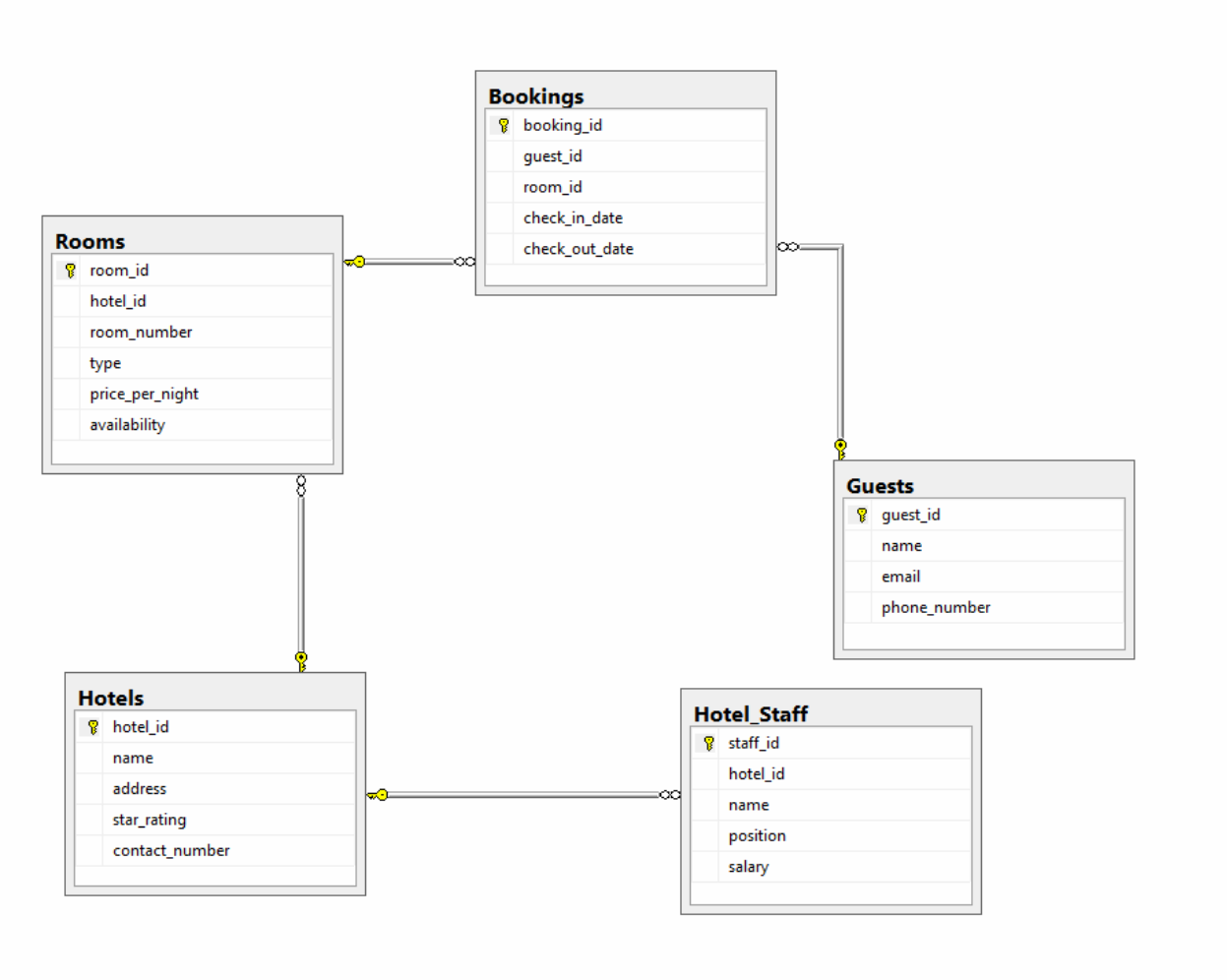
Lab Evaluation 2

Note: The use of any AI tool will result in F grade.

Hotel Management System

Suppose you are tasked with designing a database for a hotel management system. Design tables to store information about hotels, rooms, guests, bookings, and hotel staff. The database organizes hotel activities by connecting key parts like Hotels, Rooms, Guests, Bookings, and Hotel Staff. Each hotel has its own ID, and Rooms are linked to specific hotels using this ID. Bookings connect Guests to specific Rooms for their stay. Hotel Staff members are associated with Hotels using their own unique IDs, helping to manage various hotel tasks smoothly. This setup ties together different aspects of hotel management and guest services. Here's a proposed schema along with SQL queries to fulfill the given tasks:

Database Schema:



The database with the following data:

Results Messages

	hotel_id	name	address	star_rating	contact_number
1	1	Hotel A	123 Main Street, City A	4	123-456-7890
2	2	Hotel B	456 Elm Street, City B	3	456-789-0123
3	3	Hotel C	789 Oak Street, City C	5	789-012-3456
4	4	Hotel D	101 Pine Street, City D	2	101-112-1314
5	5	Hotel E	202 Maple Street, City E	4	202-213-2435

	staff_id	hotel_id	name	position	salary
1	1	1	Michael Johnson	Manager	5000.00
2	2	2	Emily Wilson	Receptionist	3000.00
3	3	3	David Lee	Chef	4000.00
4	4	4	Sarah Brown	Housekeeper	3500.00
5	5	5	Robert Smith	Maintenance	3200.00

	room_id	hotel_id	room_number	type	price_per_night	availability
1	101	1	101	Standard	100.00	1
2	102	1	102	Deluxe	150.00	1
3	103	2	103	Suite	200.00	0
4	104	3	104	Standard	120.00	1
5	105	4	105	Economy	80.00	1

	guest_id	name	email	phone_number
1	1	John Doe	john@example.com	123-456-7890
2	2	Jane Smith	jane@example.com	456-789-0123
3	3	Alice Joh...	alice@example.c...	789-012-3456
4	4	Bob Brown	bob@example.com	101-112-1314
5	5	Emma D...	emma@example....	202-213-2435

	booking_id	guest_id	room_id	check_in_date	check_out_date
1	1	1	101	2024-02-01	2024-02-05
2	2	2	102	2024-02-10	2024-02-15
3	3	3	103	2024-03-01	2024-03-05
4	4	4	104	2024-03-10	2024-03-15
5	5	5	105	2024-03-20	2024-03-25

Perform the following tasks:

1. Retrieve the names of all hotels.

2. List the addresses of all hotels.

3. Retrieve the names of all guests who checked in after a specific date, say 25th March of 2024.

4. Retrieve the room numbers and types of all available rooms in a hotel where hotel_id is 4.

5. Write a SQL query to retrieve the names of all hotel staff members working in hotel B.

6. Write an SQL statement to delete all records from the Bookings table where the check-out date is before 2024-02-25.

7. Write an SQL query to retrieve the names of all guests who booked room 102 in hotel A.

8. Retrieve the names of all hotels along with the bookings they have.

9. Write a SQL query to find the minimum and maximum number of bookings made for any hotel.

Data Entries:

Hotel:
(1, 'Hotel A', '123 Main Street, City A', 4, '123-456-7890'),
(2, 'Hotel B', '456 Elm Street, City B', 3, '456-789-0123'),
(3, 'Hotel C', '789 Oak Street, City C', 5, '789-012-3456'),
(4, 'Hotel D', '101 Pine Street, City D', 2, '101-112-1314'),
(5, 'Hotel E', '202 Maple Street, City E', 4, '202-213-2435');
Rooms:
(101, 1, '101', 'Standard', 100.00, 1),
(102, 1, '102', 'Deluxe', 150.00, 1),
(103, 2, '103', 'Suite', 200.00, 0),
(104, 3, '104', 'Standard', 120.00, 1),
(105, 4, '105', 'Economy', 80.00, 1);
Guests:
(1, 'John Doe', 'john@example.com', '123-456-7890'),
(2, 'Jane Smith', 'jane@example.com', '456-789-0123'),
(3, 'Alice Johnson', 'alice@example.com', '789-012-3456'),
(4, 'Bob Brown', 'bob@example.com', '101-112-1314'),
(5, 'Emma Davis', 'emma@example.com', '202-213-2435');

Bookings:
(1, 1, 101, '2024-02-01', '2024-02-05'),
(2, 2, 102, '2024-02-10', '2024-02-15'),
(3, 3, 103, '2024-03-01', '2024-03-05'),
(4, 4, 104, '2024-03-10', '2024-03-15'),
(5, 5, 105, '2024-03-20', '2024-03-25');

Hotel_Staff:
(1, 1, 'Michael Johnson', 'Manager', 5000.00),
(2, 2, 'Emily Wilson', 'Receptionist', 3000.00),
(3, 3, 'David Lee', 'Chef', 4000.00),
(4, 4, 'Sarah Brown', 'Housekeeper', 3500.00),
(5, 5, 'Robert Smith', 'Maintenance', 3200.00);