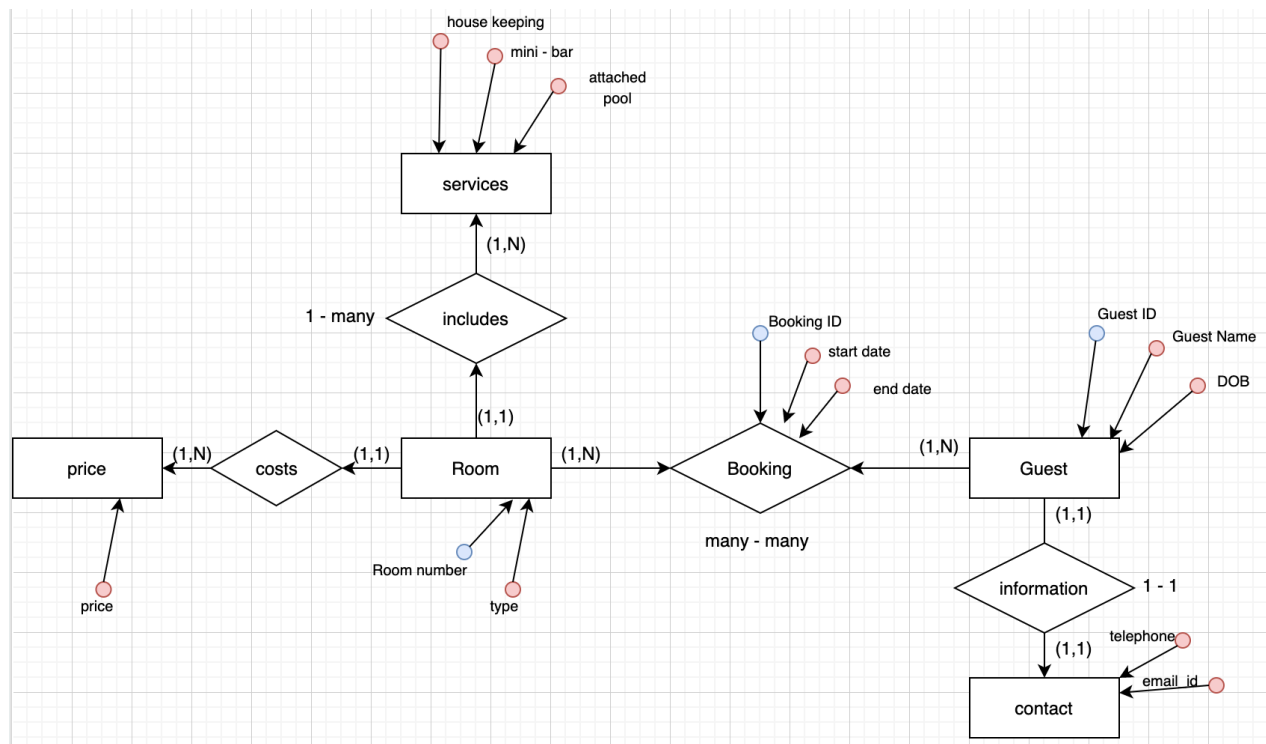


Assignment 2

Student number - 19204052

I decided to make an ER database for a hotel to manage its room reservations and store the types of rooms.

Task 1)



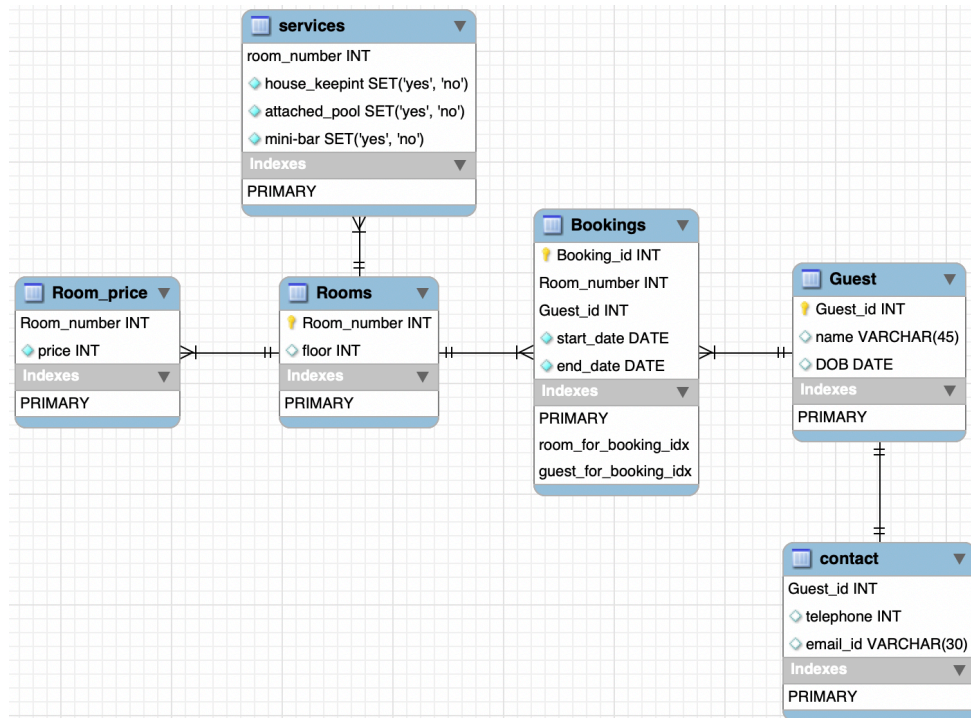
Task 2)

Assumption and constraints

- Guest table has a one to one relationship with contact table as each guest will have his/her unique contact.
- Rooms table has a many to many relationship with the guest table. This relation shows the booking made by guests. The relation is many-to-many because a same room can be booked for 2 or more people and one person can book 2 or more rooms. I included the guest check in and check out date in the relation table to keep a track of the time from when to when a room is booked.
- Room table has a one-to-many relationship with the services table. Services table includes the services that the guest can enjoy when they book a room. The relation is one-to-many because one room can have only one set of services attached to it however 2 or more rooms can provide the same services.

- Room table has a one-to-many relationship with the price table. Price table (as the name suggests) holds the prices of each room. The relation is one to many because one room can only have one price however 2 or more rooms can have the same price.

Task 3)



**In the above flowchart the golden mark indicate the primary key of that table

Guest - Contact

for this (one-to-one) relation I made a foreign key of Guest_id in the contact table.

Rooms - Guest

for this (many-to-many) relation I made a separate table called bookings and in it, I added both the Guest_id and the Room number (Rooms primary key) as foreign keys. I also made a Booking_id as a primary key for this table.

Rooms - Services

for this (one-to-many) relation I added the Room_number as a foreign key inside the Services table.

Rooms - Price

for this (one-to-many) relation I added the Room_number as a foreign key inside the price table.

Task 4)

The 2 most common issued queries can be :-

- what are the contact details of the guest who booked the room (input = room number)
- What is the price a guest has to pay for his/her room.

Task 5)

what are the contact details of the guest who booked the room (input = room number)

```
CREATE DEFINER='root'@'localhost' PROCEDURE `contact_info`(IN room_no INT)
BEGIN
```

```
    SELECT room_no ,g.name, c.telephone
    from Bookings as b, Guest as g, contact as c
    where b.Guest_id = g.Guest_id and g.Guest_id = c.Guest_id and b.room_number =
room_no ;
```

```
END
```

What is the price a guest has to pay for his/her room.

```
CREATE DEFINER='root'@'localhost' PROCEDURE `guest_payment`(IN guest_id INT)
BEGIN
```

```
    SELECT guest_id, g.name, b.room_number, p.price
    from Bookings as b, Guest as g, Room_price as p
    where b.Guest_id = guest_id and b.Guest_id = g.Guest_id and b.room_number =
p.room_number;
```

```
END
```