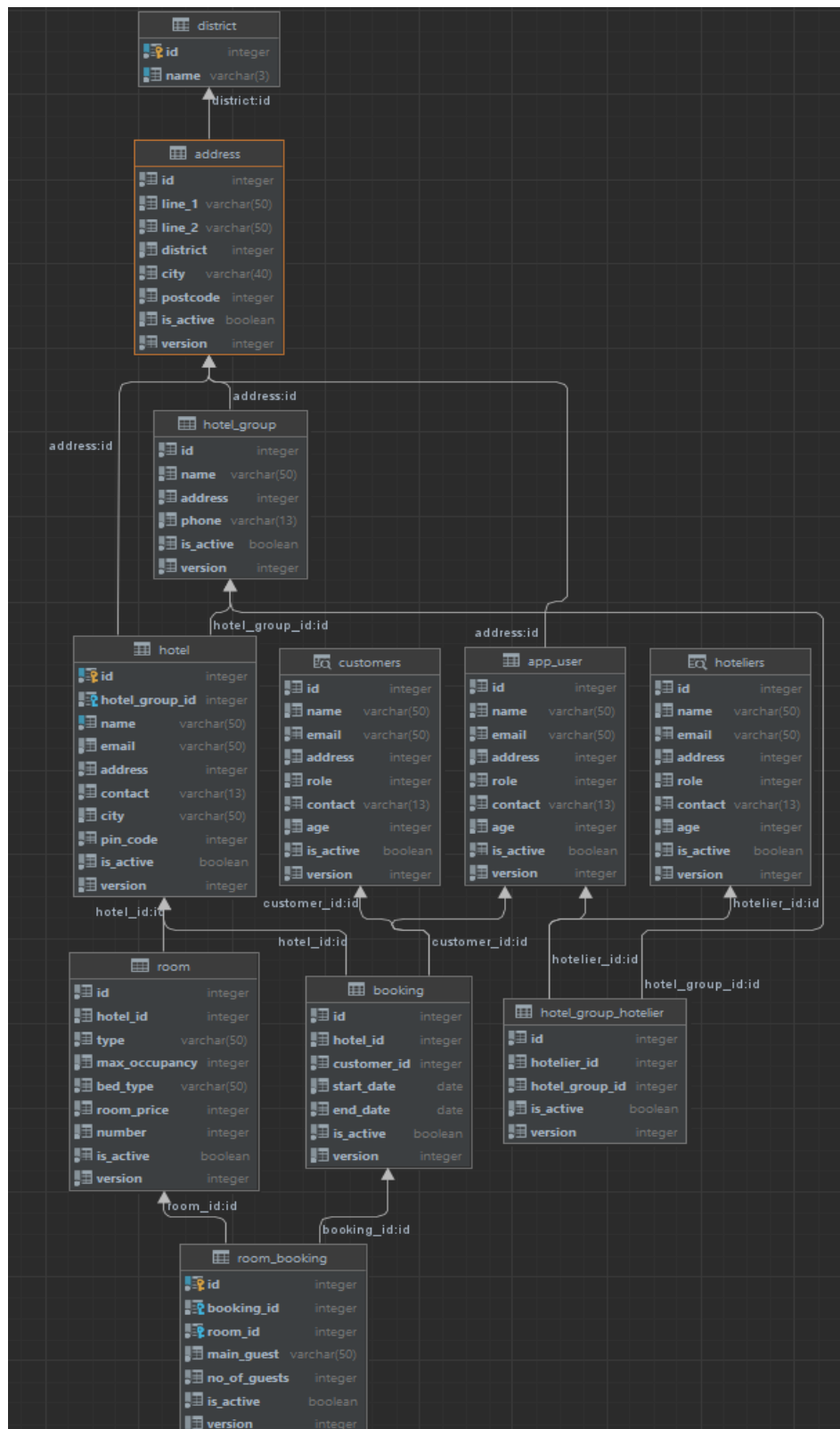ER Diagram

1) ADDRESS

No	Key	Column Name	Data Type	Not Null	Description
1	PK	id	Integer (Auto Increment)	Yes	An auto increment id to uniquely identify each row in the database.
2		line_1	Varchar (50)	Yes	Field to store the first address line.
3		line_2	Varchar (50)		Field to store the second address line.
4	FK	district	Integer	Yes	Field to store a foreign key mapping with the district table.
5		city	Varchar (40)	Yes	Field to store the city of the address
6		postcode	Integer	Yes	Field to store the postcode of the address
7		is_active	Boolean	Yes	Field to indicate whether the row has been deleted or not. True by default indicating a not deleted state.
8		version	Integer	Yes	Field to control the version of the table for an optimistic lock

Links From

Table	Join	Description
District	ADDRESS.district=DISTRICT.id	Create a mapping between the district and the address tables.

2) ROOM_BOOKING

No	Key	Column Name	Data Type	Not Null	Description
1	PK	id	Integer	Yes	An auto increment id to uniquely identify each row in the database.
2	FK	booking_id	Integer	Yes	Field to store the booking id which the row is related to.
3	FK	room_id	Integer	Yes	Field to store the room id which the row is related to.
4		main_guest	Varchar(50)	Yes	Field to store name of main guest of room booking entry.
5		no_of_guests	Integer	Yes	Field to store the value of number of guests in room booking entry.
6		is_active	Boolean	Yes	Field to store status of room booking being active or cancelled.
7		version	Integer	Yes	Field to control the version of the table for an optimistic lock

Links From

Table	Join	Description
BOOKING	BOOKING.ID = ROOM_BOOKING.booking_id	Direct mapping of each room booking to associated parent booking.
ROOM	ROOM.ID = ROOM_BOOKING.room_id	Direct mapping of each room booking to associated room being booked.

Constraints

Name	Description
room_valid	Check if room belongs to same hotel as associated hotel.
room_available	Check if room booking being made for dates from parent booking has no date overlap clashes with existing room bookings for same room id.

3) BOOKING

No	Key	Column Name	Data Type	Not Null	Description
1	PK	id	Integer	Yes	An auto increment id to uniquely identify each row in the database.
2	FK	hotel_id	Integer	Yes	Field to store the hotel id which the row is associated to.
3	FK	customer_id	Integer	Yes	Field to store the booking id which the row is associated to.
4		start_date	Date	Yes	Field to store date of booking start.
5		end_date	Date	Yes	Field to store date of booking end.
6		is_active	Boolean	Yes	Field to store status of booking being active or cancelled.
7		version	Integer	Yes	Field to control the version of the table for an optimistic lock

Links From

Table	Join	Description
HOTEL	HOTEL.ID = BOOKING.hotel_id	Direct mapping of each booking to associated hotel.
APP_USER	APP_USER.ID = BOOKING.customer_id	Direct mapping of each booking to associated customer who made the booking.

4) ROOM

No	Key	Column Name	Data Type	Not Null	Description
1	PK	id	Integer	Yes	An auto increment id to uniquely identify each row in the database.
2	FK	hotel_id	Integer	Yes	Field to store the hotel id which the row is associated to.
3		type	Varchar(50)	Yes	Field to store type of room.
4		max_occupancy	Integer	Yes	Field to store maximum number of guests per room on any given night.
5		bed_type	Varchar(50)	Yes	Field to store bed type of room.
6		room_price	Integer	Yes	Field to store price per night of room.
7		number	Integer	Yes	Field to store room number of room within the hotel
8		is_active	Boolean	Yes	Field to store status of room being active or inactive.
9		version	Integer	Yes	Field to control the version of the table for an optimistic lock

Links From

Table	Join	Description
HOTEL	HOTEL.ID = ROOM.hotel_id	Direct mapping of each room to associated hotel.

5) HOTEL

No	Key	Column Name	Data Type	Not Null	Description
1	PK	id	Integer	Yes	An auto increment id to uniquely identify each row in the database.
2	FK	hotel_grou_id	Integer	Yes	Field to store the hotel group id which the row is associated to.
3		name	Varchar(50)	Yes	Field to store hotel's name.
4		email	Varchar(50)	Yes	Field to store hotel's address.
5	FK	address	Integer	Yes	Field to store the address id which the row is associated to.
6		contact	Varchar(13)	Yes	Field to hotel's phone number.
7		city	Varchar(50)	Yes	Field to location of hotel.
8		pincode	Integer	Yes	Field to store pincode of hotel.
9		is_active	Boolean	Yes	Field to store status of hotel being active or inactive.
10		version	Integer	Yes	Field to control the version of the table for an optimistic lock

Links From

Table	Join	Description
HOTEL_GROUP	HOTEL_GROUP.ID = HOTEL.hotel_group_id	Direct mapping of each hotel to associated hotel group.
ADDRESS	ADDRESS.ID = HOTEL.address	Direct mapping of each hotel to associated address.

6) APP_USER

No	Key	Column Name	Data Type	Not Null	Description
1	PK	id	Integer	Yes	An auto increment id to uniquely identify each row in the database.
2		name	Varchar(50)		Field to store the name of the user
3		email	Varchar(50)	Yes	Field to store a unique email of the user
4	FK	address	Integer		Field to store the corresponding address id as present in the address table
5		role	Integer	Yes	Field to store the role of a user
6		contact	Varchar(50)		Field to store the contact number of the user
7		age	Integer		Field to store the age of the user
8		Is_active	Boolean	Yes	Field to store status of user being active or cancelled
9		version	Integer	Yes	Field to control the version of the table for an optimistic lock

Links From

Table	Join	Description
ADDRESS	ADDRESS.id = APP_USER.address	Mapping to associate an address with a user

Unique Keys

Column	Reason/Description
email	Requires every user entry to have a unique email.

Constraints

Name	Description
email	REGEX check to ensure that the format of the email is correctly entered.

7) HOTEL_GROUP

No	Key	Column Name	Data Type	Not Null	Description
1	PK	id	Integer	Yes	An auto increment id to uniquely identify each row in the database.
2		name	Varchar(50)	Yes	Field to store the name of the hotel group
3	FK	address	Integer	Yes	Field to store the corresponding address id as present in the address table
4		phone	Varchar(13)		Field to store the contact number of the user
5		is_active	Boolean	Yes	Field to store status of hotel group being active or cancelled
6		version	Integer	Yes	Field to control the version of the table for an optimistic lock

Links From

Table	Join	Description
ADDRESS	ADDRESS.id = HOTEL_GROUP.address	Mapping to associate an address with a hotel group.

Unique Keys

Column	Reason/Description
name	Each hotel group must have a uniquely identifiable name

8) HOTEL_GROUP_HOTELIER

No	Key	Column Name	Data Type	Not Null	Description
1	PK	id	Integer	Yes	An auto increment id to uniquely identify each row in the database.
2	FK	hotelier_id	Varchar(50)	Yes	Field to store the corresponding hotelier's id as present in the app_user table
3	FK	Hotel_group_id	Integer	Yes	Field to store the corresponding hotel group's id as present in the hotel_group table
4		is_active	Boolean	Yes	Field to store status of hotel group being active or cancelled
5		version	Integer	Yes	Field to control the version of the table for an optimistic lock

Links From

Table	Join	Description
APP_USER	APP_USER.id = HOTEL_GROUP_HOTELIER.hotelier_id	Mapping to associate a hotelier with a hotel group.
HOTEL_GROUP	HOTEL_GROUP.id = HOTEL_GROUP_HOTELIER.hotel_group_id	Mapping to associate a hotel group with a hotelier

9) DISTRICT

No	Key	Column Name	Data Type	Not Null	Description
1	PK	id	Integer	Yes	An auto increment id to uniquely identify each row in the database.
2		name	Varchar(3)	Yes	Field to store a three digit district code.