CPCS241-Database I-Spring2022-Project

Travelcations

DB Design

Group No: 5

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PART I: Analysis

1 Problem Definition and Data Requirements

1.1 Problem Description

Travelcations is an online travel agency where customers can sign up, add their details, and book a variety of different travel related services, like hotels, restaurants, touristic places, and transportation services. Customers can also rent cars immediately through the agency. The agency also offers some packages. Additionally, the agency's website also includes reviews from previous customers for the different services offered by the agency.

The aim of our project is to build a database which provides the facilities for booking different travel related services for customers. The database will eliminate inconveniences caused by having to book these services manually. It will help customers to go through the available services and book a suitable flight, restaurant, hotel, and other services.

Therefore, the database will improve efficiency of the reservation process by automating the operations and enquiries. Also, it will help the employees to manage the customers bookings easily and it will keep the customers data safe.

1.2 Data Requirements

Customer

- **customerID: the national ID of the customer, unique for every customer.**
- **name (composite attribute): the name of the customer.**
- **phone_number: the phone number of the customer.**
- **Email: the email of the customer.**
- **passport_expiry_date: the expiry date of the customer's passport.**
- **driver's license expiry date:**
- **DOB: the date of birth of the customer.**
- **age (derived attribute): the age of the customer.**

Employee

- **employee ID: a unique ID for every employee.**
- **name (composite attribute): the name of the employee.**
- **phone number: the phone number of the employee.**
- **email: the email of the employee.**
- **address (composite attribute): the address of the employee.**
- **IBAN: bank information of the employee.**
- **salary: the salary of the employee.**

Booking

- **bookingID: a unique ID for every booking.**

- **total_price: total price of the booking.**

Hotel

- **hotel ID: a unique ID for every hotel.**
- **name: the name of the hotel.**
- **location: the address of the hotel.**
- **rating: the rating of the hotel.**
- **avg_price: the average price of the hotel per night.**

Flight_ticket

- **ticket_number: each flight ticket has a unique ticket number.**
- **class_type: the name of the flight class type.**
- **seat_no: the seat number of the passenger.**
- **departure_airport: the name of the departure airport.**
- **arrival_airport: the name of the arrival airport.**
- **price: the price of the flight**
- **airline_name: name of the airline of the flight.**

Rental_car

- **rental_car ID: each rental car has a unique ID.**
- **type: the specific type of the rental car.**
- **model: the model of the rental car.**
- **price_per_day: the price per day of the rental car.**
- **company_name: the company name of the rental car.**

Restaurant

- **restaurant ID: each restaurant has a unique ID**
- **name: the name of the restaurant.**
- **location (composite): the address of the restaurant.**
- **cuisine_type: the type of cuisine of the restaurant.**
- **price_rating: the price rating of the restaurant.**

Tour

- **tour ID: each tour has a unique ID.**
- **location: the location of the tour.**
- **date: the date of the tour.**
- **start_time: the specific time that the tour starts at.**
- **end_time: the specific time that the tour ends at.**
- **type: the type of the tour.**
- **price_per_person: the price of the tour for each person.**

Review

- **review ID: each review has a unique ID.**
- **content: a text that contains the customer's review of the agent services.**
- **date: the date of writing the review.**

Package

- **package ID: each package has a unique ID.**
- **name: the name of the package.**
- **contents: the details of the package.**
- **total_cost: total cost of all the services in this package.**

1.2 Business Rules

Customer

- **The database system maintains customers' information by auto-generating a unique (customerID) for every customer.**
- **A customer can MAKE a booking of an entire package and/or of separate services.**
- **A customer can WRITE reviews about the agency.**

Employee

- **The database system maintains employees' information by auto-generating a unique (employeeID) for every employee.**
- **Each employee has one supervisor, and a supervisor can supervise many employees.**
- **An employee MANAGES many bookings.**

Booking

- **The database system manages bookings' information by auto-generating a unique booking_id for every booking.**

Hotel

- **The database system manages hotels' information by auto-generating a unique hotel_id for every hotel.**
- **Hotels relate to their bookings in a HAS_HOTEL relationship.**

Flight_ticket

- **The database system manages flight tickets by generating a unique ticket number for every flight ticket.**
- **Flight tickets relate to their bookings in a HAS_FLIGHT relationship.**

Rental_car

- **The database system manages rental cars by auto-generating a unique id (car id) for every car.**
- **Rental car relates to its booking in a HAS_CAR relationship.**

Restaurant

- **The database system manages restaurants by auto-generating a unique id (restaurant id) for every restaurant.**
- **Restaurants relate to their bookings in a HAS_RESTAURANT relationship.**

Tour

- **The database system manages tours by auto-generating a unique id (tour id) for every tour.**
- **Tours relate to their bookings in a HAS_TOUR relationship.**

Review

- **The database system manages reviews by auto-generating a unique id (review id) for every review.**

Package

- **The database system manages packages by auto-generating a unique id (package id) for every package.**
- **Packages relate to their bookings in a HAS_PACKAGE relationship**

1.4 Intended Output of the system

Booking invoice that contains the following (design a picture for the invoice):

1. **Customer name**
2. **Employee name**
3. **Departure flight price**
4. **Return flight price**
5. **Hotel price**
6. **Rental Car price**
7. **Tours price**
8. **Issue date**
9. **Package**
10. **Total price**

Queries:

- **Search for a service according to:**
- **Type of service**
- **Country/City**
- **Price range**
- **Display the customer ID and name for customers who requested the same given services.**
- **Print all bookings made by a certain customer.**
- **Show the names of all the hotels which have average price less than another hotel.**
- **Show the service which has the most bookings.**

Reports:

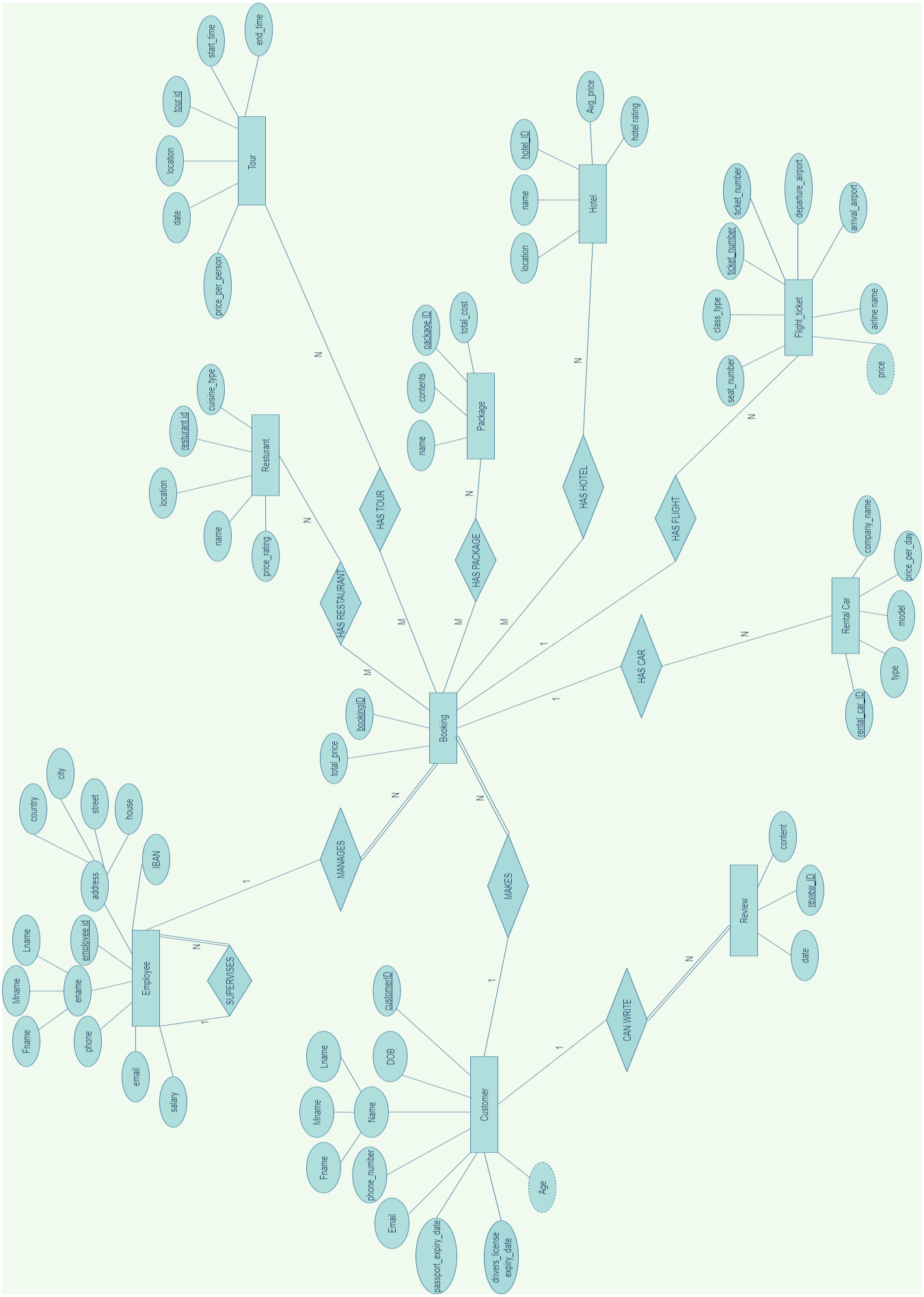
- **List of all customers' information and their bookings.**
- **Number of bookings for each employee.**
- **Lists of the available hotels, restaurants, and tours.**
- **List of the available packages.**
- **Number of bookings for each package.**
- **List of the most required packages.**

PART II: DB DEISGN

2 ER Diagram Design

2.1 ER diagram

ER diagram is on the next page.


Tour
start_time
end_time
tour id
location
date
price_per_person
Hotel
Avg_price
hotel rating
hotel_ID
name
location
Flight_ticket
ticket_number
departure_airport
arrival_airport
ticket_number
class_type
airline name
seat_number
price
Package
total_cost
package ID
contents
name
Resturant
cuisine_type
resturant id
location
name
price_rating
Rental Car
company_name
price_per_day
model
type
rental_car_ID
Booking
bookingID
total_price
HAS TOUR
HAS HOTEL
HAS PACKAGE
HAS FLIGHT
HAS RESTAURANT
HAS CAR
MANAGES
MAKES
SUPERVISES
CAN WRITE
Employee
Lname
Mname
Fname
ename
employee id
address
city
country
street
house
IBAN
phone
email
salary
Customer
customerID
DOB
Name
Lname
Mname
Fname
phone_number
Email
passport_expiry_date
drivers_license expiry_date
Age
Review
content
review_ID
date
N
M
1

2.2 Design of Business Rules

Business Rule	Design Decisions	Justification (if any)
Customers can MAKE a booking of an entire package and/or of separate services.	**1:N partial-total binary relationship MAKE between CUSTOMER and BOOKING**	**One to many because a customer can make many bookings, but one booking can only be done by one customer.** **Partial from the customer's side because they don't necessarily have to have a booking at all times, but total from the booking side because every booking has to be done by a customer.**
Customers can WRITE reviews about the agency.	**1:N partial-total binary relationship WRITE between CUSTOMER and REVIEW**	**One to many because a customer can write many reviews but each review has to be written by one customer.** **Partial from the customer's side because they don't necessarily have to write a review, but total from the review side because every review has to be done by a customer.**
Each employee has one supervisor, and a supervisor can supervise many employees.	**1:N partial-total unary relationship SUPERVISES in EMPLOYEE.**	**One to many because a supervisor can supervise many employees, but each employee is only supervised by one supervisor.** **Total from the supervisee's side because every employee has to have a supervisor, but partial from the supervisor's side because not all employees are supervisors.**
Employees MANAGE bookings.	**1:N partial-total binary relationship MANAGES between employees and bookings.**	**One to many because an employee can manage multiple bookings at a time, but each booking is only managed by one supervisor.** **Partial from the employees' side because the number of bookings might be less than the number of employees at a given instance, so some employees will have no bookings to manage at that time. Moreover, it's total from the**

		bookings side because every booking has to be managed by an employee.
Hotels relate to their bookings in a HAS_HOTEL relationship.	**M:N partial-partial binary relationship between BOOKING and HOTEL.**	**Many to many because a booking can have multiple hotels, and a hotel can be booked several times by different bookings.** **Partial from the booking side because of the package entity. If a customer only books a package that has everything and decides not to book other services then a booking does not have to have a hotel value. And partial from the hotel side because the hotels exist in the database but they might not have been used by a booking yet.**
Flight tickets relate to their bookings in a HAS_FLIGHT relationship.	**1:N partial-total binary relationship between BOOKING and FLIGHT TICKET.**	**One to many because a booking can have multiple flight tickets, but each flight ticket can only be taken by one booking.** **Partial from the booking side because of the package entity. If a customer only books a package that has everything and decides not to book other services then a booking does not have to have a flight ticket value.**
Rental car relates to its booking in a HAS_CAR relationship.	**1:N partial-partial binary relationship between BOOKING and RENTAL CAR.**	**One to many because a booking can have multiple car rentals, but each car rental can only be taken by one booking.**
Restaurants relate to their bookings in a HAS_RESTAURANT relationship.	**M:N partial-partial binary relationship between BOOKING and RESTAURANT.**	**Many to many because a booking can have multiple restaurants, and a restaurant can be booked several times by different bookings.** **Partial to partial: same justification as hotel.**
Tours relate to their bookings in a HAS_TOUR relationship.	**M:N partial-partial binary relationship between BOOKING and TOUR.**	**Many to many because a booking can have multiple tours, and a tour can be booked several times by different bookings.** **Partial to partial: same justification as hotel.**

Packages relate to their bookings in a HAS_PACKAGE relationship.	**M:N partial-partial binary relationship between BOOKING and PACKAGE.**	**Many to many because a booking can have multiple packages, and a package can be booked several times by different bookings.** **Partial to partial: same justification as hotel.**

3 ER-to-logical schema mapping

3.1 Mapping of Regular Entity Types

The result are the following relations:

Customer

Customer_ID	Fname	Mname	Lname	DOB	phone_number	email	passport_exp	license_exp

Employee

employee_ID	Fname	Mname	Lname	phone_number	email	house	street	city	country	IBAN	salary

Booking

booking_ID	total_price

Rental_Car

rental_Car_ID	type	model	price_per_day	company_name

Hotel

hotel_ID	name	location	avg_price	rationg

Flight_ticket

ticket_number	class_type	seat_no	departure_airport	arrival_airport	price	airline_name

Tour

tour_ID	location	date	start_time	end_time	type	price_per_person

Review

review_ID	content	date	customer_ID

Restaurant

restaurant_ID	name	location	cuisine_type	price_rating

Package

package_ID	name	contents	total_cost

3.2 Mapping of Weak Entity Types

None

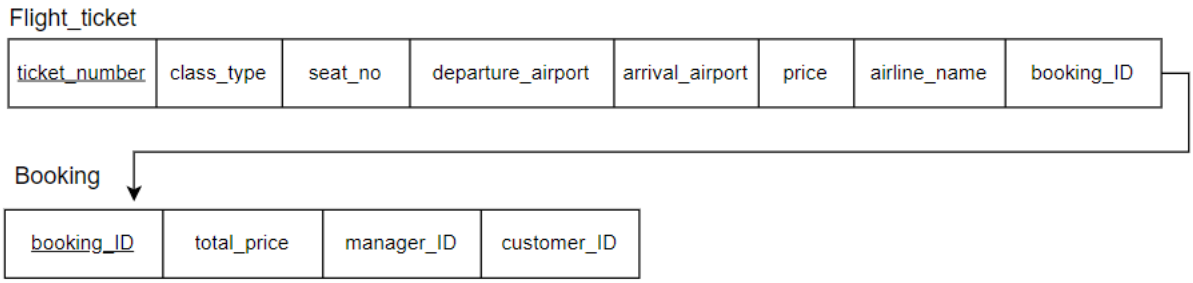
3.3 Mapping of binary 1-1 relationship types

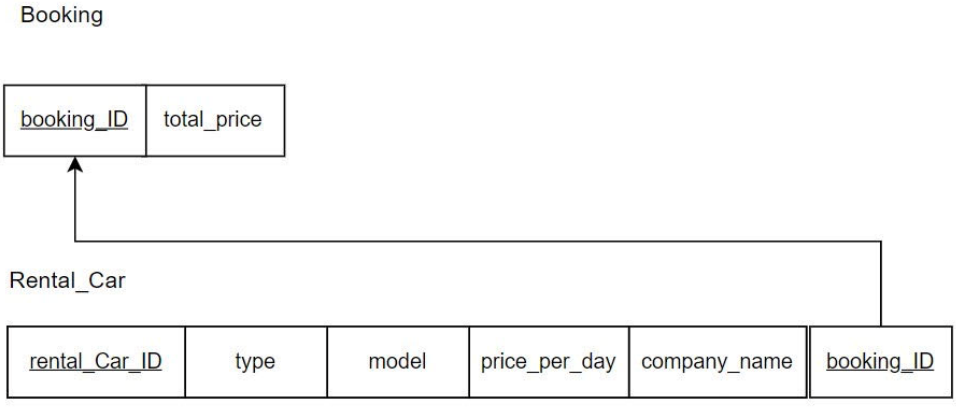
None

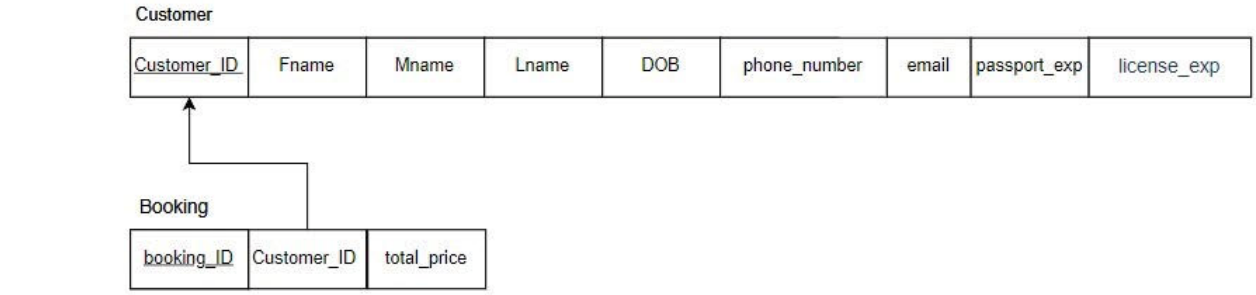
3.4 Mapping of binary 1-N relationship types

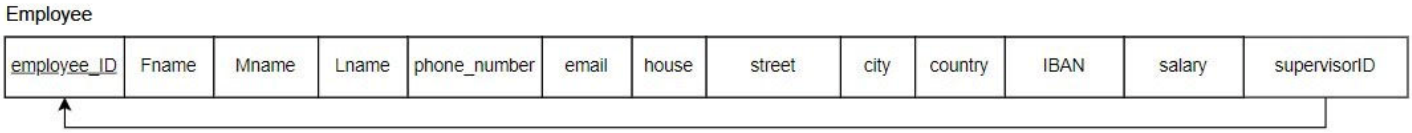
Here, we only need to include a foreign key on the N side.

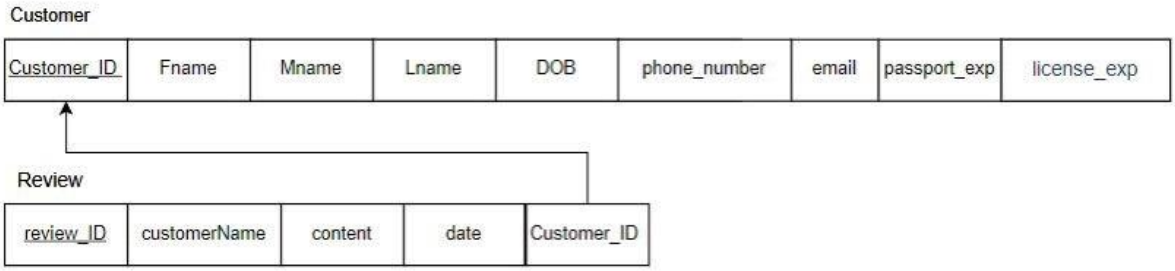
The result are the following relations:






Customer
Customer_ID
Fname
Mname
Lname
DOB
phone_number
email
passport_exp
license_exp
Booking
booking_ID
Customer_ID
total_price


Employee
employee_ID
Fname
Mname
Lname
phone_number
email
house
street
city
country
IBAN
salary
supervisorID


Customer
Customer_ID
Fname
Mname
Lname
DOB
phone_number
email
passport_exp
license_exp
Review
review_ID
customerName
content
date
Customer_ID

3.5 Mapping of binary M-N relationship types

Create a new relation for the relationship and set the primary key to be the combination of the primary keys of both entities.

The result are the following relations, with each foreign key referencing the appropriate primary key (as will be shows in the entire relational schema down below):

HAS_HOTEL

hotel_ID	booking_ID

HAS_RESTAURANT

restaurant_ID	booking_ID

HAS_TOUR

tour_ID	booking_ID

HAS_PACKAGE

package_ID	booking_ID

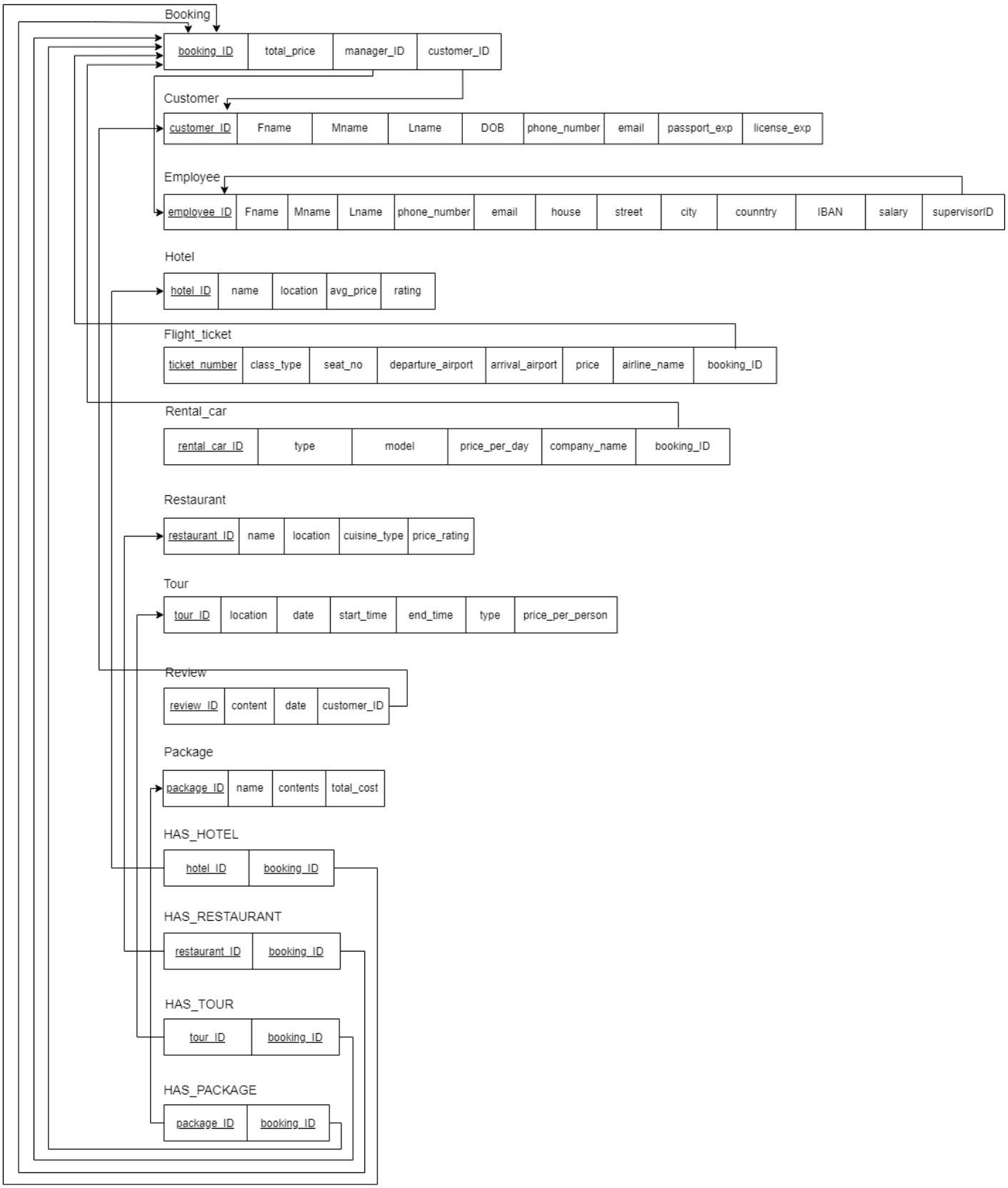
3.6 Mapping of multivalued attributes

None

3.7 Mapping of n-ary relationship types

None

3.8 Schema Diagram



4 Normalization

4.1 First Normal Form

1NF disallows composite and multivalued attributes, as well as nesting. This is already dealt with by following the ER-to-Relational algorithm. Therefore, all relations in our schema are in first normal form.

booking_ID	total_price	manager_ID	customer_ID

Customer

customer_ID	Fname	Mname	Lname	DOB	phone_number	email	passport_exp	license_exp

Employee

employee_ID	Fname	Mname	Lname	phone_number	email	house	street	city	counntry	IBAN	salary	supervisorID

Hotel

hotel_ID	name	location	avg_price	rating

Flight_ticket

ticket_number	class_type	seat_no	departure_airport	arrival_airport	price	airline_name	booking_ID

Rental_car

rental_car_ID	type	model	price_per_day	company_name	booking_ID

Restaurant

restaurant_ID	name	location	cuisine_type	price_rating

Tour

tour_ID	location	date	start_time	end_time	type	price_per_person

Review

review_ID	content	date	customer_ID

Package

package_ID	name	contents	total_cost

HAS_HOTEL

hotel_ID	booking_ID

HAS_RESTAURANT

restaurant_ID	booking_ID

HAS_TOUR

tour_ID	booking_ID

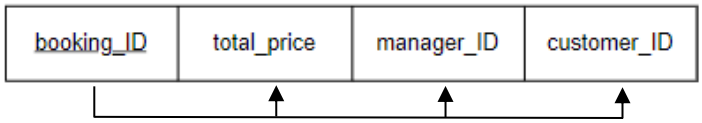
HAS_PACKAGE

package_ID	booking_ID

4.2 Second Normal Form

To make our relational schema in (2NF), every non-prime attribute in the relation must be Fully Functionally Dependent (FD) on the primary key of the relation. Full functional dependency (Full FD) means that removal of the primary key attribute or any attribute that is part of the primary key means that the FD does not hold any more.

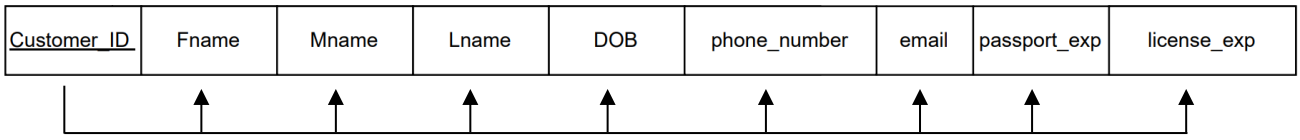
1- Booking



{booking_ID} -> total_price, managerID, and customerID.

All are Fully Functionally Dependent on the primary key (booking_ID).

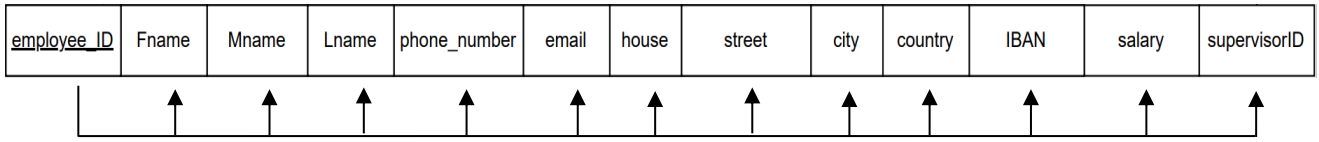
2- Customer



{Customer_ID} -> Fname, Mname, Lname, DOB, phone_number, email, passport_exp, and license_exp.

All are Fully Functionally Dependent on the primary key (customer_ID).

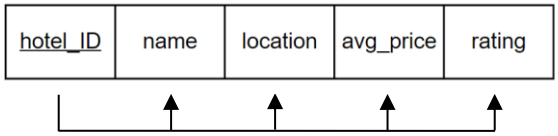
3- Employee



{employee_ID} -> Fname, Mname, Lname, phone_number, email, house, street, city, country, IBAN, salary, and supervisorID.

All are Fully Functionally Dependent on the primary key (employee_ID).

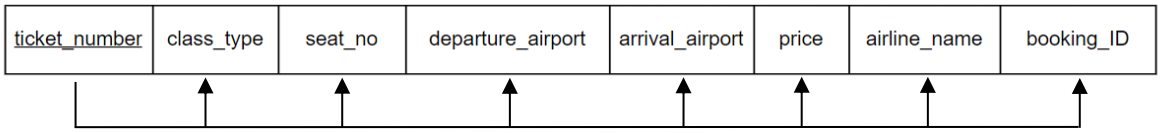
4- Hotel



{hotel_ID} -> name, location, avg_price, and rating.

All are Fully Functionally Dependent on the primary key (hotel_ID).

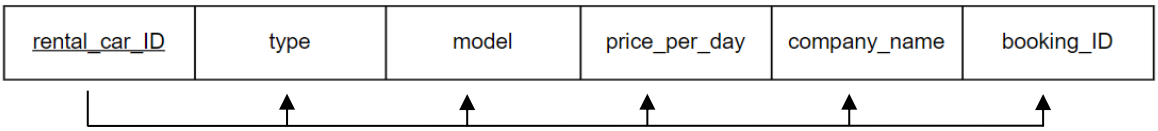
5- Flight Ticket



{ticket_number} -> class_type, seat_no, departure_airport, arrival_airport, price, airline_name, and booking_ID

All are Fully Functionally Dependent on the primary key (ticket_number).

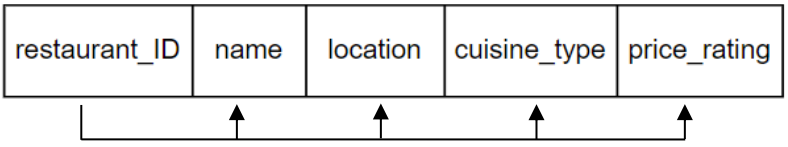
6- Rental Car



{rental_Car_ID} -> type, model, price_per_day, company_name, and booking_ID.

All are Fully Functionally Dependent on the primary key (rental_car_ID).

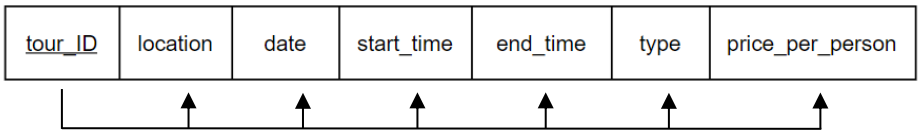
7- Restaurant



{restaurant_ID} -> name, location, cuisine_type, and price_rating.

All are Fully Functionally Dependent on the primary key (restaurant_ID).

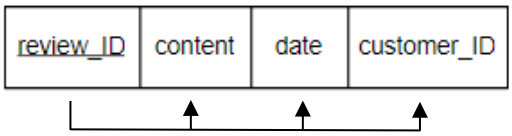
8- Tour



{tour_ID} -> location, date, start_time, end_time, type, price_per_person.

All are Fully Functionally Dependent (FD) on the primary key (tour_ID).

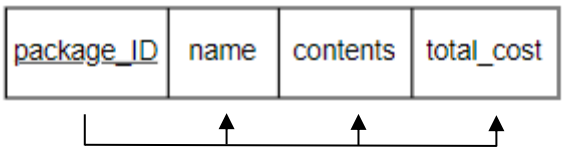
9- Review



{review_ID} -> customerName, content, date, and customer_ID id.

All are Fully Functionally Dependent on the primary key (review_ID).

10- Package



{package_ID} -> name, content, total_cost.

All are Fully Functionally Dependent on the primary key (package_ID).

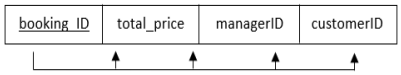
In conclusion, all relations are in {2NF}. All attributes are fully functionally dependent on their primary keys.

No partial dependency exists in this schema.

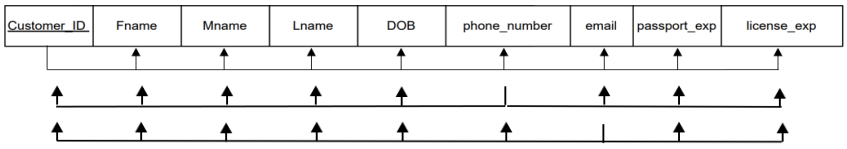
4.3 Third Normal Form

To make our relational schema in the third normal form (3NF), there should not be any non-prime attribute in any relation that transitively depends on the primary key of the relation. As all attributes must depend only on the key. So, to find these transitive dependencies, we will go over the relational schema once again while paying attention to the non-prime attributes this time. As follows:

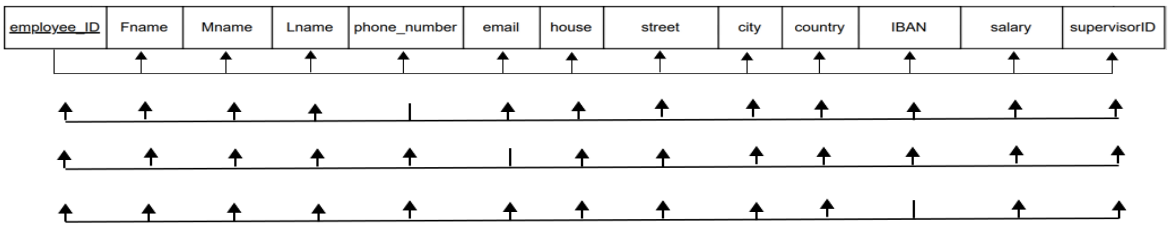
Booking



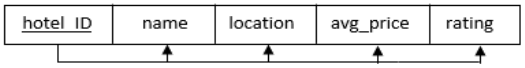
Customer



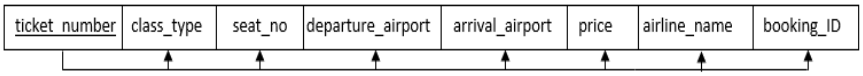
Employee



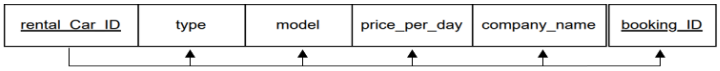
Hotel



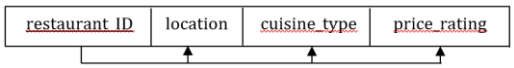
Flight_ticket



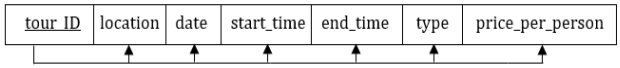
Rental_Car



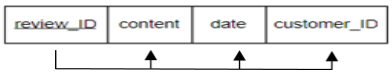
Restaurant



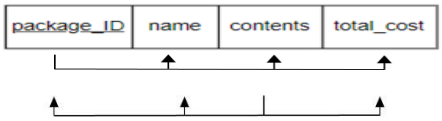
Tour



Review



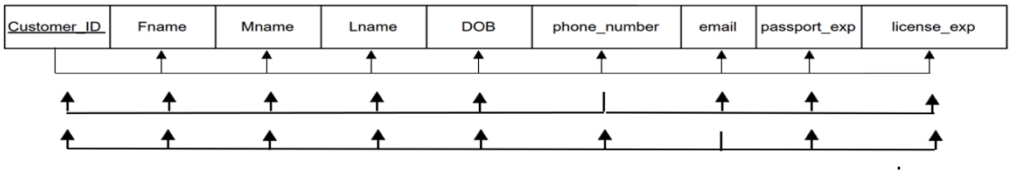
Package



Now, we need to look at the relations that have transitive dependencies and examine them.

First, CUSTOMER relation:

Customer



A. There are transitive dependencies of Customer_ID, Fname, Mname, Lname, DOB, email, passport_exp and license_exp on Customer_ID via phone_number as the following:

Customer_ID –> phone_number and phone_number -> Cutomer_ID

Customer_ID –> phone_number and phone_number -> Fname

Customer_ID –> phone_number and phone_number -> Mname

Customer_ID –> phone_number and phone_number -> Lname

Customer_ID –> phone_number and phone_number -> DOB

Customer_ID –> phone_number and phone_number -> email

Customer_ID –> phone_number and phone_number -> passport_exp

Customer_ID –> phone_number and phone_number -> license_exp

However, since phone_ID determines all the other attributes in the relation, then it is a candidate key. So, there are no problems with these transitive dependency.

B. There are transitive dependencies of Customer_ID, Fname, Mname, Lname, DOB, email, passport_exp and license_exp on Customer_ID via email, as the following:

Customer_ID –> email and email -> Cutomer_ID

Customer_ID –> email and email -> Fname

Customer_ID –> email and email -> Mname

Customer_ID –> email and email -> Lname

Customer_ID –> email and email -> DOB

Customer_ID –> email and email -> phone_number

Customer_ID –> email and email -> passport_exp

Customer_ID –> email and email -> license_exp

However, since email determines all the other attributes in the relation, then it is a candidate key. So, there are no problems with these transitive dependencies.

Finally, since all the transitive dependencies in the CUSTOMER relation are based on candidate keys, they cause no problem, and the CUSTOMER relation will stay as it is.

Second: EMPLOYEE relation

A. There are transitive dependencies of employee_ID, Fname, Mname, Lname, email, house, street, city, country, IBAM, salary and supervisorID on employee_ID via phone_number, as the following:

employee_ID –> phone_number and phone_number -> employee_ID

employee_ID –> phone_number and phone_number -> Fname

employee_ID –> phone_number and phone_number -> Mname

employee_ID –> phone_number and phone_number -> Lname

employee_ID –> phone_number and phone_number -> email

employee_ID –> phone_number and phone_number -> house

employee_ID –> phone_number and phone_number -> street

employee_ID –> phone_number and phone_number -> city

employee_ID –> phone_number and phone_number -> country

employee_ID –> phone_number and phone_number -> IBAN

employee_ID –> phone_number and phone_number -> salary

employee_ID –> phone_number and phone_number -> supervisorID

However, since phone_number determines all the other attributes in the relation, then it is a candidate key. So, there is no problem with these transitive dependencies.

B. There are transitive dependencies of employee_ID, Fname, Mname, Lname, email, house, street, city, country, IBAM, salary and supervisorID on employee_ID via email, as the following:

employee_ID –> email and email -> employee_ID

employee_ID –> email and email -> Fname

employee_ID –> email and email -> Mname

employee_ID –> email and email -> Lname

employee_ID –> email and email -> phone_number

employee_ID –> email and email -> house

employee_ID –> email and email -> street

employee_ID –> email and email -> city

employee_ID –> email and email -> country

employee_ID –> email and email -> IBAN

employee_ID –> email and email -> salary

employee_ID –> email and email -> supervisorID

However, since email determines all the other attributes in the relation, then it is a candidate key. So, there is no problem with these transitive dependencies.

C. There are transitive dependencies of employee_ID, Fname, Mname, Lname, email, house, street, city, country, IBAM, salary and supervisorID on employee_ID via IBAN, as the following:

employee_ID –> IBAN and IBAN -> employee_ID

employee_ID –> IBAN and IBAN -> Fname

employee_ID –> IBAN and IBAN -> Mname

employee_ID –> IBAN and IBAN -> Lname

employee_ID –> IBAN and IBAN -> phone_number

employee_ID –> IBAN and IBAN -> email

employee_ID –> IBAN and IBAN -> house

employee_ID –> IBAN and IBAN -> street

employee_ID –> IBAN and IBAN -> city

employee_ID –> IBAN and IBAN -> country

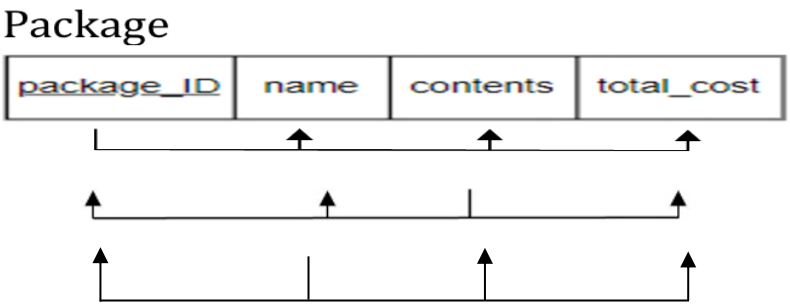
employee_ID –> IBAN and IBAN -> salary

employee_ID –> IBAN and IBAN -> supervisorID

However, since IBAN determines all the other attributes in the relation, then it is a candidate key. So, there is no problem with these transitive dependencies.

Finally, since all the transitive dependencies in the EMPLOYEE relation are based on candidate keys, they cause no problem, and the EMPLOYEE relation will stay as it is.

Third: PACKAGE relation



A. There are transitive dependencies of package_ID, name, and total_cost on package_ID via contents, as the following:

package_ID –> contents and contents -> package_ID

package_ID –> contents and contents -> name

package_ID –> contents and contents -> total_cost

However, since contents determines all the other attributes in the relation, then it is a candidate key. So, there is no problem with these transitive dependencies.

B. There are transitive dependencies of package_ID, name, and total_cost on package_ID via name, as the following:

package_ID –> name and name -> package_ID

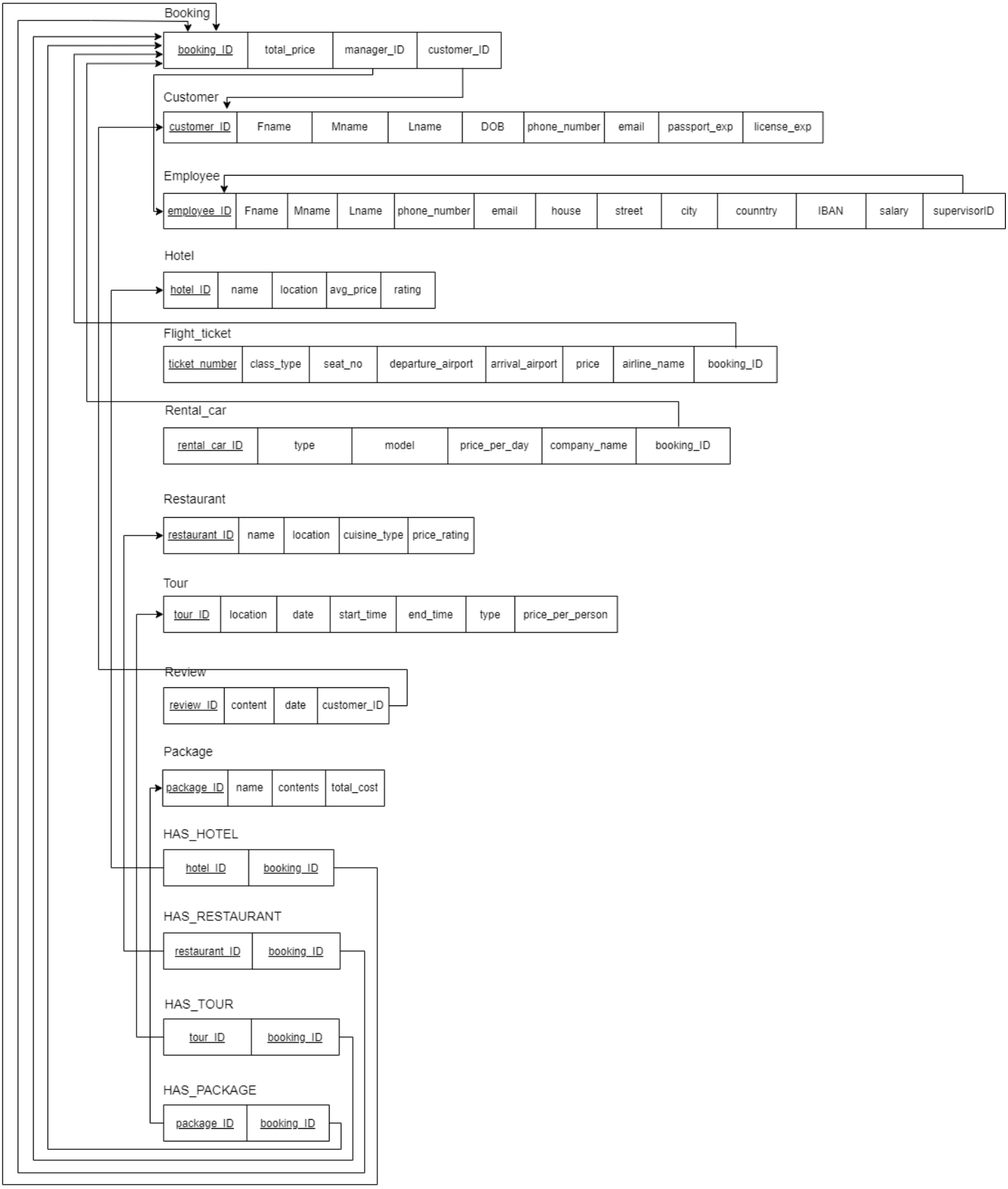
package_ID –> name and name -> contents

package_ID –> name and name -> total_cost

However, since name determines all the other attributes in the relation, then it is a candidate key. So, there is no problem with these transitive dependencies.

Finally, since all the transitive dependencies in the PACKAGE relation are based on candidate keys, they cause no problem, and the PACKAGE relation will stay as it is.

5 Final DB Schema Diagram



PART III: IMPLEMENTATION

6 Table Creation Script

6.1 CUSTOMER TABLE

```
CREATE TABLE CUSTOMER (
    customer_ID number(10) PRIMARY KEY,
    Fname varchar2(25),
    Mname varchar2(25),
    Lname varchar2(25),
    DOB date,
    phone_number varchar2(50) UNIQUE,
    email varchar2(50) UNIQUE,
    passport_exp date,
    license_exp date
);
```

6.2 EMPLOYEE TABLE

```
CREATE TABLE EMPLOYEE(
Employee_ID number(10) PRIMARY KEY,
Fname varchar2(25),
Mname varchar2(25),
Lname varchar2(25),
phone_number number(20)UNIQUE,
Email varchar2(35),
house varchar2(100),
street varchar2(100),
city varchar2(100),
country varchar2(100),
IBAN varchar2(100)UNIQUE,
salary decimal(9,2),
supervisor_ID number(10)
);
```

Then, after adding all the data, we alter the employee table to add the supervisor foreign key:

```
ALTER TABLE EMPLOYEE
ADD CONSTRAINT supervisor_IDFK FOREIGN KEY (supervisor_ID) REFERENCES EMPLOYEE(Employee_ID) ON DELETE SET NULL;
```

6.3 BOOKING TABLE

```
CREATE TABLE BOOKING (
    booking_ID number(10) PRIMARY KEY,
    total_price decimal(9,2),
    manager_ID number(10) NOT NULL,
    customer_ID number(10) NOT NULL,
    CONSTRAINT managerIDFK FOREIGN KEY (manager_ID) REFERENCES EMPLOYEE (employee_ID) ON DELETE SET NULL,
    CONSTRAINT customerIDFK FOREIGN KEY (customer_ID) REFERENCES CUSTOMER (customer_ID) ON DELETE CASCADE
    );
```

6.4 FLIGHT_TICKET TABLE

```
CREATE TABLE FLIGHT_TICKET(
    ticket_number number(20) PRIMARY KEY,
    seat_no varchar2(5),
    departure_airport varchar2(40),
    arrival_airport varchar2(40),
    price decimal(9,2),
    airline_name varchar2(25),
    booking_ID number(5),
    CONSTRAINT booking_IDFK FOREIGN KEY (booking_ID) REFERENCES BOOKING(booking_ID) ON DELETE CASCADE
    );
```

6.5 REVIEW TABLE

```
CREATE TABLE REVIEW (
    review_ID number(10) PRIMARY KEY,
    content varchar2(225),
    the_date DATE,
    customer_ID number(10) NOT NULL,
    CONSTRAINT customer_IDFK FOREIGN KEY (customer_ID) REFERENCES CUSTOMER (customer_ID) ON DELETE CASCADE
    );
```

6.6 HOTEL TABLE

```
CREATE TABLE HOTEL(
    hotel_ID number(6) PRIMARY KEY,
    hotel_name VARCHAR2(60),
    hotel_location VARCHAR2(60),
    avg_price DECIMAL(6,2),
    rating NUMBER(1) CHECK(rating >= 1 AND rating <= 5)
    );
```

6.7 RESTAURANT TABLE

```
CREATE TABLE RESTAURANT (
    restaurant_ID number(10) PRIMARY KEY,
    restaurant_name varchar2(25),
    restaurant_location varchar2(100),
    cuisine_type varchar2(60),
    price_rating number(5) CHECK(price_rating >= 1 AND price_rating <=5)
    );
```

6.8 RENTAL_CAR TABLE

```
CREATE TABLE RENTAL_CAR(
    rental_car_ID NUMBER(6) PRIMARY KEY,
    car_type VARCHAR2(25),
    car_model NUMBER(4) CHECK(car_model >= 2010 AND car_model <= 2030),
    price_per_day DECIMAL(6,2),
    company_name VARCHAR2(50),
    booking_ID NUMBER(10),
    CONSTRAINT bookingIDFK FOREIGN KEY (booking_ID) REFERENCES BOOKING (booking_ID) ON DELETE CASCADE
    );
```

6.9 TOUR TABLE

```
CREATE TABLE Tour (
    tour_ID number(10) PRIMARY KEY,
    tour_location varchar2(100),
    the_date date,
    start_time varchar2(25),
    end_time varchar2(25),
    tour_type varchar2(60),
    price_per_person decimal(9,2)
);
```

6.10 PACKAGE TABLE

```
CREATE TABLE PACKAGE (
    package_ID number(6) PRIMARY KEY,
    package_name VARCHAR2(25),
    package_contents VARCHAR2(500),
    total_cost DECIMAL(6,2)
    );
```

6.11 HAS_HOTEL TABLE

```
CREATE TABLE HAS_HOTEL(
    hotel_ID number(6),
    booking_ID number(10),
    CONSTRAINT HAS_HOTEL_PK PRIMARY KEY (hotel_ID, booking_ID),
    CONSTRAINT HAS_HOTEL_FK1 FOREIGN KEY (hotel_ID) REFERENCES HOTEL(hotel_ID) ON DELETE CASCADE,
    CONSTRAINT HAS_HOTEL_FK2 FOREIGN KEY (booking_ID) REFERENCES BOOKING(booking_ID) ON DELETE CASCADE
    );
```

6.12 HAS_RESTAURANT TABLE

```
CREATE TABLE HAS_RESTAURANT (
    restaurant_ID number(6),
    booking_ID number(10),
    CONSTRAINT HAS_RESTAURANT_PK PRIMARY KEY (restaurant_ID, booking_ID),
    CONSTRAINT HAS_RESTAURANT_FK1 FOREIGN KEY (restaurant_ID) REFERENCES RESTAURANT(restaurant_ID) ON DELETE CASCADE,
    CONSTRAINT HAS_RESTAURANT_FK2 FOREIGN KEY (booking_ID) REFERENCES BOOKING(booking_ID) ON DELETE CASCADE
    );
```

6.13 HAS_TOUR TABLE

```
CREATE TABLE HAS_TOUR (
    tour_ID number(6),
    booking_ID number(10),
    CONSTRAINT HAS_TOUR_PK PRIMARY KEY (tour_ID, booking_ID),
    CONSTRAINT HAS_TOUR_FK1 FOREIGN KEY (tour_ID) REFERENCES TOUR(tour_ID) ON DELETE CASCADE,
    CONSTRAINT HAS_TOUR_FK2 FOREIGN KEY (booking_ID) REFERENCES BOOKING(booking_ID) ON DELETE CASCADE
    );
```

6.14 HAS_PACKAGE TABLE

```
CREATE TABLE HAS_PACKAGE(
    package_ID number(6),
    booking_ID number(10),
    CONSTRAINT HAS_PACKAGE_PK PRIMARY KEY (package_ID, booking_ID),
    CONSTRAINT HAS_PACKAGE_FK1 FOREIGN KEY (package_ID) REFERENCES PACKAGE(package_ID) ON DELETE CASCADE,
    CONSTRAINT HAS_PACKAGE_FK2 FOREIGN KEY (booking_ID) REFERENCES BOOKING(booking_ID) ON DELETE CASCADE
    );
```

7 Constraints Script

The following table shows some examples of the types of constraints while creating the tables in SQL. Most of the constraints have the same idea so we will only show the distinct ones.

Business Rule	SQL Script	Table
PRIMARY KEYS: Each CUSTOMER has a unique ID	**customer_ID number(10) PRIMARY KEY** **(the primary key keyword ensures that each id value is unique, so no need to add NOT NULL)**	**CUSTOMER**
PRIMARY KEYS: Each FLIGHT_TICKET has a unique ticket_number	**Ticket_number number(20) PRIMARY KEY**	**FLIGHT_TICKET**
FOREIGN KEYS: Each employee has a supervisor	**ALTER TABLE EMPLOYEE ADD CONSTRAINT supervisor_IDFK FOREIGN KEY (supervisor_ID) REFERENCES EMPLOYEE(Employee_ID);**	**EMPLOYEE**

	(we cannot add this constraint while creating the table, so we have to use the alter method.)	
FOREIGN KEYS: Package_ID in HAS_PACKAGE refers to the package_ID in PACKAGE relation	**CONSTRAINT HAS_PACKAGE_FK1 FOREIGN KEY (package_ID) REFERENCES PACKAGE(package_ID) ON DELETE CASCADE,**	**HAS_PACKAGE and PACKAGE**
DOMAIN CONSTRAINTS: **Rating of hotels and restaurants refers to the number of stars, so it's an integer between 1 and 5**	**rating NUMBER(1) CHECK(rating >= 1 AND rating <= 5)** **price_rating number(5) CHECK(price_rating >= 1 AND price_rating <=5)** **(use CHECK keyword to enforce this domain**	**HOTEL** **RESTAURANT**

8 Queries and Transactions

8.1 *Query1*

Query in Natural Language (English)

Retrive the ticket with the minimum price from Jeddah to Istanbul:

SQL Script

```
SELECT MIN(price)
FROM Flight_ticket
WHERE departure_airport IN (SELECT departure_airport
                            FROM Flight_ticket
                            WHERE departure_airport = 'king abdulaziz International  Airport' AND arrival_airport = 'Istanbul Airport');
```

Caption of the First Five Rows of the Output

MIN(PRICE)
1200

Download CSV

8.2 *Query2*

Query in Natural Language (English)

Show the Fname, Lname and phone number of all employees whose subervisor_ID = 123542

SQL Script

```
SELECT Fname,Lname,phone_number
FROM Employee
WHERE supervisor_ID = 123542
```

Caption of the First Five Rows of the Output

FNAME	LNAME	PHONE_NUMBER
Mohamed	Hatem	548824916
Fatih	Alamri	542256940

Download CSV

2 rows selected.

8.3 *Query3*

Query in Natural Language (English)

Print the number of hotels and restaurants booking made by every customer, along with the customers' IDs and full names.

SQL Script

```
SELECT CUSTOMER.customer_ID, Fname, Mname, Lname, COUNT(*) AS bookings

FROM BOOKING JOIN HAS_RESTAURANT ON BOOKING.booking_ID =
HAS_RESTAURANT.booking_ID JOIN CUSTOMER ON CUSTOMER.customer_ID =
BOOKING.customer_ID

GROUP BY CUSTOMER.customer_ID, Fname, Mname, Lname


UNION


SELECT CUSTOMER.customer_ID, Fname, Mname, Lname, COUNT(*)

FROM BOOKING JOIN HAS_HOTEL ON BOOKING.booking_ID = HAS_HOTEL.booking_ID
JOIN CUSTOMER ON CUSTOMER.customer_ID = BOOKING.customer_ID

GROUP BY CUSTOMER.customer_ID, Fname, Mname, Lname;
```

Caption of the First Five Rows of the Output

CUSTOMER_ID	FNAME	MNAME	LNAME	BOOKINGS
107624552	Nuha	S	Samer	2
107624552	Nuha	S	Samer	3
1012365498	Yazeed	M	Khalid	3
1021696782	Sara	B	Fahad	2
1024465987	Bayan	A	Mohammed	2
1024465987	Bayan	A	Mohammed	3
1065497357	Ahmed	F	Omar	1
1071236594	Abdulaziz	A	Faisal	1
1085438703	Hussam	A	Ali	1
1091247456	Joud	N	Hakeem	1
1103654790	Abdullah	K	Nasser	1

8.4 *Query4*

Query in Natural Language (English)

Show the names of all the hotels which have average price less than the average price of the “Taj Exotica Resort & Spa, Maldives” hotel.

SQL Script

```
SELECT hotel_name
FROM Hotel
WHERE avg_price <
                    (
                    SELECT avg_price
                    FROM Hotel
                    WHERE hotel_name= 'Taj Exotica Resort & Spa, Maldives'
                    );
```

Caption of the First Five Rows of the Output

HOTEL_NAME
InterContinental Paris - Le Grand, an IHG Hotel
InterContinental New York Times Square, an IHG Hotel
Ino Village Hotel
SeaLaVie Inn
Hilton Miami Downtown
Sheraton Grand Los Angeles
Starhotels Metropole

Download CSV

7 rows selected.

8.5 *Query5*

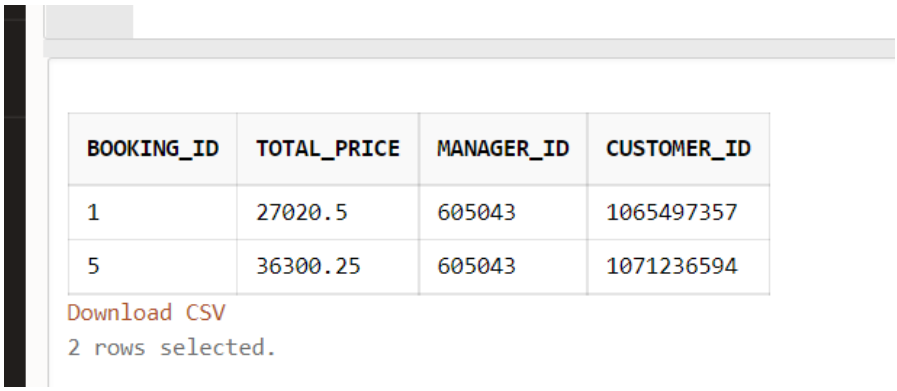
Query in Natural Language (English)

Retrieve all data of all the bookings that are being managed by the manager who has "0541014598" as the phone number.

SQL Script

```
SELECT *
FROM BOOKING
WHERE manager_ID IN
        (SELECT  employee_ID
        FROM Employee
        WHERE phone_number = '0541014598');
```

Caption of the First Five Rows of the Output



BOOKING_ID	TOTAL_PRICE	MANAGER_ID	CUSTOMER_ID
1	27020.5	605043	1065497357
5	36300.25	605043	1071236594

Download CSV
2 rows selected.

8.6 Update Example

Update in Natural Language (English)

Make a 10% discount for all hotels.

SQL Script

UPDATE HOTEL

SET avg_price = avg_price * 0.9;

Caption of the Output

Before update:

HOTEL_ID	HOTEL_NAME	HOTEL_LOCATION	AVG_PRICE	RATING
123456	InterContinental Paris - Le Grand, an IHG Hotel	2 Rue Scribe, 75009 Paris, France	2500	4
122548	InterContinental New York Times Square, an IHG Hotel	300 W 44th St, New York, NY 10036, United States	2300	4
123754	Taj Exotica Resort & Spa, Maldives	Emboodhu Finolhu, South Male Atoll 02117, Maldives	2700	5
124376	Ino Village Hotel	Samion Agoniston 69, Samos, 83100, Greece	500	3
122459	SeaLaVie Inn	Jamhooree Magu Ukulhas, 09030, Maldives	182	3
125347	Mandarin Oriental Ritz, Madrid	Pl. de la Lealtad, 5, 28014 Madrid, Spain	4400	5
125735	Hilton Miami Downtown	1601 Biscayne Blvd, Miami, FL 33132, United States	1050	4
126439	Four Seasons Hotel Istanbul At The Bosphorus	No:28, Çırağan Cd., 34349 Beşiktaş/İstanbul, Turkey	3200	5
126821	Sheraton Grand Los Angeles	711 S Hope St, Los Angeles, CA 90017, United States	1300	4
127243	Starhotels Metropole	Via Principe Amedeo, 3, 00185 Roma RM, Italy	803	4

Download CSV

After update:

```
10 row(s) updated.
```

HOTEL_ID	HOTEL_NAME	HOTEL_LOCATION	AVG_PRICE	RATING
123456	InterContinental Paris - Le Grand, an IHG Hotel	2 Rue Scribe, 75009 Paris, France	2250	4
122548	InterContinental New York Times Square, an IHG Hotel	300 W 44th St, New York, NY 10036, United States	2070	4
123754	Taj Exotica Resort & Spa, Maldives	Emboodhu Finolhu, South Male Atoll 02117, Maldives	2430	5
124376	Ino Village Hotel	Samion Agoniston 69, Samos, 83100, Greece	450	3
122459	SeaLaVie Inn	Jamhooree Magu Ukulhas, 09030, Maldives	163.8	3
125347	Mandarin Oriental Ritz, Madrid	Pl. de la Lealtad, 5, 28014 Madrid, Spain	3960	5
125735	Hilton Miami Downtown	1601 Biscayne Blvd, Miami, FL 33132, United States	945	4
126439	Four Seasons Hotel Istanbul At The Bosphorus	No:28, Çırağan Cd., 34349 Beşiktaş/İstanbul, Turkey	2880	5
126821	Sheraton Grand Los Angeles	711 S Hope St, Los Angeles, CA 90017, United States	1170	4
127243	Starhotels Metropole	Via Principe Amedeo, 3, 00185 Roma RM, Italy	722.7	4

Download CSV

8.7 Delete Example

Delete in Natural Language (English):

Delete all car rentals from 'Al Wefaq Rent a Car' Company

SQL Script

```
DELETE FROM RENTAL_CAR
WHERE company_name LIKE '%Wefaq%';
```

Caption of the Output

Before deletion:

RENTAL_CAR_ID	CAR_TYPE	CAR_MODEL	PRICE_PER_DAY	COMPANY_NAME	BOOKING_ID
214675	BMW 2 Series	2021	2000	Al Wefaq Rent a Car	1
275219	BMW 2 Series	2021	2100	Al Wefaq Rent a Car	2
284251	BMW 4 Series	2019	2050	Al Wefaq Rent a Car	3
276812	Mercedes S-Class Sedan	2020	2100	Yelo: Rent A Car	4
246873	Mercedes E-Class Sedan	2021	2200	Yelo: Rent A Car	5
226584	Mercedes E-Class Sedan	2021	2070	Yelo: Rent A Car	6
276930	Audi A5 Sportback	2022	2080	Al Wefaq Rent a Car	7
235726	Audi Q7	2022	2000	Al Wefaq Rent a Car	8
289662	Lexus ES Hybrid	2022	1900	Yelo: Rent A Car	9

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9 rows selected.

After deletion:

```
5 row(s) deleted.
```

RENTAL_CAR_ID	CAR_TYPE	CAR_MODEL	PRICE_PER_DAY	COMPANY_NAME	BOOKING_ID
276812	Mercedes S-Class Sedan	2020	2100	Yelo: Rent A Car	4
246873	Mercedes E-Class Sedan	2021	2200	Yelo: Rent A Car	5
226584	Mercedes E-Class Sedan	2021	2070	Yelo: Rent A Car	6
289662	Lexus ES Hybrid	2022	1900	Yelo: Rent A Car	9

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APPENDIX

CUSTOMER TABLE:

CUSTOMER_ID	FNAME	MNAME	LNAME	DOB	PHONE_NUMBER	EMAIL	PASSPORT_EXP	LICENSE_EXP
107624552	Nuha	S	Samer	17-MAR-91	00966557323559	nuhasamer@gmail.com	20-NOV-22	26-APR-26
1024465987	Bayan	A	Mohammed	19-MAY-88	00966563359882	bayanm88@gmail.com	13-FEB-23	30-SEP-24
1012365498	Yazeed	M	Khalid	27-JAN-86	00966507344876	yazkhalid@gmail.com	23-JAN-25	25-AUG-29
1071236594	Abdulaziz	A	Faisal	21-JUL-91	00966551376549	azizfaisal@gmail.com	19-APR-27	07-JUN-24
1085438703	Hussam	A	Ali	28-OCT-93	00966549654765	hussali@gmail.com	23-NOV-26	17-FEB-23
1103654790	Abdullah	K	Nasser	12-SEP-97	00966552455879	abdullahnasser@gmail.com	28-AUG-25	15-SEP-26
1091247456	Joud	N	Hakeem	04-MAY-95	00966583384216	joudhakeem@gmail.com	22-MAR-23	26-DEC-27
1021696782	Sara	B	Fahad	12-AUG-87	00966544375795	sarafahad@gmail.com	07-DEC-22	22-JUL-29
1091543598	Reem	M	Ibraheem	03-JUN-96	00966503474398	reemibraheem@gmail.com	17-OCT-26	10-AUG-24
1065497357	Ahmed	F	Omar	18-DEC-90	00966564875834	ahmed1990@gmail.com	02-JUN-24	15-JUL-28

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EMPLOYEE TABLE:

EMPLOYEE_ID	FNAME	MNAME	LNAME	PHONE_NUMBER	EMAIL	HOUSE	STREET	CITY	COUNTRY	IBAN	SALARY	SUPERVISOR_ID
205638	Ahmed	Adel	alghamdi	548723594	ahmed34@hotmail.com	20	alfaiha	Jeddah	saudi arabia	SA0086234987122580006	3000	501232
605043	Fahad	Mohamed	alatibi	541014598	fahadAtibi@hotmail.com	5	alsafa	Jeddah	saudi arabia	SA0087331380912580O	5000.87	193826
107640	Khalid	Abdulrahman	alzahrani	548831208	khaled4000@hotmail.com	9	alworood	Jeddah	saudi arabia	SA7351840367022431O9	7500	745832
745832	Moad	Aahad	alghamdi	562409453	moadFahd@hotmail.com	5	alrawdah	Jeddah	saudi arabia	SA0056813940371934O1	6012	215638
215638	Ghaith	Aalah	moqbel	546834889	ghaith5000@hotmail.com	10	almohamadia	Jeddah	saudi arabia	SA0072950023371640O3	2000	205638
205631	Adnan	Abdullah	alzaidy	548976435	adnanAlzaidy@hotmail.com	2	alnaseem	Jeddah	saudi arabia	SA0085392651950463B9	9000	193826
501232	Abdullah	Rashed	Alghahtani	503501214	abdullahrashed205@hotmail.com	11	alnaseem	Jeddah	saudi arabia	SA0089934629405739l0	9000	205638
193826	Khalid	Abdullah	alghamdi	541258948	khalidAlghamdi@hotmail.com	5	almanar	Jeddah	saudi arabia	SA0089034699405749l0	5000	501232
236537	Mohamed	Haithm	Hatem	548824916	mohamedhatem200@hotmail.com	1	alsafa	Jeddah	saudi arabia	SA0097034688565749z0	3000	123542
302617	Fatih	Emad	Alamri	542256940	fatih909@hotmail.com	10	alrawdah	Jeddah	saudi arabia	SA0097034675065798z8	10000	123542
123542	Omar	Ahmed	Alzahrani	539145930	OmarAlzahrani@hotmail.com	10	alsamir	Jeddah	saudi arabia	SA0097000545683798z8	7000	302617

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BOOKING TABLE:

BOOKING_ID	TOTAL_PRICE	MANAGER_ID	CUSTOMER_ID
1	27020.5	605043	1065497357
2	19980.25	745832	107624552
3	18000.25	205638	1024465987
4	29885.75	215638	1012365498
5	36300.25	605043	1071236594
6	10000.25	107640	1085438703
7	26543	205631	1103654790
8	18005	745832	1091247456
9	19645.5	107640	1021696782
10	16260.5	107640	1091543598

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FLIGHT_TICKET TABLE:

TICKET_NUMBER	SEAT_NO	DEPARTURE_AIRPORT	ARRIVAL_AIRPORT	PRICE	AIRLINE_NAME	BOOKING_ID
742464639523	11D	king abdulaziz International Airport	London Heathrow Airport	2000	SAUDI ARABIAN AIRLINES	1
371059836617	09A	king abdulaziz International Airport	Istanbul Airport	1200	TURKISH AIRLINES	6
6032109799519	5B	King Khalid International Airport	London Heathrow Airport	4500	BRITISH AIRWAYS	5
123487329807	41A	Frankfurt Airport	London Heathrow Airport	5000	Lufthansa	6
2052107488408	08C	London Heathrow Airport	king abdulaziz International Airport	3200	SAUDI ARABIAN AIRLINES	7
1762140736267	36F	king abdulaziz International Airport	Bahrain International Airport	1000	SAUDI ARABIAN AIRLINES	2
1952429653559	5F	king abdulaziz International Airport	Istanbul Airport	2800	TURKISH AIRLINES	1
772400902846	09B	London Heathrow Airport	Frankfurt Airport	3000	BRITISH AIRWAYS	5
1262459580092	05G	Istanbul Airport	king abdulaziz International Airport	1900	TURKISH AIRLINES	2
427321023107	11D	King Khalid International Airport	king abdulaziz International Airport	500	SAUDI ARABIAN AIRLINES	5

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10 rows selected.

REVIEW TABLE:

REVIEW_ID	CONTENT	THE_DATE	CUSTOMER_ID
1	Excellent! Very good service from beginning to end.	22-APR-22	1012365498
2	It was a great company to deal with.	13-JAN-22	1085438703
3	Will definitely book with your company again!	13-DEC-21	1021696782
4	Thnak you!	06-FEB-22	1024465987
5	The hotel was quite disappointing.	26-NOV-21	1091543598
6	Very easy to deal with, will consider booking with again.	03-APR-22	1065497357
7	Easy to book with excellent prices.	24-JUN-21	1103654790
8	Always great service.	24-JUL-21	1091247456
9	Happy with service provided.	11-FEB-22	1071236594

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HOTEL TABLE:

HOTEL_ID	HOTEL_NAME	HOTEL_LOCATION	AVG_PRICE	RATING
123456	InterContinental Paris - Le Grand, an IHG Hotel	2 Rue Scribe, 75009 Paris, France	2500	4
122548	InterContinental New York Times Square, an IHG Hotel	300 W 44th St, New York, NY 10036, United States	2300	4
123754	Taj Exotica Resort & Spa, Maldives	Emboodhu Finolhu, South Male Atoll 02117, Maldives	2700	5
124376	Ino Village Hotel	Samion Agoniston 69, Samos, 83100, Greece	500	3
122459	SeaLaVie Inn	Jamhooree Magu Ukulhas, 09030, Maldives	182	3
125347	Mandarin Oriental Ritz, Madrid	Pl. de la Lealtad, 5, 28014 Madrid, Spain	4400	5
125735	Hilton Miami Downtown	1601 Biscayne Blvd, Miami, FL 33132, United States	1050	4
126439	Four Seasons Hotel Istanbul At The Bosphorus	No:28, Çırağan Cd., 34349 Beşiktaş/İstanbul, Turkey	3200	5
126821	Sheraton Grand Los Angeles	711 S Hope St, Los Angeles, CA 90017, United States	1300	4
127243	Starhotels Metropole	Via Principe Amedeo, 3, 00185 Roma RM, Italy	803	4

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RESTAURANT TABLE:

RESTAURANT_ID	RESTAURANT_NAME	RESTAURANT_LOCATION	CUISINE_TYPE	PRICE_RATING
20300	Bistro	Paris	French	4
20301	White Orchid	Dubai	Asian	5
20302	Er Pizzicarolo	Rome	Italian	4
20303	Cok Cok Pera	Istanbul	Asian	5
20304	Sfixio	Egypt	Italian	4
20305	Pollos & Jarras	Miami	Barbecue	5
20306	The Palm Cafe	South Male Atoll	Italian,Chinese,Indian	4
20307	Langers	Los Angeles	American	3
20308	Raos	New York	Italian	5
20309	The Cheesecake Factory	Jeddah	American	4

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RENTAL_CAR TABLE:

RENTAL_CAR_ID	CAR_TYPE	CAR_MODEL	PRICE_PER_DAY	COMPANY_NAME	BOOKING_ID
214675	BMW 2 Series	2021	2000	Al Wefaq Rent a Car	1
275219	BMW 2 Series	2021	2100	Al Wefaq Rent a Car	2
284251	BMW 4 Series	2019	2050	Al Wefaq Rent a Car	3
276812	Mercedes S-Class Sedan	2020	2100	Yelo: Rent A Car	4
246873	Mercedes E-Class Sedan	2021	2200	Yelo: Rent A Car	5
226584	Mercedes E-Class Sedan	2021	2070	Yelo: Rent A Car	6
276930	Audi A5 Sportback	2022	2080	Al Wefaq Rent a Car	7
235726	Audi Q7	2022	2000	Al Wefaq Rent a Car	8
289662	Lexus ES Hybrid	2022	1900	Yelo: Rent A Car	9
218639	Lexus IS	2022	1950	Yelo: Rent A Car	10

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TOUR TABLE:

TOUR_ID	TOUR_LOCATION	THE_DATE	START_TIME	END_TIME	TOUR_TYPE	PRICE_PER_PERSON
1020	Dubai	10-JAN-22	5 PM	10 PM	Shopping Tour	530.5
1030	Paris	05-FEB-22	9 AM	9 PM	Honeymoon Tour	337.34
1040	Istanbul	13-MAR-22	6 AM	12 PM	Relaxation Tour	200
1050	Roma	22-APR-22	9 AM	9 PM	Family Tour	50
1060	Miami	15-MAY-22	7 AM	9 PM	Outdoor Activities Tour	730.5
1070	South Male Atoll	03-JUN-22	6 AM	11 PM	Sea Tour	150
1080	Los Angeles	29-JUL-22	8 PM	11PM	Culinary Food Tour	70.5
1090	New York	08-AUG-22	10 AM	2 PM	Educational Tour	80
1110	Jeddah	06-SEP-22	9 AM	9 PM	Entertainment Tour	300.34
1120	Egypt	25-OCT-22	5 PM	10 PM	Cultural Tour	40.77

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PACKAGE TABLE:

PACKAGE_ID	PACKAGE_NAME	PACKAGE_CONTENTS	TOTAL_COST
642681	Maldives - Honeymoon Package	Celebrate your love in the natural beauty of the Maldives Islands combined with the luxurious services and experiences our 14-days package provides.	42000
612159	Maldives - Family Package	Take your family and your loves one to an unforgettable adventure in the Maldives with our kids-friendly 10-days luxury package.	54000
642875	FIFA World Cup Qatar 2022 - Luxury Package	Enjoy an unforgettable luxurious experience in the FIFA World Cup 2022, in Qatar's best hotels, restaurants, beaches, museums and amazing landscape, with your own trip guide all along the experience.	49000
662189	FIFA World Cup Qatar 2022 - First Class Package	Don't miss out on the FIFA World Cup 2020 in Qatar's amazing hotels, restaurants, beaches, museums, and amazing landscape, with your own trip guide all along the experience.	35000
658781	FIFA World Cup Qatar 2022 - Standard Package	Save up on your trip to the FIFA WORLD CUP 2020 In Qatar and attend 12 matches of your choice.	22000
624512	Sail Across the Arabian Gulf	Enjoy one-in-a-lifetime experience across the Arabian Gulf with our stunning cruise ship. In this package, you will enjoy the beauty of the Arabian Gulf, the comfort of our cruise ship, and the work of the best of musicians and chefs around the world.	30500
636528	Treasures of Europe	Enjoy the experience of the European journey of a lifetime and discover all the must-sees of France, Spain, England, and see the incredible sights of Switzerland and Italy.	42000
634263	Jeddah Season - Luxury Package	Experience the best of both worlds on this 7-night luxury package, inclusive of all the hotels and restaurants and trips, that will take you across beautiful sights of Jeddah. From the new experiences exclusive for Jeddah Season to the beautiful historical sides of Jeddah.	40500
642651	Jeddah Season - First Class Package	Don't miss out on all the experiences that are waiting for you in Jeddah and Jeddah Season this year. From the water parks and festivals to the stunning historical sides of Jeddah.	29000
643183	Jeddah Season - Standard Package	Save up on your trip to Jeddah Season this year with our 5-day package that will assure you have an unforgettable experience at the beautiful city of Jeddah.	17000

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HAS_HOTEL TABLE:

HOTEL_ID	BOOKING_ID
122548	5
123456	4
123754	1
124376	3
125347	4
125735	2
126439	3
126439	6
126821	2
127243	4

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HAS_RESTAURANT TABLE:

RESTAURANT_ID	BOOKING_ID
20300	3
20301	8
20302	3
20303	3
20303	9
20304	9
20305	2
20307	2
20308	2
20309	7

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HAS_TOUR TABLE:

TOUR_ID	BOOKING_ID
1020	8
1030	4
1040	3
1060	3
1070	4
1070	10
1080	3
1090	3
1110	9
1110	10

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HAS_PACKAGE:

PACKAGE_ID	BOOKING_ID
612159	2
624512	7
636528	10
642651	1
642681	2
642681	4
643183	2
643183	9
658781	3
658781	8

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