

WeREverywhere Car Rental Database

This document illustrates our database design for our booking process.

There are six entities in total in our database as follows:

1. **Customer** with the following attributes:

Attributes	Data Type	
idCustomer	INT	PK
f_Name	VARCHAR(45)	
l_name	VARCHAR(45)	
phone_no	INT	
dob	DATE	
license_no	VARCHAR(45)	
street	VARCHAR(45)	
city	VARCHAR(45)	
country	VARCHAR(45)	
email	VARCHAR(45)	
license_Exp	DATE	

2. **Booking** with the following attributes:

Attributes	Data Type	
idBooking	INT	PK
Pick_Up_Date	DATETIME	
drop_Off_Date	DATETIME	
pick_Up_Loc	VARCHAR(90)	
drop_Off_Loc	VARCHAR(90)	
price	DECIMAL(4)	

3. **Payment** with the following attributes:

Attributes	Data Type	
idPayment	INT	PK
payment_method	VARCHAR(50)	
payment_date	DATE	
total_Amount	INT	
tax_Amount	DECIMAL(4)	

4. **Cars** with the following attributes:

Attributes	Data Type	
registration_No	VARCHAR(7)	PK
model_Name	VARCHAR(45)	
Make	VARCHAR(45)	
category	VARCHAR(45)	
year	YEAR(4)	
color	VARCHAR(45)	
mileage	INT	

5. **Car Availability** with the following attributes:

Attributes	Data Type	
idAvailability	INT	PK
car_Availability	TINYINT	
start_Date	Date	
end_Date	DATE	

6. **Location** with the following attributes:

Attributes	Data Type	
IdLocation	INT	PK
location_Name	VARCHAR(45)	
street	Date	
city	DATE	
zip_Code	VARCHAR(45)	
no_car	INT	

Relationships and Constraints:

We have six **relationships**

- The relationship between **Customer** and **Booking** is (1:N). (each Customer has one or more Booking)
- The relationship between **Payment** and **Booking** is (1:1). (each booking has one payment)
- The relationship between **Cars** and **Booking** is (1:N). (each Car can have one or more booking)
- The relationship between **Location** and **cars** is (1:N). (each Location has one or more car)
- The relationship between **CarAvailability** and **Cars** is (1:N)
- The relationship between **Location** and **Booking** is (1:N) . (each Location has one or more Booking)

Attributes Constraints:

We have some attributes constraints to avoid potential issues such as:

- License Number attribute is not null and unique to avoid having duplicate profiles for the same customer.
- Car Availability formatted as TINYINT to be as flag of yes or no.
- CAR Registration No is limited to 7 characters as this is the default length of the car plates in Saudi Arabia.
- Having Date of birth attributes for the customer in order to provide the rental service to customer with an age 18.