Django Assessment

Problem Statement:
Develop the backend for a car rental system.

Stack:

- Preferred language/Runtime environment - Django
- Preferred database - Mysql, Mongo & Postgres
- Hosting services - Heroku, Gearhost, Mlab, Atlas

Business Logic for it:

1. We will have a list of cars with the following mandatory details:
    a. car_license_number(Unique true) = MH12XZ1111
    b. Manufacturer - honda
    c. Model - city,
    d. base_price (Base price for any KM) - Rs500
    e. PPH (Price per hour) - Rs150
    f. Security deposit - Rs1000
2. We will have users in the system who can book a single or multiple cars for any duration.
    a. user_id
    b. Mobile
3. Use serializers with these models

APIs:

1. Apis to Add a user and add a car in the system:
    a. **/user** => CRUDS
    b. **/cars** => CRUDS
2. Given a user, return a list of all the cars he has booked along with their price and durations.
    a. **/user/bookings**
3. Given a time range, figure out which cars are available for that duration.

    a. **/cars/search-cars** => Parameters for this API will be to_datetime & from_datetime.
4. Given a time range to calculate pricing for that car.
    a. /cars/calculate-price => Parameters for this apis will be to_datetime, from_datetime & car_id
5. Given a car, return a list of users who have booked the car along with their durations.
    a. /car/bookings
6. To book a car for certain durations.
    a. /car/book

Optional Features:

1. Authentication or authorization logics
2. Creating a UI for the above Apis
3. Providing Search-cars with different types of filters.
4. Hosting everything on the cloud services

PS: Feel free to add new models and views if need be.