

# Database Systems: Final Project

## Car Rental System

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## Customer Portal:

The Navigation Bar differs according to whether the user is logged in or not:

- If the user is logged in, the Navigation bar has the following pages: Home, contact us, Login, and Sign up.
- If the user is not logged in, the Navigation bar has the following pages: Rent, My Profile, My Reservations, contact us, and Logout.

## Screens:

### 1. **Homepage:** (Index)

- Gives the user a hint about what the website is about.

### 2. **User authentication and authorization.** (Sign up and Login Pages)

3. **Contact Us:** A page where any user (logged in or not) can send messages to the admin of the Car Rental company. When a message is sent, it is inserted in the database for the admin to view later.

4. **Rent:** Views all cars in the database. Can only be accessed if the user is logged in.

- Time filter is implemented: A user should enter a pick-up date and a return date, then the system will show all the available (not-reserved) in these specific dates.

- Specifications' filter is implemented: A user is allowed to search the available cars by any of the car specifications according to their needs.

- After the user chooses the dates and filters the cars, they can then choose to reserve a car. When a car is reserved, it is added to the reservations table. Reserving the car doesn't mean that it is paid for. The user is then directed to the 'My Reservations' page to view all their reservations and pay if needed.

5. **Customer Reservations:** Views all customer's reservations with the option to pay for any of the reservations that hasn't been paid for yet.

6. **Card Payment:** The user can anytime pay for the reservation they chose to pay from the button in 'My Reservations' page, which will direct them to the 'card payment page'

- The user enters their credit card information and pay for the reservation.

7. **Customer Profile:** Views all customer information.

Admin Portal: (All include a Navigation Bar)

- Navigation Bar includes the following pages: Reservations, Cars, Customers, Reports, Feedbacks, and Admin Logout.

Screens:

1. **Admin Authentication and Authorization:** Allows the admin to log in to the admin portal.

2. **Reservations:**

- Views all the reservations information, including customer information, and reserved car information.
- Advanced search which is searching by any of the car information, customer information or reservation day and get all information about the car, customer, and reservation.
- Admin can update the reservation when the customer picks up the car and when they return it.

3. **Cars:**

- Views all the cars' information.
- Admin can search using any of the car information.
- Admin can add a new car, update, and delete an existing car.
- Admin can update the car status to available or out of service.

#### 4. **Customers:**

- Views all the customers' information.
- Admin can search using any of the customer information.

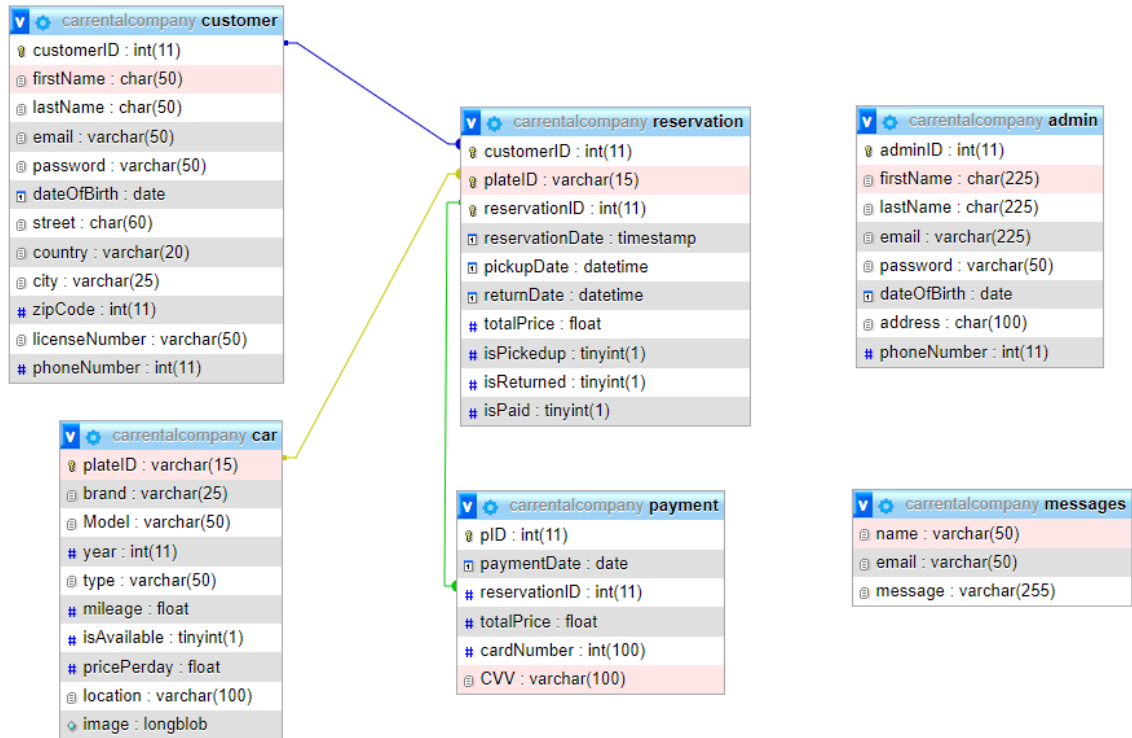
#### 5. **Reports:**

- Report 1: all reservations within a specified period that the admin enters including all car and customer information.
- Report 2: all reservations of any car that the admin searches for within a specified period including all car information.
- Report 3: the status of all cars on a specific day that the admin enters.
- Report 4: all reservations of a specific customer that the admin searches for including customer information, car model and plate id.
- Report 5: daily payments within a specific period that the admin specifies.

5. **Feedbacks:** Views all the messages that the customers sent using the contact us page.

- After finishing, the user or admin can then logout and be redirected back to the homepage.

- **Relational Schema:**



- **Entity-Relationship Diagram (ERD):**

