



Faculty of Engineering - Cairo University

Credit Hours System

Fall 2022

CMPN202 – Introduction to Database

Cars-Dealership Project

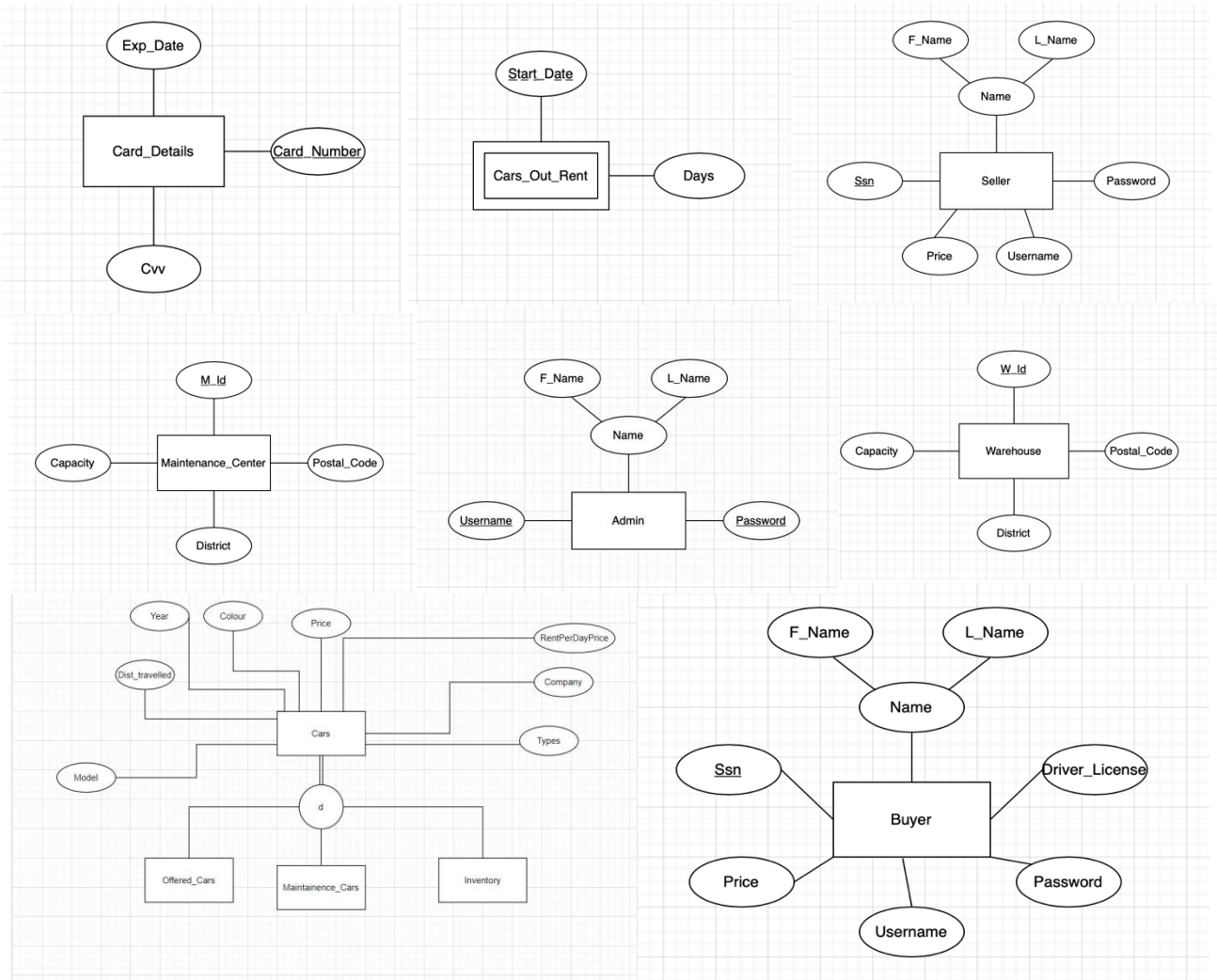
Quality Motors

Team number (7):

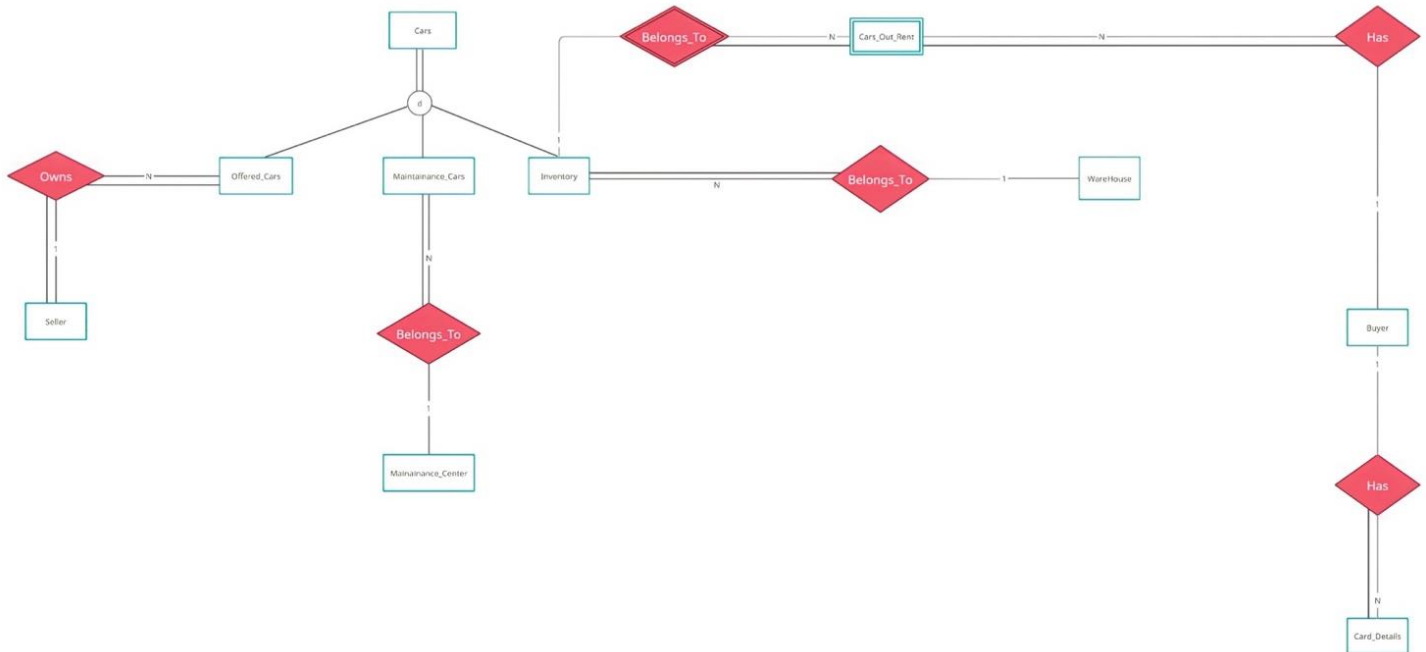
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1- The New ER diagram:

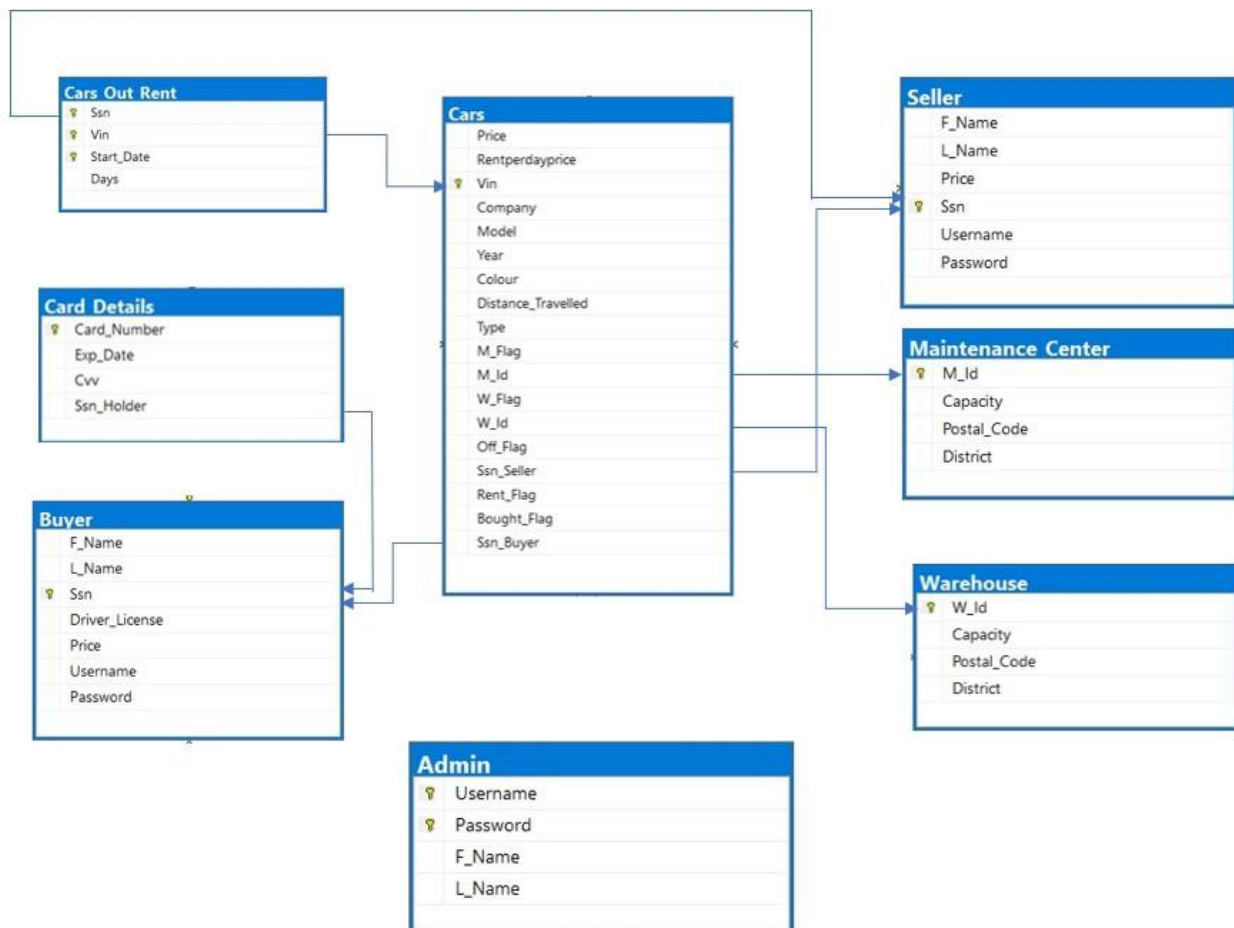
a) Attributes



b) Relations



2- Database Schema:



3- Assumptions and Constraints:

Admins:

- Any Admin could approve any car offered by seller.
- Any Admin assigns each car from the maintenance center to a warehouses.
- Admin updates the price to sell or rent of each car.
- Any Admin is responsible for retrieving any rented car.
- Admin can only reject an offered car (will not delete it as another admin could accept it).
- Each admin has a unique Username.
- An admin can add another admin.

Sellers:

- Each seller has a unique SSN, Username.
- Each seller can offer multiple cars.
- Only sellers can delete any of his offered cars (not Admins).
- A car must have only one seller.

Buyer:

- Each buyer has a unique SSN, username, driver's license.
- Each buyer can buy/rent multiple cars.
- Buyer can view cars in inventory without buying.

Maintenance center :

- Each maintenance center must have a unique Maintenance ID, and has a postal code, capacity, and district. (These data are inserted in our system from the start, so no admin will need to add centers)

Warehouse:

- Each Warehouse must have a unique Warehouse ID, and has a postal code, capacity and district. (These data are inserted in our system from the start, so no admin will need to add centers)

Card Details:

- Each Card has unique card number and must have the buyer SSN, expiry date and CVV.

Validations:

- **VIN:** must be 8 characters
- **SSN:** must be 7 digits
- **Distance Travelled:** must be max of 6 digits
- **Price:** must be by max of 7 digits