**IST 659 FALL 2022**

**Project Proposal: Car Sales Management System**

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1. **Business Description**

The objective of the project is to create a database for Car Sales to manage car records for the dealers, to view past records and comments of the car for new customers and help dealers to improve the quality based on the reviews.

This database will be helpful in the following ways:

* It will be feasible to user to view which type of car will be best fit according to their price range and type.
* It will be easier for the salesman to keep a track of the car availability.
* The Database that is to be created will contain records of the available car type, current user details, the details of the car types and current description of each car available, if not available it shows when it might be available

We have assumed the following:

* The dealer’s showroom has new cars from the manufactures and used cars from existing customers.
* All second-hand cars are in perfect running condition.

1. **Problem Statement**

There are physical copies of all the administrative records for a car. It is incredibly difficult to manage, keep up with, and access these records. They are vulnerable to deterioration and eventual loss of important data because they are on paper. There are also space problems brought on by the volume of recordings.

Physical records also make it difficult for consumers to efficiently keep track of new car models.

Additionally, this antiquated system makes it challenging for the consumer to locate availability and a dealership close that has the car of their choice. They must spend their own time going to find the model, which is inefficient. As a result, a management system that is effective and can address all the problems is required.

1. **Proposed Solution**

With the use of Car sales management system, we can ensure improved and efficient user experience between all users of this system as they can interact and exchange information.

* + - This system will help solve the issues faced by the administration as it will make the data records easier to store, maintain and access.
    - It will also solve the problem of the wastage of space caused in the case of having physical records.
    - It will help the seller to access the records of the buyer, and the buyer can access the previous customer reviews and ratings based on the car models of their choice.
    - The buyer can query the system and find the seller according to their region, city. They can also check the availability of the car models available.
    - The seller can update the database based on the availability of the models and can maintain different databases for new and used cars.
    - The seller can also check if the buyer is authenticated, by checking their credit scores, hence car sales management system simplifies the management of the database making it easier and accessible.

1. **Users**

The customers who will use it to more easily access the car models, their car ratings, car information, amenities offered by the car departments, and submit remarks on the new model are the product's main end users. When the seller arrives at the other end, they enter the necessary car details. The administrative staff can examine the records of transactions between buyers and sellers using this database management system to make sure there are no outstanding debts.

1. **Potential Entities and Attributes**

**BID\_STATUS**

* + - * **Bid\_id[**PK]
      * Bid\_user\_id[FK]
      * Bid\_car\_id[FK]
      * Bid\_date\_time
      * Bid\_amount
      * Bid\_status

**BID\_STATUS\_LOOKUP**

* + - * **Bid\_status\_id[**PK]
      * **Bid\_status\_status**

**CAR:**

* + - * **Car\_id**
      * Car\_name
      * Car\_type
      * Car\_availability
      * Car\_asking\_price
      * Car\_seller\_user\_id [FK]
      * Car\_buyer\_user\_id [FK]
      * Car\_sold\_amount

**CAR\_INFORMATION**

* + - * **Car\_id [PK,FK]**
      * Car\_description
      * Car\_Transmission
      * Car\_Colour
      * Car\_YearOfManufacture
      * Car\_FuelType
      * Car\_mileage\_000
      * Car\_previous\_ownerships
      * Car\_condition (1 is bad, average, good, very good, 5 is excellent condition) LINKED TO RATING\_VALUE

**CARTYPE\_LOOKUP**

* + - * **Cartype\_type [NATURAL PK]**

**CAR\_CONDITION\_LOOKUP**

* **Car\_condition\_value**
* **Car\_condition\_condition**

**CAR\_RATING: EVALUATED by 3rd party**

* + - * **Rating\_id**
      * Rating\_for\_car\_id [FK]
      * Rating\_value
      * Rating\_comments

**USER:**

* + - * **User\_id**
      * User\_email
      * User\_firstname
      * User\_lastname
      * User\_address
      * User\_phonenumber\_area\_code
      * User\_phonenumber\_telephone\_number
      * User\_Score\_id **[FK]**

Score\_Lookup

* + - * **Score\_id**
      * Score\_user\_id [FK]
      * Score\_user\_score
      * Score\_provider\_id [FK]

Score\_PROVIDER\_LOOKUP

* + - * **Provider\_id**
      * Provider\_name (Equifax, TransUnion, and Experian)

**USER\_PREFERENCES**

* **PREF\_user\_id [PK,FK]**
* PREF\_MAX\_PRICE
* PREF\_Colour
* PREF\_FuelType
* PREF\_TRANSMISSION\_TYPE