



CAR RETAIL MANAGEMENT

SYSTEM

DBMS PROJECT

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CAR RETAIL MANAGEMENT SYSTEM

1. Description of the Car Retail Management System

- ❖ The details of Cars is stored into Cars table with below mentioned attributes.
- ❖ Each entity(Car Owners, Customer, Car Models, Cars) contain primary keys and unique keys.
- ❖ The entity Car Owners, Customers has binded with Cars, Car Models entities with foreign key
- ❖ There is one-to-one and one-to-many relationships available between Customer, Owners, Cars and models.
- ❖ All entities Cars, Customer, Car Owners,etc are normalized and reduced duplicacy of records.
- ❖ We have implemented indexing on each tables of Car Retail Management System tables for fast query execution.

2. Car Retail Management System entities and their attributes

✧ **Cars Entity:**

- ✓ car_id,
- ✓ car_customer_id,
- ✓ car_number,
- ✓ car_company,
- ✓ car_description

✧ **Car Models Entity:**

- ✓ car_model_id
- ✓ car_model_number
- ✓ car_model_year
- ✓ car_model_name
- ✓ car_model_type
- ✓ car_model_description

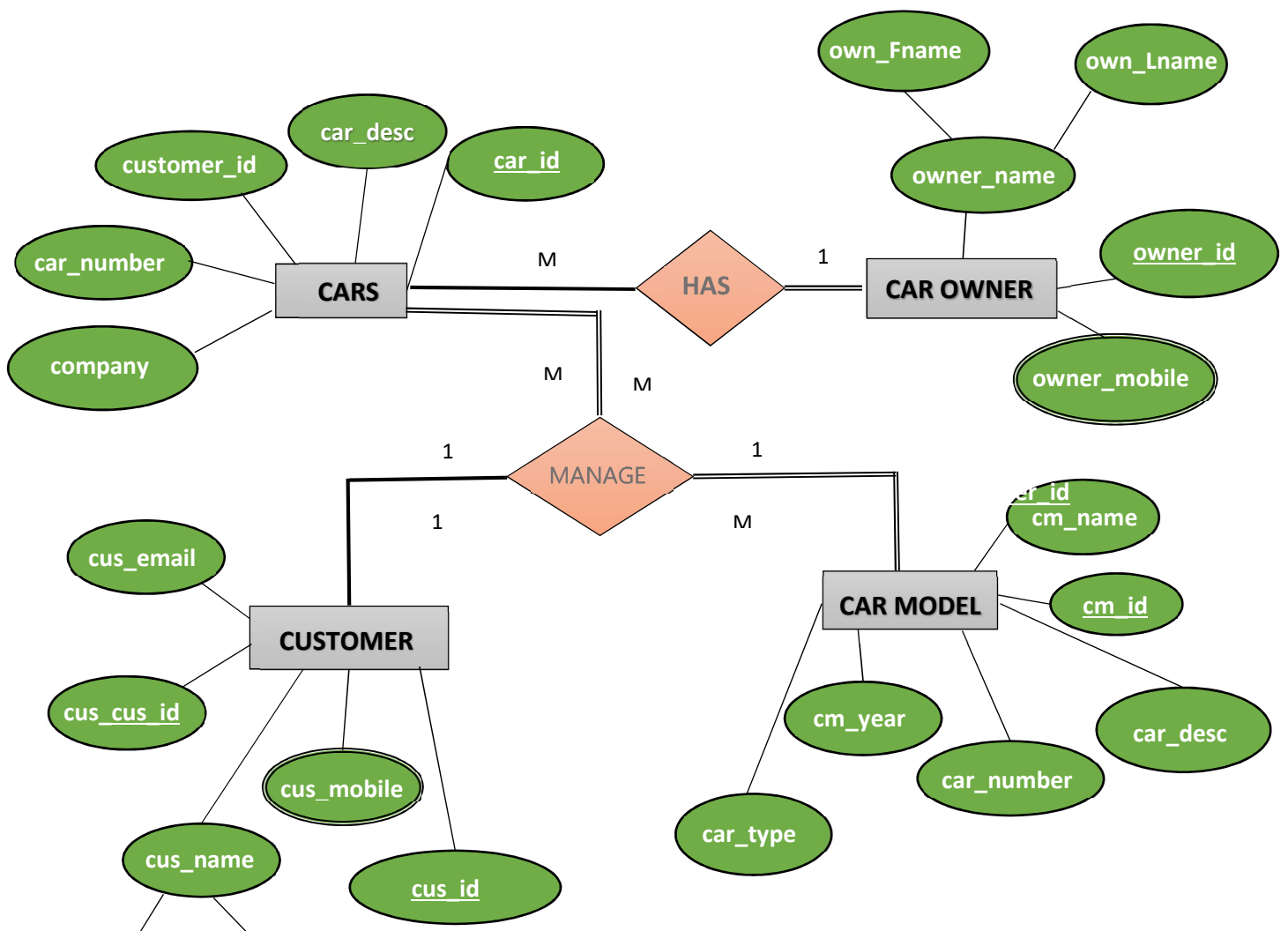
✧ **Car Owners Entity:**

- ✓ owner_id(licence number)
- ✓ owner_name
- ✓ owner_mobile

✧ **Customer Entity:**

- ✓ cus_id(licence number)
- ✓ cus_name
- ✓ cus_email
- ✓ cus_mobile
- ✓ cus_address

Entity-Relationship Model



ER TO RELATIONAL MODEL

CAR

car_id	car_desc	cus_id	car_number	company	owner_id
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CAR OWNER

owner_id	own_name
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CUSTOMER

Cus_id	Cus_email	Cus_add	Cus_name
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CAR MODEL

Cm_id	Cm_name	Cm_year	Car_type	Car_desc	Car_number
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CAR OWNER MOBILE

Owner_id	Owner_mobile
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Cus_id	Cus_mobile
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CUSTOMER MOBILE

CREATION OF TABLES

1) CAR:

```
mysql> CREATE TABLE cars(  
  -> car_id varchar(20) NOT NULL,  
  -> car_desc varchar(80),  
  -> customer_id int(20),  
  -> car_number varchar(20),  
  -> company varchar(20),  
  -> PRIMARY KEY(car_id)  
  -> );  
Query OK, 0 rows affected, 1 warning (0.56 sec)
```

2) CAR_OWNER:

```
mysql> CREATE TABLE car_owner(  
  -> owner_id int(20) NOT NULL,  
  -> own_Fname varchar(20),  
  -> own_Lname varchar(20),  
  -> PRIMARY KEY(owner_id)  
  -> );  
Query OK, 0 rows affected, 1 warning (0.10 sec)
```


3) OWNER_MOBILE:

```
mysql> CREATE TABLE owner_mobile(  
  -> owner_id int(20),  
  -> own_mob int(30),  
  -> FOREIGN KEY(owner_id) REFERENCES car_owner(owner_id)  
  -> );  
Query OK, 0 rows affected, 2 warnings (0.16 sec)
```

4) CUSTOMER:

```
mysql> CREATE TABLE customer(  
  -> cus_id int(20) NOT NULL,  
  -> cus_add varchar(30),  
  -> cus_Fname varchar(3),  
  -> cus_Lname varchar(30),  
  -> cus_email varchar(30)  
  -> );  
Query OK, 0 rows affected, 1 warning (0.13 sec)
```

5) CAR_MODEL:

```
mysql> create table car_model(  
  -> cm_id int(20) NOT NULL,  
  -> cm_name varchar(20),  
  -> cm_year int(20),  
  -> car_type varchar(20),  
  -> car_num varchar(20),  
  -> PRIMARY KEY(cm_id)  
  -> );  
Query OK, 0 rows affected, 2 warnings (0.48 sec)
```

6) CUSTOMER_MOBILE

```
mysql> create table customer_mobile(  
  -> cus_id int(11) NOT NULL,  
  -> cus_mobile int(20),  
  -> CONSTRAINT fk1 FOREIGN KEY (cus_id) REFERENCES customer(cus_id)  
  -> );  
Query OK, 0 rows affected, 2 warnings (0.24 sec)
```

INSERTION OF TABLES

1) CAR:

```
mysql> INSERT INTO cars(car_id,customer_id,car_number,company,car_desc)
-> VALUES
-> ('A01',2,'DL6557','Maruti','Black'),
-> ('A02',6,'DL5757','Honda','White'),
-> ('A03',8,'DL4578','Honda','White'),
-> ('A04',3,'DL6421','Maruti','Black'),
-> ('A05',7,'DL6425','Tata','Grey')
-> ;
Query OK, 5 rows affected (0.73 sec)
Records: 5 Duplicates: 0 Warnings: 0
```

```
mysql> select * from cars;
+-----+-----+-----+-----+-----+
| car_id | car_desc | customer_id | car_number | company |
+-----+-----+-----+-----+-----+
| A01    | Black   |          2 | DL6557    | Maruti  |
| A02    | White   |          6 | DL5757    | Honda   |
| A03    | White   |          8 | DL4578    | Honda   |
| A04    | Black   |          3 | DL6421    | Maruti  |
| A05    | Grey    |          7 | DL6425    | Tata    |
+-----+-----+-----+-----+-----+
5 rows in set (0.00 sec)
```

2) CUSTOMER:

```
mysql> INSERT INTO customer
-> VALUES
-> (2,'Delhi','Rhea','Chawla','rc@gmail.com'),
-> (6,'Haryana','Karan','Goyal','kg@gmail.com'),
-> (8,'Haryana','Nidhish','Gaur','ng@gmail.com'),
-> (3,'Delhi','Sarika','Gaind','sg@hotmail.com'),
-> (7,'Chandigarh','Aditi','Goyal','ag@mail.com')
-> ;
```

```
mysql> select * from customer;
+-----+-----+-----+-----+-----+
| cus_id | cus_add | cus_Fname | cus_Lname | cus_email |
+-----+-----+-----+-----+-----+
| 2      | Delhi   | Rhea      | Chawla    | rc@gmail.com |
| 3      | Delhi   | Sarika    | Gaind     | sg@hotmail.com |
| 6      | Haryana | Karan     | Goyal     | kg@gmail.com |
| 7      | Chandigarh | Aditi    | Goyal     | ag@mail.com |
| 8      | Haryana | Nidhish   | Gaur      | ng@gmail.com |
+-----+-----+-----+-----+-----+
5 rows in set (0.00 sec)
```

3)CUSTOMER_MOBILE:

```
mysql>
mysql> INSERT INTO customer_mobile
-> VALUES
-> (2,4562987),
-> (2,6489082),
-> (3,7094850),
-> (3,1665090),
-> (6,9078962),
-> (7,0986352),
-> (8,6763847)
-> ;
Query OK, 7 rows affected (0.04 sec)
Records: 7 Duplicates: 0 Warnings: 0
```

```
mysql> select * from customer_mobile;
+-----+-----+
| cus_id | cus_mobile |
+-----+-----+
|      2 |    4562987 |
|      2 |    6489082 |
|      3 |    7094850 |
|      3 |    1665090 |
|      6 |    9078962 |
|      7 |     986352 |
|      8 |    6763847 |
+-----+-----+
7 rows in set (0.00 sec)
```

4)CAR_OWNER:

```
mysql> INSERT INTO car_owner
-> VALUES
-> (11,'RJUKL','CLIO'),
-> (12,'HUOK','KIUI'),
-> (23,'HIJO','OKLOP'),
-> (34,'OIJK','UIOOKN'),
-> (67,'HIUBH','GDFAC')
-> ;
Query OK, 5 rows affected (0.03 sec)
Records: 5 Duplicates: 0 Warnings: 0
```

```
mysql> SELECT * FROM car_owner;
+-----+-----+-----+
| owner_id | own_Fname | own_Lname |
+-----+-----+-----+
|      11 | RJUKL    | CLIO     |
|      12 | HUOK     | KIUI     |
|      23 | HIJO     | OKLOP    |
|      34 | OIJK     | UIOOKN   |
|      67 | HIUBH    | GDFAC    |
+-----+-----+-----+
5 rows in set (0.00 sec)
```

5)OWNER_MOBILE:

```
+-----+-----+-----+-----+-----+
2 rows in set (0.00 sec)

mysql> INSERT INTO owner_mobile
-> VALUES
-> (11,490890),
-> (11,097362),
-> (11,907347),
-> (12,087483),
-> (23,487349),
-> (34,879348),
-> (67,986732)
-> ;
Query OK, 7 rows affected (0.07 sec)
Records: 7  Duplicates: 0  Warnings: 0

mysql> SELECT * FROM owner_mobile;
+-----+-----+
| owner_id | own_mob |
+-----+-----+
|      11 | 490890 |
|      11 |  97362 |
|      11 | 907347 |
|      12 |  87483 |
|      23 | 487349 |
|      34 | 879348 |
|      67 | 986732 |
+-----+-----+
7 rows in set (0.00 sec)
```

7) CAR_MODEL:

```
mysql> INSERT INTO car_model
-> VALUES
-> ('A01','Maruti','2014','Petrol','DL6557'),
-> ('A02','Honda','2016','Diesel','DL5757'),
-> ('A03','Honda','2016','Diesel','DL4578'),
-> ('A04','Maruti','2013','CNG','DL6421'),
-> ('A05','Tata','2014','Petrol','DL6425')
-> ;
Query OK, 5 rows affected (0.03 sec)
Records: 5  Duplicates: 0  Warnings: 0

mysql> select * from car_model;
+-----+-----+-----+-----+-----+
| cm_id | cm_name | cm_year | car_type | car_num |
+-----+-----+-----+-----+-----+
| A01   | Maruti  | 2014    | Petrol   | DL6557  |
| A02   | Honda   | 2016    | Diesel   | DL5757  |
| A03   | Honda   | 2016    | Diesel   | DL4578  |
| A04   | Maruti  | 2013    | CNG      | DL6421  |
| A05   | Tata    | 2014    | Petrol   | DL6425  |
+-----+-----+-----+-----+-----+
5 rows in set (0.00 sec)
```


MODIFICATION OF TABLES

```
mysql> UPDATE car_model  
      -> SET cm_name = 'Hyundai'  
      -> where cm_id = 'A03';  
Query OK, 1 row affected (1.10 sec)  
Rows matched: 1  Changed: 1  Warnings: 0
```



```
mysql> select * from car_model;
+-----+-----+-----+-----+-----+
| cm_id | cm_name | cm_year | car_type | car_num |
+-----+-----+-----+-----+-----+
| A01   | Maruti  | 2014    | Petrol   | DL6557   |
| A02   | Honda   | 2016    | Diesel   | DL5757   |
| A03   | Hyundai | 2016    | Diesel   | DL4578   |
| A04   | Maruti  | 2013    | CNG      | DL6421   |
| A05   | Tata    | 2014    | Petrol   | DL6425   |
+-----+-----+-----+-----+-----+
5 rows in set (0.00 sec)
```

```
mysql> ALTER TABLE customer MODIFY state VARCHAR(30);
ERROR 1054 (42S22): Unknown column 'state' in 'customer'
mysql> ALTER TABLE customer MODIFY cus_Fname VARCHAR(30);
```

```
mysql> DELETE FROM customer_mobile WHERE cus_id = 7;
Query OK, 1 row affected (0.02 sec)
```

```
mysql> select * from customer_mobile;
+-----+-----+
| cus_id | cus_mobile |
+-----+-----+
| 2      | 4562987    |
| 2      | 6489082    |
| 3      | 7094850    |
| 3      | 1665090    |
| 6      | 9078962    |
| 8      | 6763847    |
+-----+-----+
6 rows in set (0.00 sec)
```