# DATABASE MANAGEMENT SYSTEM -22ITT41

PROJECT REPORT


Team Members,

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# CAR MANAGEMENT SYSTEM

## Problem Statement

In the fast-paced world of today, managing fleets of vehicles efficiently is crucial for businesses, organizations, and individuals alike. Whether it's a rental car company, a transportation service, or a personal car collection, effective management of cars ensures smooth operations, cost-effectiveness, and customer satisfaction. The aim of this project is to develop a comprehensive Car Management System that addresses the diverse needs of users involved in the lifecycle of cars.

## Requirements

- **Vehicle Inventory Management:** Record details of each vehicle in the fleet, including make, model, year, VIN (Vehicle Identification Number), registration information, and current status (e.g., available for rent, in maintenance, rented out).

- **Customer Management:** Record customer information, including name, contact details, identification documents, and billing addresses.

- **Car Management:** Maintain a catalog of car models, including make, model, year, features, and specifications. Classify cars into different types (e.g., sedan, SUV, luxury) based on size, features, and intended use.

- **Billing:** Process billing for car rentals, including rental fees, additional services (e.g., insurance), and any applicable taxes. Handle payment processing through various channels, including credit/debit cards, cash, and online payments.

- **Loan Management:** Accept loan applications from customers seeking financing for car purchases. Capture applicant details, including income, employment history, credit score, and desired loan amount.

# DATABASE SCHEMA

**Customer:**

Cus_id

Name

Phoneno

Address

**Car_Model:**

Car_id

Car_model

Car_price

**Car_Type:**

Car_id

C_name

**Car_Details:**

Car_id

Color

Mileage

**Billing:**

Bill_id

Cus_id

Car_id

Car_model

Car_price

Amt_balance

Advance_amt

**Loan:**

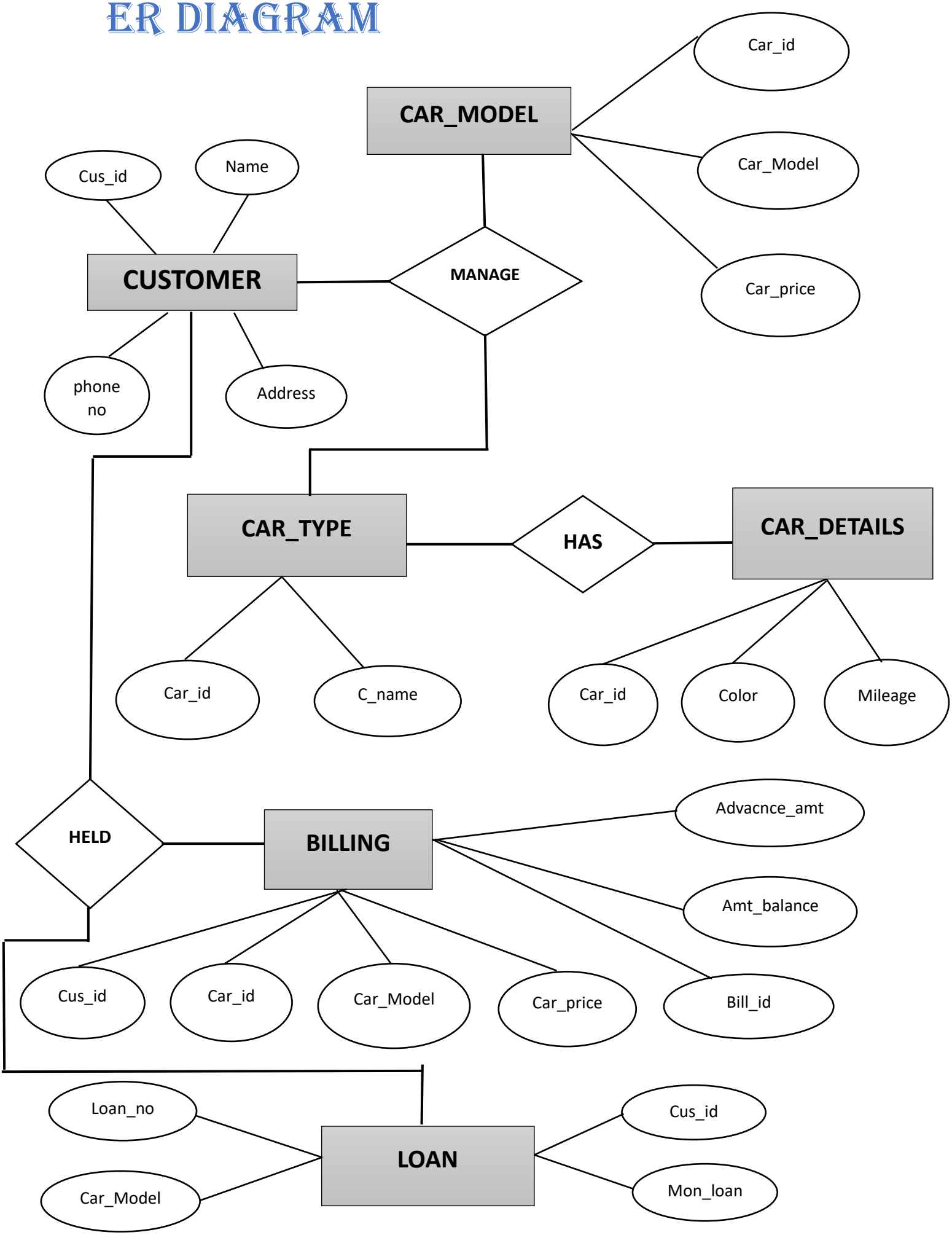
Loan_no

Loan_id

Mon_loan

Car_model

# ER DIAGRAM


Car_id
CAR_MODEL
Car_Model
Cus_id
Name
CUSTOMER
MANAGE
Car_price
phone no
Address
CAR_TYPE
HAS
CAR_DETAILS
Car_id
C_name
Car_id
Color
Mileage
HELD
BILLING
Advacnce_amt
Amt_balance
Cus_id
Car_id
Car_Model
Car_price
Bill_id
Loan_no
LOAN
Cus_id
Car_Model
Mon_loan

# SQL QUERIES

## DDL (Data Definiton Language):

**Create a table named “Customer” with basic columns and a Primary Key**

```
Create table customer (
        cus_id varchar(7) primary key,
        name varchar(15),
        phone_num number(10),
        address varchar(15)
);
```

**OUTPUT:**

Table created.

## DML (Data Manipulation Language):

**Insert a new record into Customer Table**

```
insert into customer values
(79,’praveena’,’6380677879’,’kallakurichi’);
```

**OUTPUT:**

1 row created.

## Displaying the records from the customer table

```
select * from customer;
```

**OUTPUT:**

```
CUS_ID NAME PHONE_NUM ADDRESS
------- -------------- --------- --------------
79 praveena 6380677879 kallakurichi
114 vasumathi 9626762998 vellakovil
115 vedhavithya 8883946181 arupukottai
117 vidya 9866334621 salem
```

## Join Query:

**Retrieve cus_id by joining loan and billing table**

```
select loan.cus_id
from billing inner join loan on billing.cus_id=loan.cus_id;
```

**OUTPUT:**

```
CUS_ID
-------
79
114
```

## Nested Query:

```
select car_price from carmodel where car_model = (select car_model
from billing where bill_id='101');
```

**OUTPUT:**

```
CAR_PRICE
---------
   6400000
```