Dealership Database

Entities

1. Manufacturer
2. Dealership
3. Salesperson
4. Customer
5. Options
6. Model
7. Car

Essential Attributes are

MANUFACTURER (M.ID, M.Name)

DEALERSHIP (D.ID, Name)

SALESPERSON (SalesmanID)

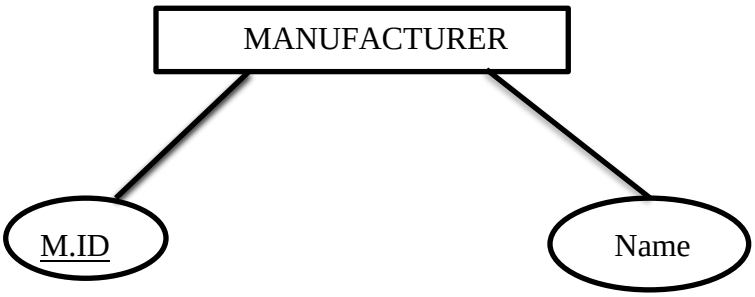
CUSTOMER (C.ID, Name, Address, Mobile#)

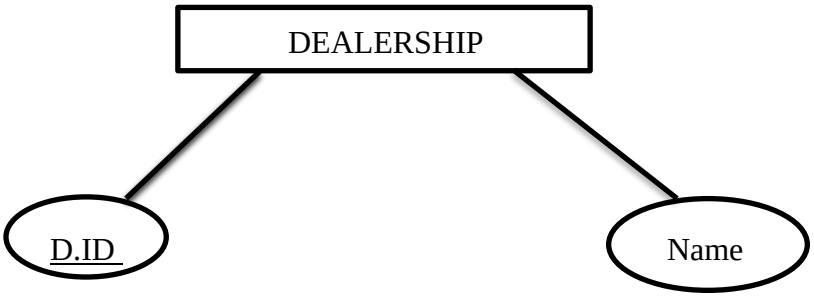
OPTION (Code ,Name,Price)

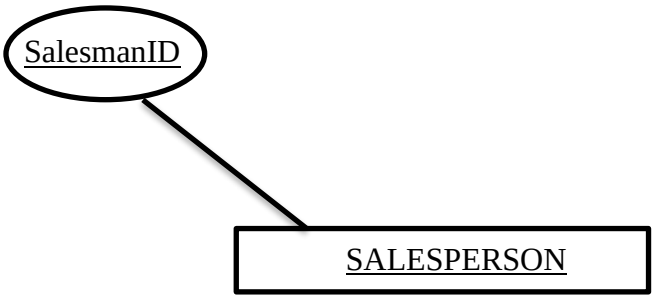
MODEL (Md.Serial,Name,Year,Basic-Specifications)

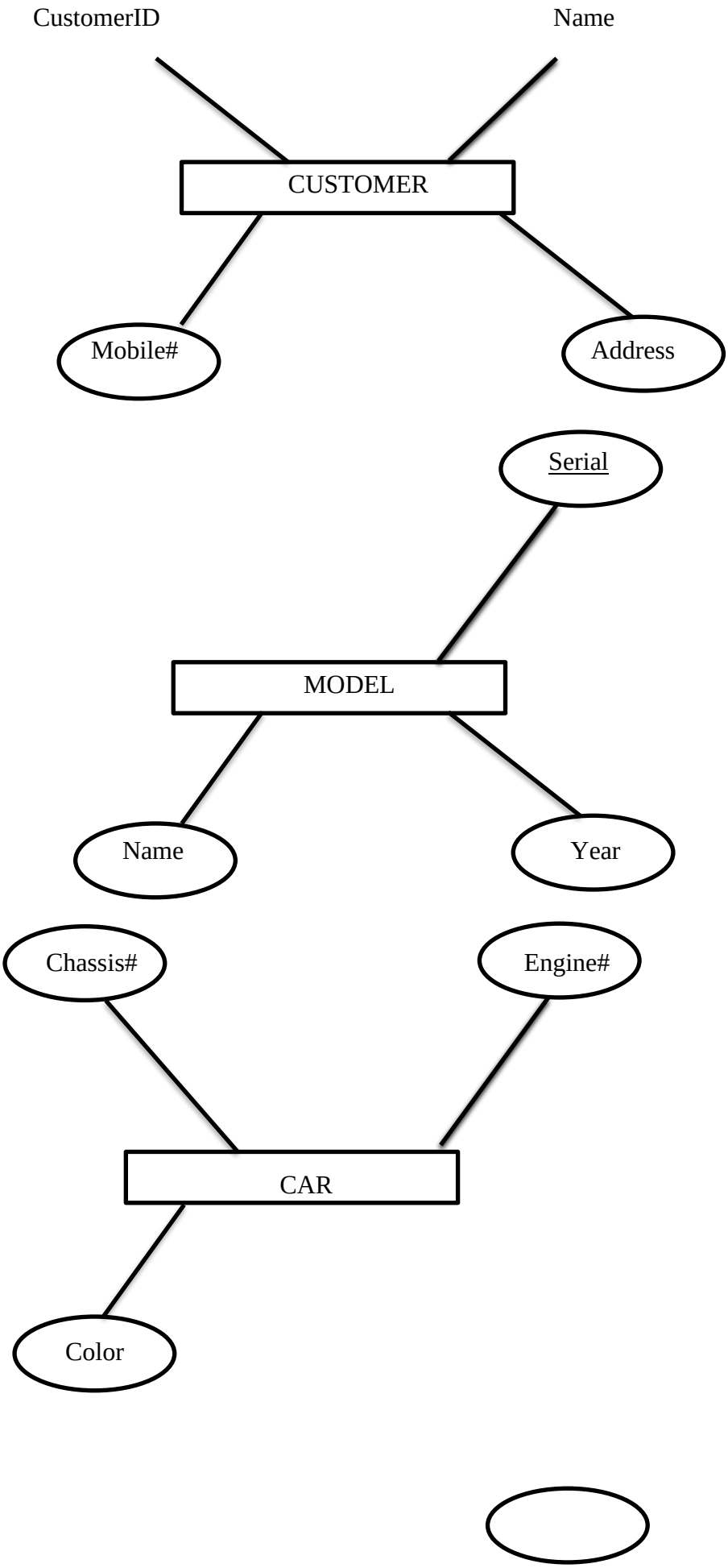
CAR (Engine_number,Chassis_number,Color)

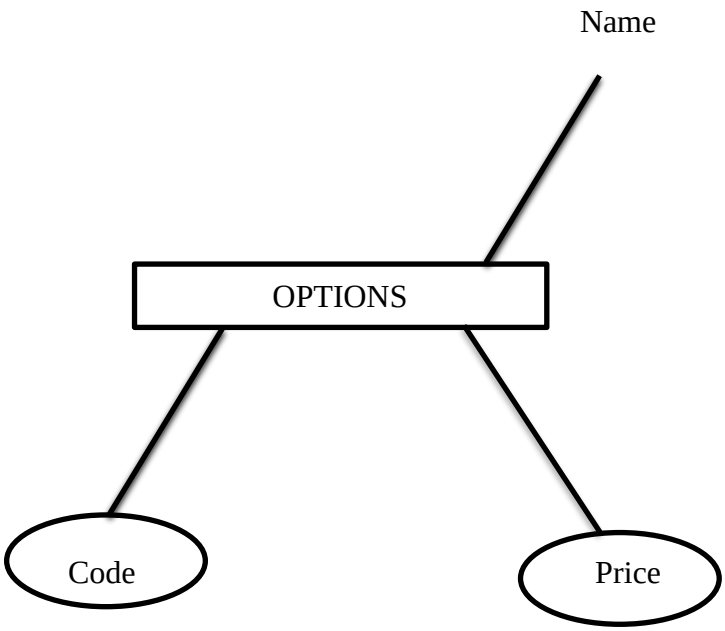
Preliminary Design of Entity Types :


MANUFACTURER
M.ID
Name

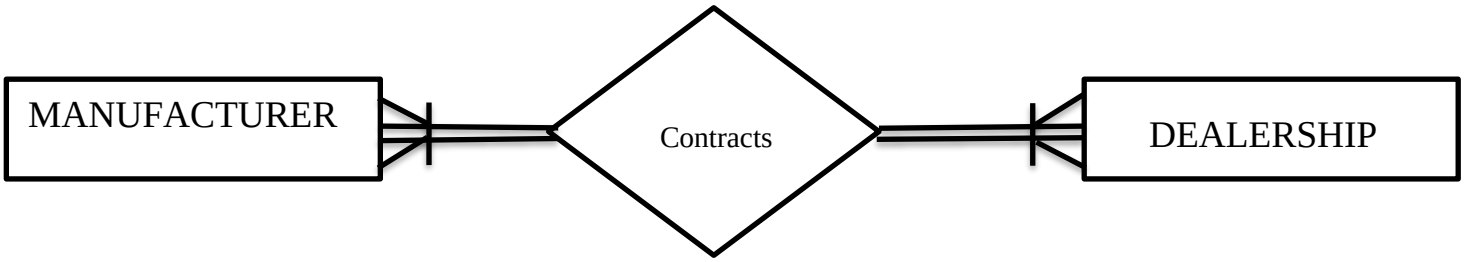

DEALERSHIP
D.ID
Name

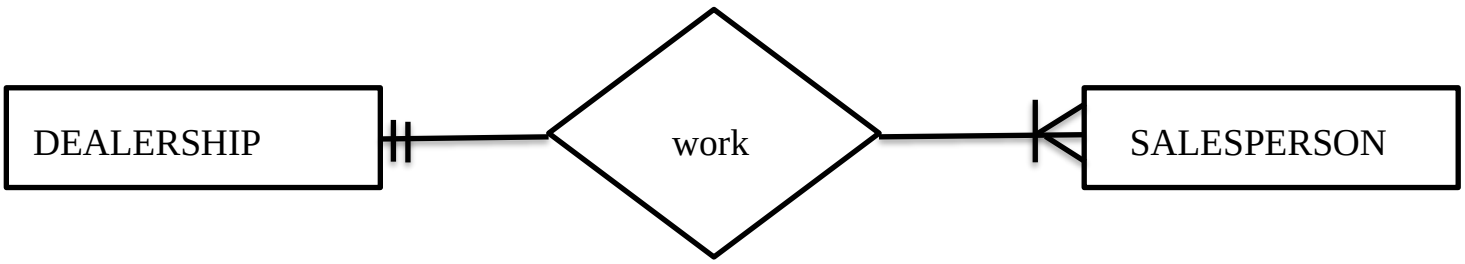

SalesmanID
SALESPERSON

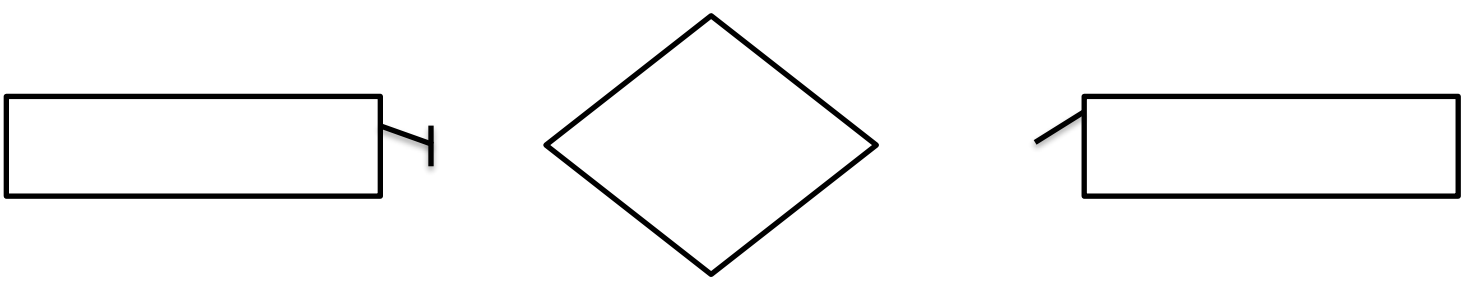

CustomerID
Name
CUSTOMER
Mobile#
Address
Serial
MODEL
Name
Year
Chassis#
Engine#
CAR
Color

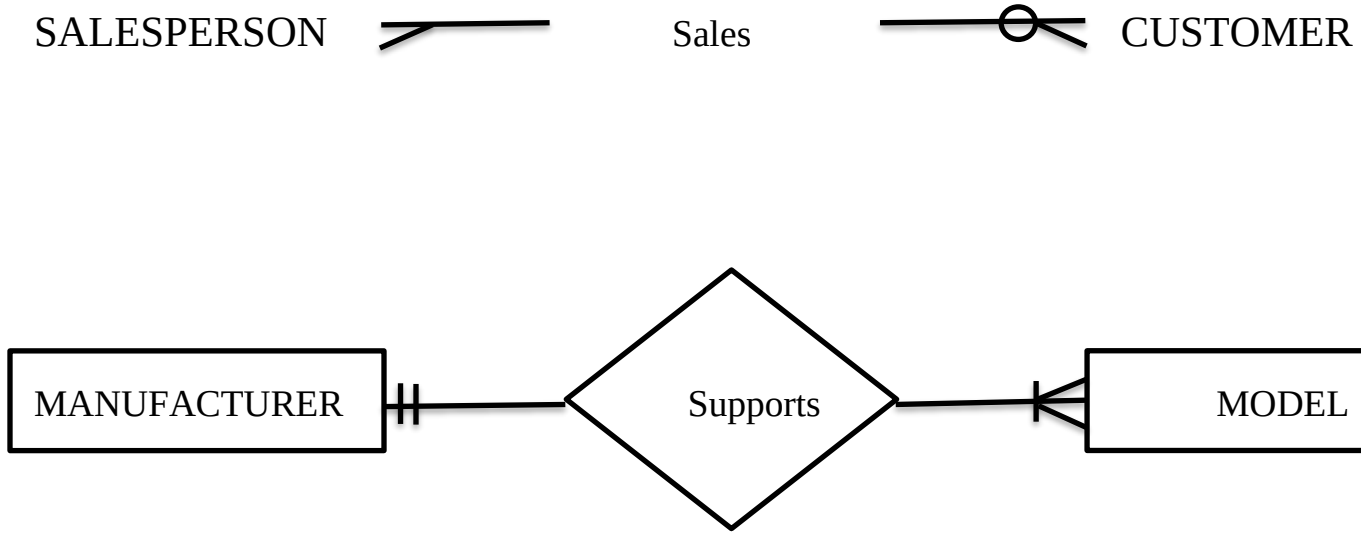


Relationship between entities:

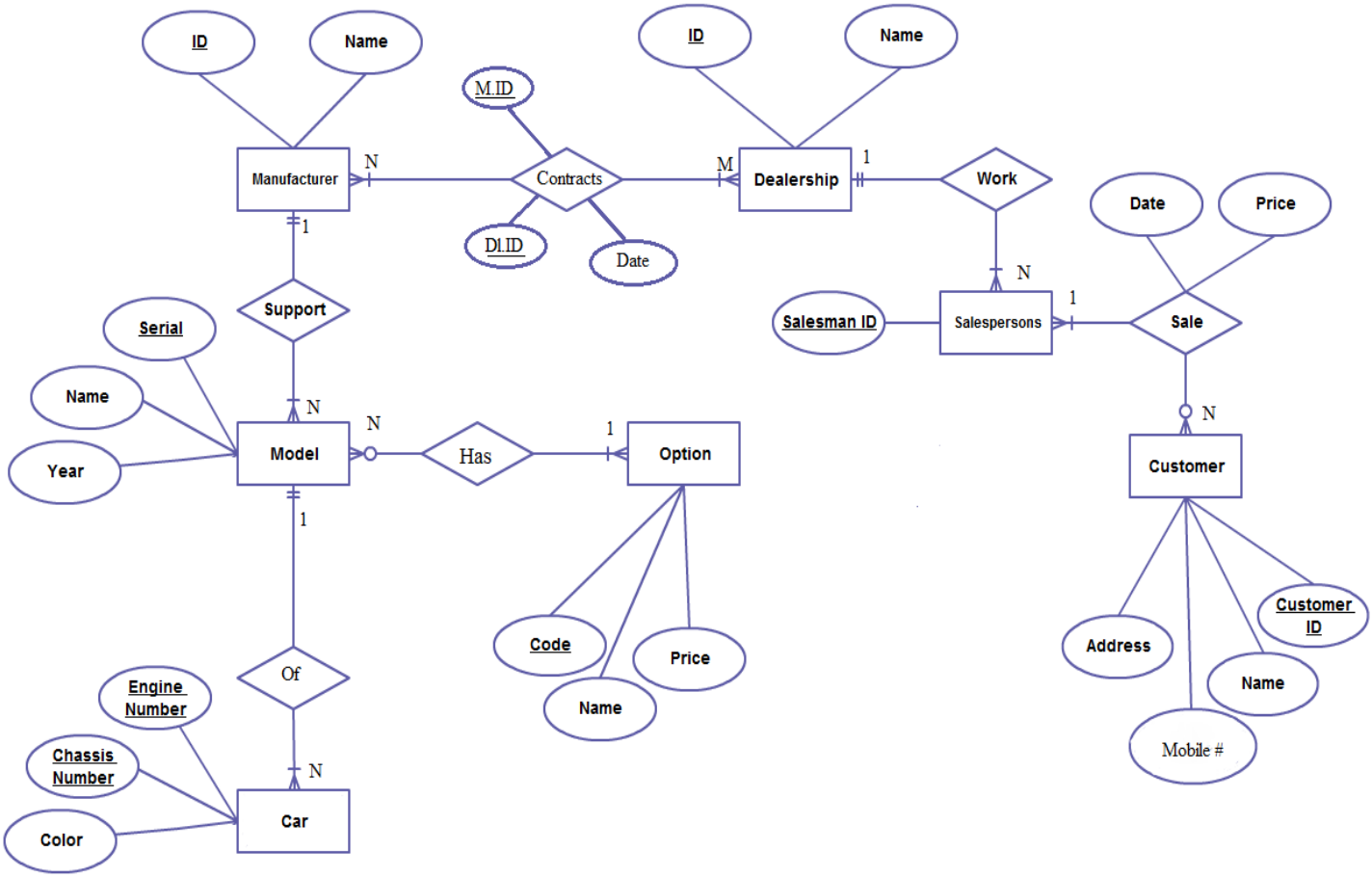







SALESPERSON
Sales
CUSTOMER
MANUFACTURER
Supports
MODEL
MODEL
Has
OPTION
MODEL
Of
CARS

ER Diagram



Relational Schema

MANUFACTURER

ID	Name

CONTRACTS

M_ID	DL_ID	Date

DEALERSHIP

ID	Name

SALESPERSON

Salesman_ID	DL_ID

CUSTOMER

Name	Customer_ID	Address	Mobile_number

SALE

Cust_ID	Salesman_ID	Date	Price

MODEL

Name	Serial	Year	M_ID

CAR

Engine_number	Chassis_number	Color	M.Serial

OPTION

Name	Price	Code

MODEL_HAS_OPTION

Op_Code	Md_serial	Year

My SQL work….!!!

Show databases

```
mysql> show databases;
+--------------------+
| Database           |
+--------------------+
| information_schema |
| company            |
| inaam              |
| inaam ahmed        |
| mysql              |
| performance_schema |
| sid                |
| test               |
+--------------------+
8 rows in set (0.00 sec)
```

Create Database of Azadmotors

```
mysql> create database azadmotors;
Query OK, 1 row affected (0.00 sec)
```

Show databases

```
mysql> show databases;
+--------------------+
| Database           |
+--------------------+
| information_schema |
| azadmotors         |
| company            |
| inaam              |
| inaam ahmed        |
| mysql              |
| performance_schema |
| sid                |
| test               |
+--------------------+
9 rows in set (0.00 sec)
```

Use Database "Azadmotors"

```
mysql> use azadmotors;
Database changed
```

TABLES Creation

MANUFACTURER

```
mysql> create table manufacturer(
    -> id int not null,
    -> name varchar(15),
    -> primary key(id));
Query OK, 0 rows affected (0.00 sec)
```

DEALERSHIP

```
mysql> create table dealership(
    -> id int not null,
    -> name varchar(15),
    -> primary key(id));
Query OK, 0 rows affected (0.01 sec)
```

Contracts

```
mysql> create table contracts(
    -> m_id int not null,
    -> dl_id int not null,
    -> Date date,
    -> primary key(m_id,dl_id),
    -> foreign key(m_id) references manufacturer(id),
    -> foreign key(dl_id) references dealership(id));
Query OK, 0 rows affected (0.08 sec)
```

Salesperson

```
mysql> create table salesperson(salesman_id int not null,dl_id int,
    -> primary key(salesman_id),foreign key(dl_id) references dealership(id));
Query OK, 0 rows affected (0.01 sec)
```

CUSTOMER

```
mysql> create table customer(
    -> name varchar(15),
    -> customer_id int not null,
    -> address varchar(15),
    -> mobile_number varchar(15),
    -> primary key(customer_id));
Query OK, 0 rows affected (0.01 sec)
```

SALES

```
mysql> create table sales(cust_id int not null,
    -> salesman_id int not null,
    -> Date date,
    -> price int,
    -> primary key(cust_id,salesman_id),
    -> foreign key(cust_id) references customer(customer_id),
    -> foreign key(salesman_id) references salesperson(salesman_id));
Query OK, 0 rows affected (0.01 sec)
```

MODEL

```
mysql> create table model(
    -> name varchar(15),
    -> serial int not null,
    -> year date,
    -> m_id int,
    -> primary key(serial),
    -> foreign key(m_id) references manufacturer(id));
Query OK, 0 rows affected (0.01 sec)
```

CAR

```
mysql> create table car(
    -> engine_number int not null,
    -> chassis_number int not null,
    -> color varchar(10),
    -> serial int,
    -> primary key(engine_number,chassis_number));
Query OK, 0 rows affected (0.06 sec)
```

OPTIONS

```
mysql> create table options(
    -> name varchar(15),
    -> price int,
    -> code int not null,
    -> primary key(code));
Query OK, 0 rows affected (0.00 sec)
```

Model_has_options

```
mysql> create table model_has_options(
    -> op_code int not null,
    -> md_serial int not null,
    -> year date,
    -> primary key(op_code,md_serial),
    -> foreign key(op_code) references options(code),
    -> foreign key(md_serial) references model(serial));
Query OK, 0 rows affected (0.07 sec)

mysql> _
```

SHOW TABLES

```
mysql> show tables;
+----------------------+
| Tables_in_azadmotors |
+----------------------+
| car                  |
| contracts            |
| customer             |
| dealership           |
| manufacturer         |
| mode_has_options     |
| mode_options         |
| model                |
| model_has_options    |
| options              |
| sales                |
| salesperson          |
+----------------------+
12 rows in set (0.81 sec)
```

TABLES Description

MANUFACTURER

```
mysql> desc manufacturer;
+-------+-------------+------+-----+---------+-------+
| Field | Type        | Null | Key | Default | Extra |
+-------+-------------+------+-----+---------+-------+
| id    | int(11)     | NO   | PRI | NULL    |       |
| name  | varchar(15) | YES  |     | NULL    |       |
+-------+-------------+------+-----+---------+-------+
2 rows in set (0.09 sec)
```

DEALERSHIP

```
mysql> desc dealership;
+-------+-------------+------+-----+---------+-------+
| Field | Type        | Null | Key | Default | Extra |
+-------+-------------+------+-----+---------+-------+
| id    | int(11)     | NO   | PRI | NULL    |       |
| name  | varchar(15) | YES  |     | NULL    |       |
+-------+-------------+------+-----+---------+-------+
2 rows in set (0.06 sec)
```

CONTRACTS

```
mysql> desc contracts;
+-------+---------+------+-----+---------+-------+
| Field | Type    | Null | Key | Default | Extra |
+-------+---------+------+-----+---------+-------+
| m_id  | int(11) | NO   | PRI | NULL    |       |
| dl_id | int(11) | NO   | PRI | NULL    |       |
| Date  | date    | YES  |     | NULL    |       |
+-------+---------+------+-----+---------+-------+
3 rows in set (0.08 sec)
```

SALESSPERSON

```
mysql> desc salesperson;
+-------------+---------+------+-----+---------+-------+
| Field       | Type    | Null | Key | Default | Extra |
+-------------+---------+------+-----+---------+-------+
| salesman_id | int(11) | NO   | PRI | NULL    |       |
| dl_id       | int(11) | YES  | MUL | NULL    |       |
+-------------+---------+------+-----+---------+-------+
2 rows in set (0.06 sec)
```

CUSTOMER

```
mysql> desc customer;
+---------------+-------------+------+-----+---------+-------+
| Field         | Type        | Null | Key | Default | Extra |
+---------------+-------------+------+-----+---------+-------+
| name          | varchar(15) | YES  |     | NULL    |       |
| customer_id   | int(11)     | NO   | PRI | NULL    |       |
| address       | varchar(15) | YES  |     | NULL    |       |
| mobile_number | varchar(15) | YES  |     | NULL    |       |
+---------------+-------------+------+-----+---------+-------+
4 rows in set (0.06 sec)
```

SALES

```
mysql> desc sales;
+-------------+---------+------+-----+---------+-------+
| Field       | Type    | Null | Key | Default | Extra |
+-------------+---------+------+-----+---------+-------+
| cust_id     | int(11) | NO   | PRI | NULL    |       |
| salesman_id | int(11) | NO   | PRI | NULL    |       |
| Date        | date    | YES  |     | NULL    |       |
| price       | int(11) | YES  |     | NULL    |       |
+-------------+---------+------+-----+---------+-------+
4 rows in set (0.01 sec)
```

MODEL

```
mysql> desc model;
+--------+-------------+------+-----+---------+-------+
| Field  | Type        | Null | Key | Default | Extra |
+--------+-------------+------+-----+---------+-------+
| name   | varchar(15) | YES  |     | NULL    |       |
| serial | int(11)     | NO   | PRI | NULL    |       |
| year   | date        | YES  |     | NULL    |       |
| m_id   | int(11)     | YES  | MUL | NULL    |       |
+--------+-------------+------+-----+---------+-------+
4 rows in set (0.03 sec)
```

CAR

```
mysql> desc car;
+----------------+------------+------+-----+---------+-------+
| Field          | Type       | Null | Key | Default | Extra |
+----------------+------------+------+-----+---------+-------+
| engine_number  | int(11)    | NO   | PRI | NULL    |       |
| chassis_number | int(11)    | NO   | PRI | NULL    |       |
| color          | varchar(10)| YES  |     | NULL    |       |
| serial         | int(11)    | YES  |     | NULL    |       |
+----------------+------------+------+-----+---------+-------+
4 rows in set (0.06 sec)
```

OPTIONS

```
mysql> desc options;
+-------+-------------+------+-----+---------+-------+
| Field | Type        | Null | Key | Default | Extra |
+-------+-------------+------+-----+---------+-------+
| name  | varchar(15) | YES  |     | NULL    |       |
| price | int(11)     | YES  |     | NULL    |       |
| code  | int(11)     | NO   | PRI | NULL    |       |
+-------+-------------+------+-----+---------+-------+
3 rows in set (0.05 sec)
```

MODEL_HAS_OPTIONS

```
mysql> desc model_has_options;
+-----------+---------+------+-----+---------+-------+
| Field     | Type    | Null | Key | Default | Extra |
+-----------+---------+------+-----+---------+-------+
| op_code   | int(11) | NO   | PRI | NULL    |       |
| md_serial | int(11) | NO   | PRI | NULL    |       |
| year      | date    | YES  |     | NULL    |       |
+-----------+---------+------+-----+---------+-------+
3 rows in set (0.01 sec)
```