**CASE STUDY**

VEHICLE SERVICE MANAGEMENT

**AIM:**

The vehicle service management identifies the vehicles to be serviced on proper basis keeping in mind about how many times it requires timely service

available on the basis of vehicle type & details,owner details and service due details etc .

**DESCRIPTION:**

It is a model where there is vehicle service company which handles the hassle free servicing of its customers vehicles on timely basis by informing its customers about the service due of there respective vehicles that are not serviced yet .

For this, we take vehicle details ,customer details and also when was it last serviced so by which we predict the service due date .Once we get the relevant information then we keep the record of all the necessary details whether the service is due or not . If yes, then we get to know how many services are pending for the vehicle of that particular customer by maintaining a vehicle\_id and owner\_id .

**DESCRIPTION OF TABLES :**

**Vehicle Table**:- **:** This table consists of details about all the types of vehicles. The information stored in this table includes vehicle\_id and vehicle\_type

Here vehicle\_id is set as primary key

**Vehicle Owner Table**:- **:** This table consists of all types of details about the owner of the vehicle. The information stored in this table includes owner\_id owner\_name , owner\_contact , owner\_location and vehicle\_id as the foreign key

**Vehicle Services Table**:- **:** This table consists of all types of details about the services of the vehicle. The information stored in this table includes service\_id and service\_due .

Here owner\_id and vehicle\_id are set as the foreign key .

There are 3 table we have created :

 vehicle(vehicle\_id,vehicle\_type)

 vehicle\_owner(owner\_id,owner\_name,owner\_contact, owner\_location,vehicleID)

 Vehicle\_services(service\_id,service\_due,OwnerID,

vehicleID)

***Implementation***

MariaDB [(none)]> use casestudy;

Database changed

**Vehicle Table:-**

MariaDB [casestudy]> create table vehicle

-> (vehicle\_id int primary key,

-> vehicle\_type varchar(30) NOT null);

Query OK, 0 rows affected (0.068 sec)

MariaDB [casestudy]> show tables;

+----------------------------+

| Tables\_in\_casestudy |

+----------------------------+

| vehicle |

+----------------------------+

1 row in set (0.003 sec)

MariaDB [casestudy]> desc vehicle;

+-----------------+----------------+------+------+---------+-------+

| Field | Type | Null | Key | Default | Extra |

+-----------------+----------------+------+-----+------------+-------+

| vehicle\_id | int(11) | NO | PRI | NULL | |

| vehicle\_type | varchar(30) | NO | | NULL | |

+--------------+-------------+------+-----+---------+--------+------+

2 rows in set (0.014 sec)

MariaDB [casestudy]> insert into vehicle values

-> (001,"Scooter"),

-> (002,"Bike"),

-> (003,"Car(Automatic)"),

-> (004,"Car(Manual)");

Query OK, 4 rows affected (0.088 sec)

Records: 4 Duplicates: 0 Warnings: 0

MariaDB [casestudy]> select \* from vehicle;

+------------+---------------------+

| vehicle\_id | vehicle\_type |

+------------+---------------------+

| 1 | Scooter |

| 2 | Bike |

| 3 | Car(Automatic) |

| 4 | Car(Manual) |

+------------+--------------------+

4 rows in set (0.042 sec)

**Vehicle Owner Table:-**

MariaDB [casestudy]> create table vehicle\_owner

-> (owner\_id int primary key,

-> owner\_name varchar(30) not null,

-> owner\_contact int(10),

-> owner\_location varchar(30),

-> vehicleID int,

-> foreign key(vehicleID) references vehicle(vehicle\_id));

Query OK, 0 rows affected (0.021 sec)

MariaDB [casestudy]> desc vehicle\_owner;

+----------------------+------------------+------+--------+-----------+---------+

| Field | Type | Null | Key | Default | Extra |

+----------------------+------------------+------+--------+-----------+---------+

| owner\_id | int(11) | NO | PRI | NULL | |

| owner\_name | varchar(30) | NO | | NULL | |

| owner\_contact | int(10) | YES | | NULL | |

| owner\_location | varchar(30)| YES | | NULL | |

| vehicleID | int(11) | YES | MUL | NULL | |

+------------------------+---------------+--------+-------+------------+-------+

5 rows in set (0.009 sec)

MariaDB [casestudy]> insert into vehicle\_owner values

-> (101,"Jay Mehta",9874563210,"Malad",001),

-> (102,"Raj Gupta",7896541230,"Mira-Road",002),

-> (103,"Rupesh Mishra",7412589630,"Borivali",004),

-> (104,"John Dsouza",8975642310,"Bandra",003),

-> (105,"Martin Dsouza",8977672310,"Bandra",004),

-> (106,"Sai Nambiar",7977679310,"Andheri",002);

Query OK, 6 rows affected, 6 warnings (0.009 sec)

Records: 6 Duplicates: 0 Warnings: 6

MariaDB [casestudy]> select \* from vehicle\_owner;

+-------------+---------------------+--------------------+---------------------+--------------+

| owner\_id | owner\_name | owner\_contact | owner\_location | vehicleID |

+-------------+---------------------+--------------------+---------------------+--------------+

| 101 | Jay Mehta | 2147483647 | Malad | 1 |

| 102 | Raj Gupta | 2147483647 | Mira-Road | 2 |

| 103 | Rupesh Mishra | 2147483647 | Borivali | 4 |

| 104 | John Dsouza | 2147483647 | Bandra | 3 |

| 105 | Martin Dsouza | 2147483647 | Bandra | 4 |

| 106 | Sai Nambiar | 2147483647 | Andheri | 2 |

+-------------+---------------------+-------------------+---------------------+---------------+

6 rows in set (0.000 sec)

**Vehicle Services Table:-**

MariaDB [casestudy]> create table vehicle\_services

-> (service\_id int primary key,

-> services\_due tinyint not null,

-> OwnerID int,

-> vehicleID int,

-> foreign key (OwnerID) references vehicle\_owner(owner\_id),

-> foreign key (vehicleID) references Vehicle(vehicle\_id));

Query OK, 0 rows affected (0.033 sec)

MariaDB [casestudy]> desc vehicle\_services;

+------------------+------------+--------+---------+-----------+-------+

| Field | Type | Null | Key | Default | Extra |

+--------------+------------+------+-----+---------+-----------+-------+

| service\_id | int(11) | NO | PRI | NULL | |

| services\_due | tinyint(4) | NO | | NULL | |

| OwnerID | int(11) | YES | MUL | NULL | |

| vehicleID | int(11) | YES | MUL | NULL | |

+------------------+------------+--------+---------+-----------+-------+

4 rows in set (0.007 sec)

MariaDB [casestudy]> insert into vehicle\_services values

-> (201,2,101,001),

-> (202,4,104,003),

-> (203,0,102,002),

-> (204,1,106,002),

-> (205,3,103,004),

-> (206,0,105,004);

Query OK, 6 rows affected (0.008 sec)

Records: 6 Duplicates: 0 Warnings: 0

MariaDB [casestudy]> select \* from vehicle\_services;

+--------------+------------------+-------------+-------------+

| service\_id | services\_due | OwnerID | vehicleID |

+--------------+------------------+-------------+-------------+

| 201 | 2 | 101 | 1 |

| 202 | 4 | 104 | 3 |

| 203 | 0 | 102 | 2 |

| 204 | 1 | 106 | 2 |

| 205 | 3 | 103 | 4 |

| 206 | 0 | 105 | 4 |

+--------------+--------------+-----------------+-------------+

6 rows in set (0.000 sec)