



Course basic information

Code	Course Name	Credit Hours		
		Lecture	Practice	Total
IS212	Data base	2	2	3

Research Title

(**Car Rental Management system**)

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Table of contents

Project title	i
Table of contents	ii
1. System description.....	3
2. List of tables.....	4
3. Entity relationship Diagram	4
4. select statements	5
5. Select statements using sub query	8
6.statements of count and Group functions.....	8
7.join statements	9
8. insert statements	9
9. Update statements	10
10. Delete statements	10
11. Git-Hub Repository Link.....	11
11. References	11



System Description :

Automobile rentals for short periods, usually from a few hours to a few weeks. It is often organized with numerous local branches (which allow a user to return a vehicle to a different location), and primarily located near airports or busy urban areas and often complemented by a website that allows online bookings . The main goal of the car rental system is the management of The Car Details It manages all car details . Booking through. The project aims to construct a Software implementation to reduce the manual labor for Managing your car.

List of tables :

➤ Customer table

<u>cid</u>	fName	lName	Address
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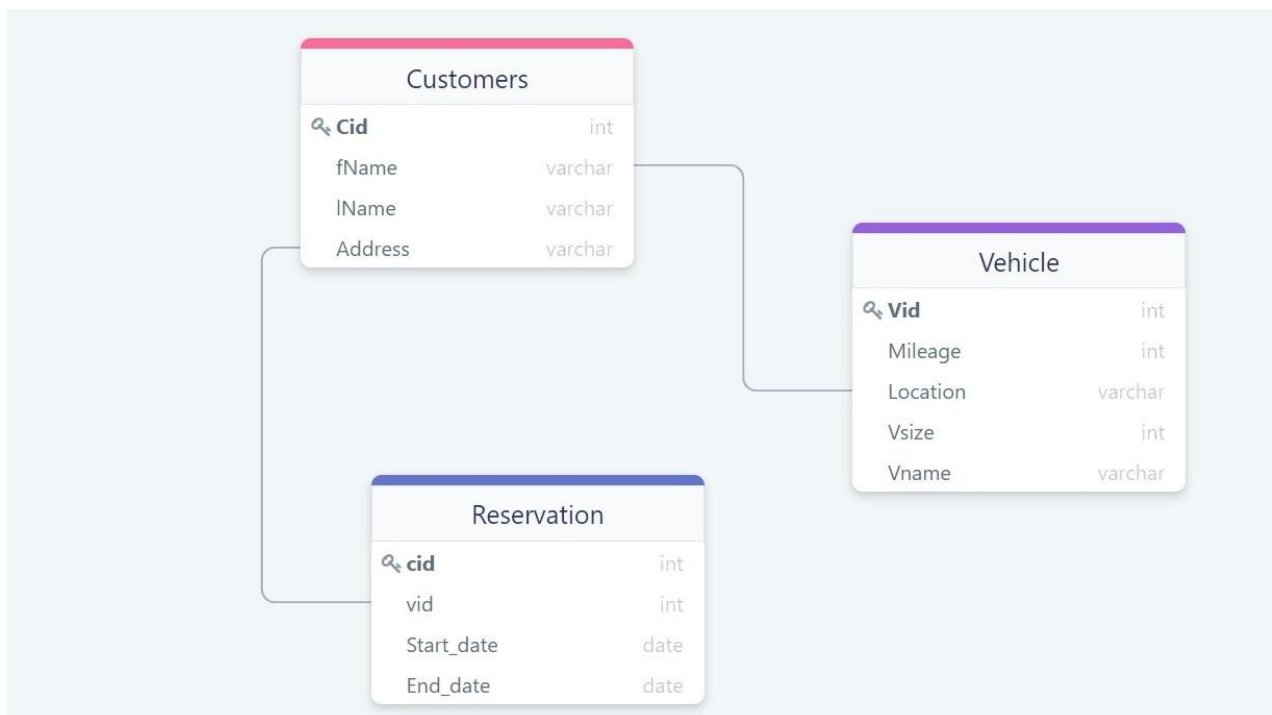
➤ Vehicle table

<u>Vid</u>	Mileage	Location	Vsize	Vname
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➤ Reservation table

<u>cid</u>	<u>Vid</u>	Start_date	End_date
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Entity Relationship Diagram :



select statements :

- ✓ Displays Customer Table data

```
Select      *  
From    customer ;
```

- ✓ View Vehicle Table records

```
Select      *  
From    vehicle ;
```

- ✓ Display Booking Table records

```
Select      *  
From    reservation ;
```

- ✓ Find customer first name whose last name begins with 'S'

```
Select      *  
From    customer  
Where    lName    like ' S %' ;
```

- ✓ Find where all vehicles are located

```
Select    location  
From    vehicle ;
```

- ✓ List first name , last name of customers in downstream order

```
Select    fName , lName  
from    customer  
order by    desc ;
```

- ✓ find all details of reservation which start date is 8 /15 / 2018 and end date is 11 /15 / 2018

```
Select      *  
From    reservation  
Where start date =' 8 /15 / 2018 ' and end date=' 11 /15 / 2018 '
```

- ✓ List size of vehicles with Id V101

```
Select      vsize
From        vehicle
Where       vid='V101'
```

- ✓ List first name , last name of customers who rental a car

```
Select      fName , lName
From        customer c , reservation r
Where       c. cid= r. cid ;
```

- ✓ List first name , address of customers who rental a car in 8 /15 / 2018 to ' 11 /15 / 2018

```
Select      fName , address
From        customer c , reservation r
Where       c. cid = r. cid and startdate =' 8 /15 / 2018 ' and enddate=' 11 / 15 / 2018 '
```

- ✓ Report all vehicle information that retaliate in 7 /18 / 2018 in Downside order

```
Select      *
From        vehicle
Where       startdate =' 2019-05-22'
Order       by desc ;
```

- ✓ List all vehicles which name start with ' F'

```
Select      *
From        vehicle
Where       vname like ' F %' ;
```

- ✓ List all vehicles which location is ' Sanford '

```
Select      *
From        vehicle
Where       location =' Sanford ' ;
```

- ✓ List the count of all retals

Select count (*)
From reservation ;

- ✓ List the count of all vehicles

Select count (*)
From vehicles ;

- ✓ List vehicles which are retaled

Select *
From vehicle v , reservation r
Where v. vid = r. vid ;

- ✓ List all reservation in descending order

Select *
From reservation
Order by desc ;

- ✓ List vehicles size which has id V201

Select vsize
From vehicle

- ✓ Find the first name of customers named ' John '

Select fName
From customer
Where fname=' John ' ;

- ✓ List location of car which are retaled

Select location
From vehicle v , reservation r
Where v. vid=r. vid ;

Select statements using Sub Query :

- List vehicles size is the most preferred

```
Select    vSize
From      vehicle
Where     mileage = ( select MAX(mileage) from vehicle) ;
```

- List vehicles which are reserved for maximum time

```
Select    *
From      vehicle
Where     vid=
(select vid from reservation where ROUND(( enddatestartdate)/360)=(select Max(
ROUND ( enddatestartdate)/360) from reservation )) ;'
```

Statements of count and Group functions :

- ❖ Find count of vehicles for each location which has at least seven vehicles

```
Select    count(vid)
from      vehicle
Group by  location
Having count(vid) >=7 ;
```

- ❖ Find count of all customers

```
Select    count ( * )
From      customer
Group by  cid ;
```


join statements :

- Select fName , lName
 From customer c join reservation r
 On c. cid= r. cid ;

- Select location
 From vehicle v left join reservation r
 On v. vid=r. vid ;

insert statements :

- Insert into customer values('98', 'Thomas ' , ' Lone' , 'Spain');

- Insert into vehicle values ('v95' , '60' , 'compact' , 'automatic' , ' Germany ');

- Insert into reservation values ('104' , ' v105 ' , ' 2 / 4 / 2019' , ' 2 / 8 / 2019 ');

- Insert into customer values('99', 'khaled ' , ' Hossam' , 'Egypt');

- insert into vehicle values ('v103' , '70' , 'compact' , 'automatic' , ' Egypt');

Update statements :

- i. Update customer
set fName = ' Amr'
where cid='96' ;

- ii. Update vehicle
Set location='Cairo'
Where vid='v111' ;

- iii. Update reservation
set startdate='11/ 23/ 2019'
where cid='114'

- iv. Update customer
set fName = ' Omar'
where cid='110' ;

- v. Update vehicle
Set location='France '
Where vid='v115' ;

Delete Statements :

- a. Delete from customer
where fName=' John ' ;

- b. Delete from vehicle
Where vid='v104' ;

- c. Delete from reservation
Where cid ='109 ' ;

- d. Delete from customer
where cid='108' ;

- e. Delete from vehicle
where vid='v107 ' ;

Git-Hub Repository Link.

<https://github.com/Mohammed231199/Data-Base.git>

References

- [1] “ Database Schema Diagrams.” DrawSQL, drawsql.app/.
- [2] “Web Development Tutorials from w3resource.” w3resource, www.w3resource.com/.
- [3] w3school.Com, www.w3school.com/.
- [4] “Free Online Courses, Lessons & Practice.” Khan Academy, Khan Academy, www.khanacademy.org/.
- [5] MySQL, www.mysql.com/.