Schema-Assignment(Car Rental Company)

2. Answer2
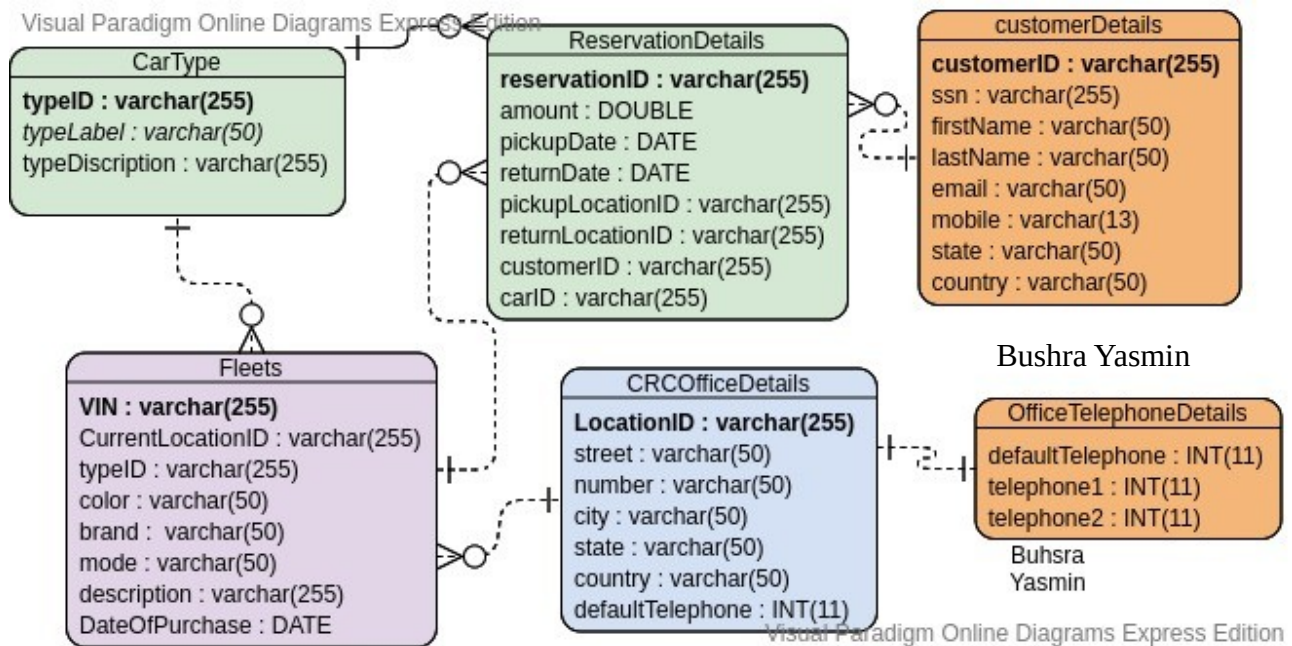

fig:- schema for car rental company

3. Answer3

a.
mysql>select reservationID, pickupLocationID from reservationDetails where pickupDate = '2015-05-01';

b.
mysql>select distinct c.firstName, c.lastName, c.mobile from customersDetails as c, reservationDetails as r, car_type as t, car where c.customerID=r.customerID and r.carID=car.carID and car.typeID=t.typeID and t.typeLabel='Luxury';

c.

mysql>select pickupLocationID, count(carID) from reservationDetails group by pickupLocationID;

d.
mysql>select car.typeID, extract(year from r.pickupDate) "Year", extract(month from r.pickupDate) "Month", count(r.carID) "No. of Cars" from reservationDetails as r, car where r.carID=car.carID group by car.typeID, year, month order by car.typeID ASC, year ASC, month ASC;

e.
mysql>create view State as select o.state, t.typeLabel, count(reservationID) as rentals
from reservationDetails as r, CRCOfficeDetails as o, car as c, car_type as t where

r.pickupLocationID=o.locationID and r.carID=c.carID and c.typeID=t.typeID group by o.state,

c.typeID order by o.state, rentals DESC;

f.

```
mysql>create view transpose as select o.state, count(r.reservationID) as rentals from
reservationDetails as r, CRCOfficeDetails as o where r.pickupLocationID=o.locationID and
(o.state="NY" or o.state="NJ" or o.state="CA") and extract(year from r.pickupDate)=2015 and
extract(month from r.pickupDate)=5 group by o.state;
```

g.

```
mysql>select year(pickupdate) as yr, month(pickupDate) as mnth, count(reservationID) as counter
from reservationDeatils where amount>all
(select avg(amount) from reservationDetails group by month(pickupDate)) and reservationID in
(select reservationID from reservationDeatils where year(pickupDate)=2015 ) group by

month(pickupDate);
```

h.

```
mysql>SELECT year(t.pickupdate) as yr, month(t.pickupdate) as mnth, ROUND((t.amount-
l.amount) * 100 /   t.amount, 2) as percent FROM  reservationDetails as l INNER JOIN
reservationDetails as t
ON
month(t.pickupdate) = month(l.pickupdate) AND year(l.pickupdate) = year(t.pickupdate) - 1 where
year(t.pickupdate)=2015;
```

I.

```
select cumTi-ti as prevMonths, ti as thisMonth, cumulativeTotal-cumTi as nextMonths  from
(SELECT year(b.pickupdate) AS yr, month(b.pickupdate) AS mnth, sum(b.amount) AS ti,
(select sum(amount) from reservation where year(pickupdate)=2015) as cumulativeTotal, (SELECT
sum(a.amount) as cumTi FROM reservationDetails as a
WHERE month(a.pickupdate) <= mnth and year(a.pickupdate)=yr
GROUP BY mnth ASC )as cumTi FROM reservation AS b where year(b.pickupdate)=2015
GROUP BY month(b.pickupdate) ASC ) as tiandTi
```
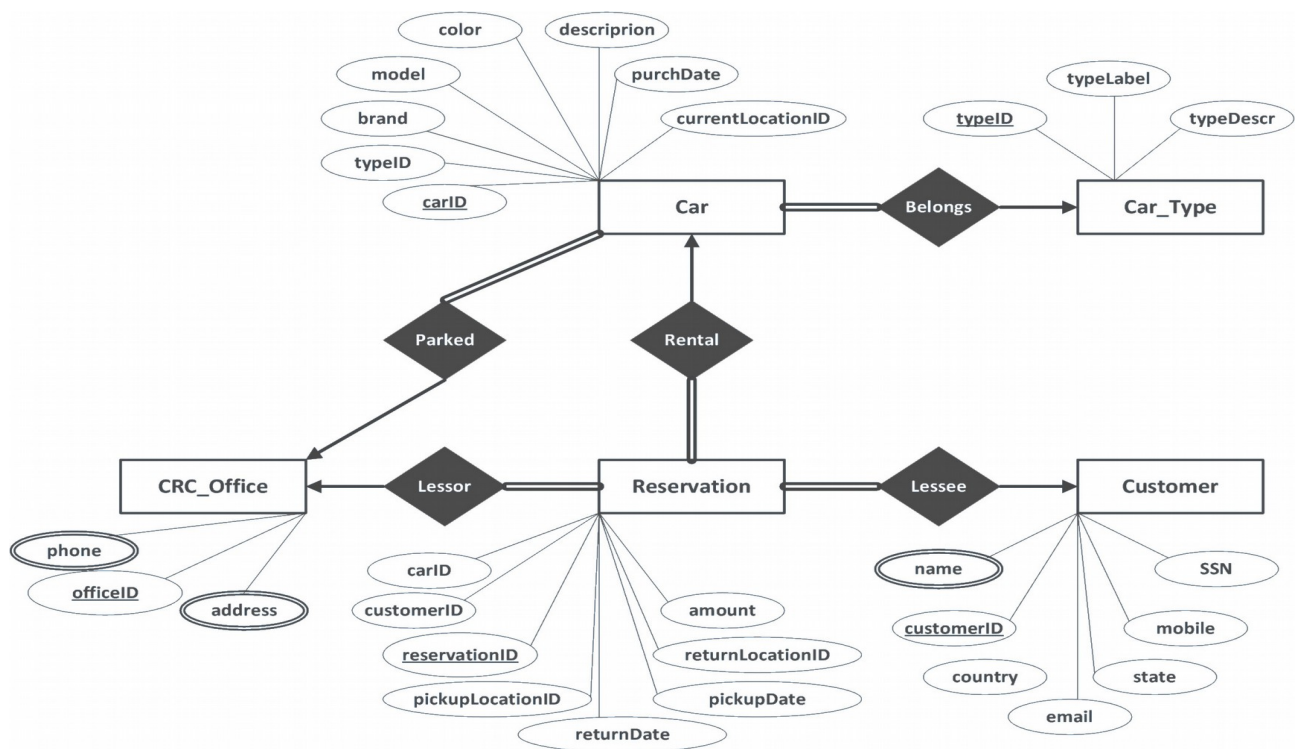
1. Answer1:

fig:- ER diagrm for Car Rental Company