

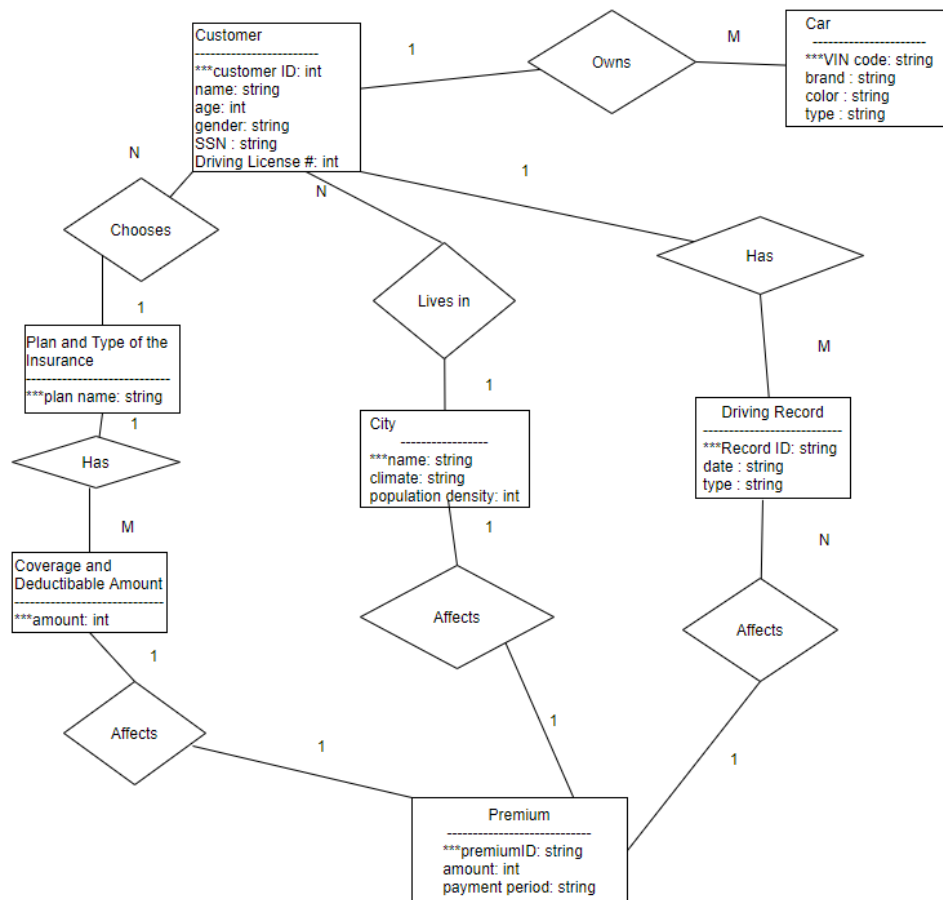
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COMP 3421: A2

(A) *E/R Schema*

- Customers (**customerID**, cname, age, gender, SSN, dlNum, **planName**, cityName)
- Cars (**VINcode**, brand, color, ctype, **customerID**)
- Plans (**planName**)
- City (**cityName**, climate, pDensity)
- Driving Record (**recordID**, DRdate, DRtype, **customerID**, **premiumID**)
- Coverage (**cAmount**, **planName**)
- Premium (**premiumID**, pAmount, paymentPeriod, **cAmount**, **cityName**)



(B) SQL Create Tables

Code (Commands):

```
show databases;  
drop database if exists carInsurance;  
create database carInsurance;  
use carInsurance;
```

```
# create 7 tables
```

```
#1. Customers
```

```
drop table if exists Customers;  
create table Customers(  
    customerID int NOT NULL,  
    cname varchar(30),  
    age int,  
    gender varchar(10),  
    ssn int,  
    dlNum int,  
    planName varchar(20) NOT NULL,  
    cityName varchar(20) NOT NULL,  
    primary key (customerID));  
describe Customers;
```

```
#2. Cars
```

```
drop table if exists Cars;  
create table Cars(  
    VINcode int NOT NULL,  
    brand varchar(15),  
    color varchar(15),  
    ctype varchar(10),  
    customerID int NOT NULL,  
    primary key (VINcode));  
describe Cars;
```

```
#3. Plans
```

```
drop table if exists Plans;  
create table Plans(  
    planName varchar(20) NOT NULL,  
    primary key (planName));  
describe Plans;
```

```
#4. Cities
```

```
drop table if exists Cities;  
create table Cities(  

```

```
cityName varchar(20) NOT NULL,  
climate varchar(15) NOT NULL,  
pDensity int NOT NULL,  
primary key (cityName));  
describe Cities;
```

#5. DrivingRecords

```
drop table if exists DrivingRecords;  
create table DrivingRecords(  
    recordID varchar(20) NOT NULL,  
    DRdate varchar(15),  
    DRtype varchar(20) NOT NULL,  
    customerID int NOT NULL,  
    premiumID int NOT NULL,  
    primary key (recordID));  
describe DrivingRecords;
```

#6. Coverage

```
drop table if exists Coverage;  
create table Coverage(  
    cAmount int NOT NULL,  
    planName varchar(20) NOT NULL,  
    primary key (cAmount));  
describe Coverage;
```

#7. Premium

```
drop table if exists Premium;  
create table Premium(  
    premiumID varchar(20) NOT NULL,  
    pAmount int NOT NULL,  
    paymentPeriod varchar(15),  
    cAmount int NOT NULL,  
    cityName varchar(20) NOT NULL,  
    primary key (premiumID));  
describe Premium;
```

Output of Running above Commands:

```
mysql> source E:/Database Mgmt/car_insurance.sql
```

Database
information_schema
mysql
performance_schema
sakila
skiingdatabase
sys
temp
test
world

9 rows in set (0.01 sec)

Query OK, 0 rows affected, 1 warning (0.00 sec)

Query OK, 1 row affected (0.01 sec)

Database changed

Query OK, 0 rows affected, 1 warning (0.00 sec)

Query OK, 0 rows affected (0.05 sec)

Field	Type	Null	Key	Default	Extra
customerID	int	NO	PRI	NULL	
cname	varchar(30)	YES		NULL	
age	int	YES		NULL	
gender	varchar(10)	YES		NULL	
ssn	int	YES		NULL	
d1Num	int	YES		NULL	
planName	varchar(20)	NO		NULL	
cityName	varchar(20)	NO		NULL	

8 rows in set (0.01 sec)

Query OK, 0 rows affected, 1 warning (0.00 sec)

Query OK, 0 rows affected (0.05 sec)

Field	Type	Null	Key	Default	Extra
VINcode	int	NO	PRI	NULL	
brand	varchar(15)	YES		NULL	
color	varchar(15)	YES		NULL	
ctype	varchar(10)	YES		NULL	
customerID	int	NO		NULL	

5 rows in set (0.00 sec)

```

+-----+-----+-----+-----+-----+-----+
| Field      | Type          | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| planName   | varchar(20)   | NO   | PRI | NULL     |       |
+-----+-----+-----+-----+-----+-----+
1 row in set (0.00 sec)

```

Query OK, 0 rows affected, 1 warning (0.00 sec)

Query OK, 0 rows affected (0.04 sec)

```

+-----+-----+-----+-----+-----+-----+
| Field      | Type          | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| cityName   | varchar(20)   | NO   | PRI | NULL     |       |
| climate    | varchar(15)   | NO   |     | NULL     |       |
| pDensity   | int           | NO   |     | NULL     |       |
+-----+-----+-----+-----+-----+-----+
3 rows in set (0.00 sec)

```

Query OK, 0 rows affected, 1 warning (0.00 sec)

Query OK, 0 rows affected (0.04 sec)

```

+-----+-----+-----+-----+-----+-----+
| Field      | Type          | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| recordID   | varchar(20)   | NO   | PRI | NULL     |       |
| DRdate     | varchar(15)   | YES  |     | NULL     |       |
| DRtype     | varchar(20)   | NO   |     | NULL     |       |
| customerID | int           | NO   |     | NULL     |       |
| premiumID  | int           | NO   |     | NULL     |       |
+-----+-----+-----+-----+-----+-----+
5 rows in set (0.00 sec)

```

Query OK, 0 rows affected, 1 warning (0.00 sec)

Query OK, 0 rows affected (0.03 sec)

```

+-----+-----+-----+-----+-----+-----+
| Field      | Type          | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| cAmount    | int           | NO   | PRI | NULL     |       |
| planName   | varchar(20)   | NO   |     | NULL     |       |
+-----+-----+-----+-----+-----+-----+
2 rows in set (0.00 sec)

```

Query OK, 0 rows affected, 1 warning (0.00 sec)

```

+-----+-----+-----+-----+-----+-----+
| Field      | Type          | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| premiumID  | varchar(20)   | NO   | PRI | NULL     |       |
| pAmount    | int           | NO   |     | NULL     |       |
| paymentPeriod | varchar(15)   | YES  |     | NULL     |       |
| cAmount    | int           | NO   |     | NULL     |       |
| cityName   | varchar(20)   | NO   |     | NULL     |       |
+-----+-----+-----+-----+-----+-----+
5 rows in set (0.00 sec)

```

(C) Inserting 3 tuples into Customers Table and Using “select” Command to Show

Commands:

insert into Customers values (1,'Alice', 25, 'female', 12345678, 000000000, 'Gold', 'Denver');

insert into Customers values (2,'Bob', 25, 'male', 12345677, 1112223334, 'Silver', 'New York');

insert into Customers values (3,'Susan', 25, 'female', 12345676, 100000001, 'Plantium', 'Chicago');

select * from Customers;

Output:

Query OK, 1 row affected (0.01 sec)

Query OK, 1 row affected (0.00 sec)

Query OK, 1 row affected (0.00 sec)

customerID	cname	age	gender	ssn	d1Num	planName	cityName
1	Alice	25	female	12345678	0	Gold	Denver
2	Bob	25	male	12345677	1112223334	Silver	New York
3	Susan	25	female	12345676	100000001	Plantium	Chicago

3 rows in set (0.00 sec)