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**1BM19CS230**

**CSE-4A**

### **Program 1 - Insurance Database**

Consider the Insurance database given below. The data types are specified.

PERSON (driver\_id: String, name: String, address: String)

CAR (reg\_num: String, model: String, year: int)

ACCIDENT (report\_num: int, accident\_date: date, location: String)

OWNS (driver\_id: String, reg\_num: String)

PARTICIPATED (driver\_id: String, reg\_num: String, report\_num: int, damage\_amount: int)

i) Create the above tables by properly specifying the primary keys and the foreign keys.

ii) Enter at least five tuples for each relation.

iii) Demonstrate how you

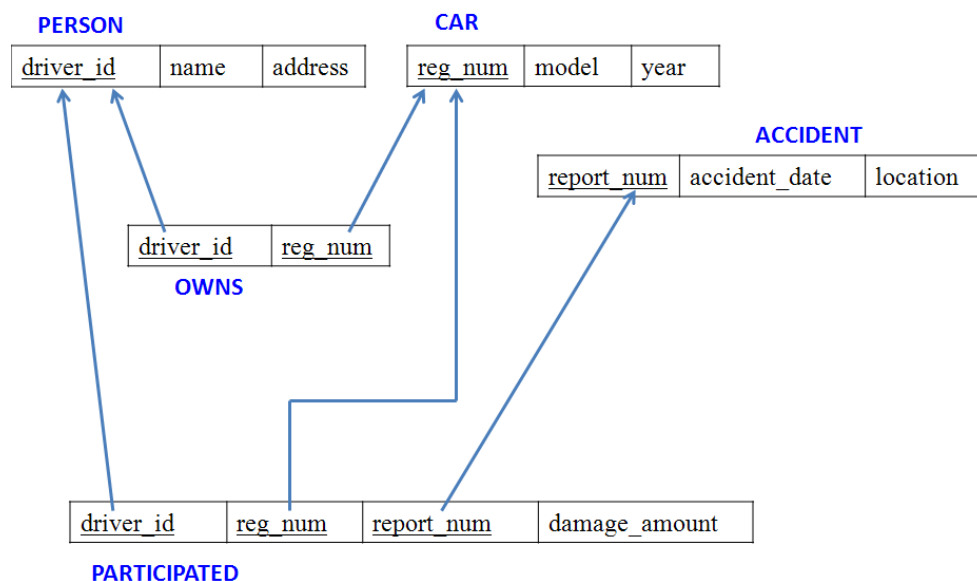
a. Update the damage amount to 25000 for the car with a specific

reg-num(example 'K A053408') for which the accident report number was 12.

b. Add a new accident to the database.

iv) Find the total number of people who owned cars that were involved in accidents in 2008.

v) Find the number of accidents in which cars belonging to a specific model were involved.



```
create database Insurance;  
use Insurance;
```

```
create table Person(  
    driver_id varchar(20) not null,  
    driver_name varchar(20) not null,  
    address varchar(20) not null,  
    primary key(driver_id)  
);
```

```
create table Car(  
    reg_num varchar(20) not null,  
    model varchar(20) not null,  
    year_purchase int not null,  
    primary key(reg_num)  
);
```

```
create table Accident(  
    report_num int not null,  
    accident_date date not null,  
    location varchar(20) not null,  
    primary key(report_num)  
);
```

```
create table Owns(  
    driver_id varchar(20) not null,  
    reg_num varchar(20) not null,  
    primary key(driver_id,reg_num),  
    foreign key(driver_id) references Person(driver_id),  
    foreign key(reg_num) references Car(reg_num)  
);
```

```
create table Participated(  
    driver_id varchar(20) not null,  
    reg_num varchar(20) not null,  
    report_num int not null,  
    damage_amount int not null,  
    primary key(driver_id,reg_num,report_num),
```

```
foreign key(driver_id) references Person(driver_id),
foreign key(reg_num) references Car(reg_num),
foreign key(report_num) references Accident(report_num)
);
```

```
insert into Person(driver_id,driver_name,address)
values ('A01','Richard','Srinivas Nagar'),
       ('A02','Pradeep','Rajajinagar'),
       ('A03','Smith','Ashok Nagar'),
       ('A04','Venu','NR Colony'),
       ('A05','Jhon','Hanumanth Nagar');
```

```
insert into Car(reg_num,model,year_purchase)
values ('KA052250','Indica',1990),
       ('KA031181','Lancer',1957),
       ('KA095477','Toyota',1998),
       ('KA053408','Honda',2008),
       ('KA041702','Audi',2005);
```

```
insert into Owns(driver_id,reg_num)
values ('A01','KA052250'),
       ('A02','KA053408'),
       ('A03','KA031181'),
       ('A04','KA095477'),
       ('A05','KA041702');
```

```
insert into Accident(report_num,accident_date,location)
values (11,'2003-01-01','Mysore Road'),
       (12,'2004-02-02','South End Circle'),
       (13,'2003-01-21','Bull Temple Road'),
       (14,'2008-02-17','Mysore Road'),
       (15,'2005-03-04','Kanakpura Road');
```

```
insert into Participated(driver_id,reg_num,report_num,damage_amount)
values ('A01','KA052250',11,10000),
       ('A02','KA053408',12,50000),
       ('A03','KA095477',13,25000),
       ('A04','KA031181',14,3000),
```

```
('A05','KA041702',15,5000);
```

**-- demonstrate how you update damage amount to 25000 for reg number 'KA053408' and report num 12**

update Participated

```
set damage_amount = 25000 where reg_num = 'KA053408' and report_num = 12;
```

select \* from Participated;

	driver_id	reg_num	report_num	damage_amount
▶	A01	KA052250	11	10000
	A02	KA053408	12	25000
	A03	KA095477	13	25000
	A04	KA031181	14	3000
	A05	KA041702	15	5000
•	NULL	NULL	NULL	NULL

**-- add a new accident to the database**

```
insert into Accident values (16,'2007-07-08','Jayanagar');
```

select \* from Accident;

	report_num	accident_date	location
▶	11	2003-01-01	Mysore Road
	12	2004-02-02	South End Circle
	13	2003-01-21	Bull Temple Road
	14	2008-02-17	Mysore Road
	15	2005-03-04	Kanakpura Road
	16	2007-07-08	Jayanagar

**-- find the total no. of people who owned cars involved in accident in 2008**

```
select count(*) as accidents_2008 from Accident where accident_date between '2008-01-01' and '2008-12-31';
```

	accidents_2008
▶	1

**-- find the number of accidents in which cars belonging to model 'Lancer' were involved**

```
select count(p.report_num) from Participated p,Car c  
where p.reg_num = c.reg_num and c.model = 'Lancer';
```

	count(p.report_num)
▶	1