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1BM19CS230
CSE-4A

Question:

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 (example)were involved.

Answer:

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

```
create database Insurance;
use Insurance;

-- create the tables by specifying primary key and foreign key
create table Person(
        driver_id char(3) not null,
        name varchar(30) not null,
        address varchar (30) not null,
        primary key(driver_id)
);
create table Car(
        reg_num char(8) not null,
        model varchar(30) not null,
        year int not null,
        primary key(reg_num)
);
create table Accidents(
        report_num int not null,
```

```
        accident_date date not null,
        location varchar(30) not null,
        primary key(report_num)
);
create table Owns(
        driver_id char(3) not null,
        reg_num char(8) 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 char(3) not null,
        reg_num char(8) 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 Accidents(report_num)
);
```

2)Enter at least five tuples for each relation.

```
-- enter at least five tuples for each relation
insert into Person(driver_id,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)
        values('KA052250','Indica',1990),
                ('KA031181','Lancer',1957),
                ('KA095477','Toyota',1998),
                ('KA053408','Honda',2008),
                ('KA041702','Audi',2005);

insert into Accidents(report_num,accident_date,location)
        values(11,'2003-01-01','Mysore Road'),
                (12,'2004-02-02','South end circle'),
                (13,'2002-01-21','Bull Temple Road'),
                (14,'2008-02-17','Mysore road'),
                (15,'2005-03-04','Kanakpura Road');
```

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

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);
```

3)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.

```
-- update damage amount to 25000 for car with report_num 12 and reg_num KA053408
update Participated
        set damage_amount = 25000 where report_num = 12 and reg_num = 'KA053408';
```

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 record to the database
insert into Accidents(report_num,accident_date,location)
        values(16,'2008-03-15','Domlur');
```

report_num	accident_date	location
11	2003-01-01	Mysore Road
12	2004-02-02	South end circle
13	2002-01-21	Bull Temple Road
14	2008-02-17	Mysore road
15	2005-03-04	Kanakpura Road
16	2008-03-15	Domlur
NULL	NULL	NULL

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

```
-- Total no. of people who owned cars that were involved in accidents in 2008
select count(driver_id) no_of_people
        from Participated p,Accidents a
        where p.report_num = a.report_num and a.accident_date between '2008-01-01' and
        '2008-12-31';
```

no_of_people
1

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

```
-- Find the no. of accidents in which cars belonging to 'Lancer' were involved
 select count(report_num) no_of_accidents
        from Participated p,Car c
        where c.reg_num = p.reg_num and c.model like 'Lancer';
```

no_of_accidents
1