

## Sushanth Gowda – 1BM24CS302

### Insurance Database

#### **Create Database:**

```
create database bms123;
```

```
use bms123;
```

```
create table person(driver_id varchar(10), name varchar(10), address varchar(20), primary  
key(driver_id));
```

```
create table car(reg_num varchar(10), model varchar(10), year int, primary key(reg_num));
```

```
create table accident(report_num int, accident_date date, location varchar(20), primary  
key(report_num));
```

```
create table owns(driver_id varchar(10), reg_num varchar(10), 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(10), reg_num varchar(10), report_num  
int, damage_amount int, 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));
```

```
desc person;
```

```
desc car;
```

```
desc owns;
```

```
desc accident;
```

```
desc participated;
```

```
insert into person(driver_id, name, address) values  
("A01", "Richard", "Srinivasanagar"), ("A02", "Pradeep", "Basavanagudi"), ("A03", "Smith", "Ashoknagar"  
), ("A04", "Venu", "NR colony"), ("A05", "Jhon", "Hanumanthanagar");
```

```
insert into car (reg_num, model, year) values  
("KA052250", "Indiea", 1990), ("KA031181", "Laneer", 1982), ("KA095456", "Toyota", 1998), ("KA048936",  
"Honda", 1967), ("KA056767", "Audi", 2007);
```

```
insert into accident(report_num, accident_date, location) values (11,"2002-02-01","Basavanagudi"),(12,"2001-12-11","Hanumanthanagar"),(13,"2012-05-31","Jayanagar"),(14,"2012-12-21","Basavanagudi"),(15,"2007-02-12","Srinivasanagar");
```

```
insert into owns(driver_id, reg_num) values ("A01","KA052250"),("A02","KA031181"),("A03","KA095456"),("A04","KA048936"),("A05","KA056767");
```

```
insert into participated(driver_id,reg_num,report_num,damage_amount) values ("A01","KA052250",11,15000),("A02","KA031181",12,10000),("A03","KA095456",13,20000),("A04","KA048936",14,28000),("A05","KA056767",15,50000);
```

### Queries:

#### 1. Find drivers who caused damage $\geq$ 25000

```
select pa.driver_id, p.name
from participated pa, person p
where(p.driver_id=pa.driver_id and pa.damage_amount>=25000);
```

#### 2. Show all accidents (date and location)

```
select accident_date, location
from accident;
```

#### 3. List each driver with the cars they own (one row per ownership)

```
select p.name, c.model
from person p, car c, owns o
where(p.driver_id=o.driver_id and c.reg_num=o.reg_num);
```

#### 4. Show accidents and the drivers involved (including damage amount)

```
select p.driver_id, p.name, a.report_num, a.accident_date, a.location, pa.damage_amount
from accident a, person p, participated pa
where(a.report_num=pa.report_num and p.driver_id=pa.driver_id)
```

**5. Total damage per accident report**

```
select report_num,damage_amount  
from participated;
```

**6. Drivers who were involved in more than one accident**

```
select driver_id  
from participated  
group by driver_id  
having count(report_num)>1;
```

**7. Cars that never had an accident (owned but not in participated)**

```
select o.driver_id,o.reg_num  
from owns o  
where o.driver_id not in (select driver_id from participated);
```

**8. Latest accident (most recent accident\_date)**

```
select *from accident  
order by accident_date desc  
limit 1;
```

**9. Average damage amount per driver**

```
select driver_id,avg(damage_amount)  
from participated  
group by driver_id;
```

**10. Update: set damage\_amount = 25000 for a specific car & report (example)**

```
select *  
from participated;  
update participated  
set damage_amount=25000  
where reg_num="KA031181" and report_num=12;  
select *from participated;
```

**11. Find drivers who caused the maximum damage in any single accident**

```
select driver_id  
from participated  
where damage_amount=(select max(damage_amount) from participated);
```

**12. Show cars (model) involved in accidents with total damage > 20000**

```
select c.model  
from car c,participated p  
where c.reg_num=p.reg_num and p.damage_amount>20000;
```

**13. Create a view summarizing accidents with participants count and total damage**

```
create view accident_summary as  
select count(driver_id) as participant_count,sum(damage_amount) as total_damage  
from participated;  
select *from accident_summary;
```