

# 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 2500 for the car with a specific reg-num(KA37) 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 involved in accidents in 2008.
- v) Find the number of accidents in which cars belonging to a specific model (MARUTI) were involved.

```
create database ins;

use ins;

create table person(
driver_id varchar(30) primary key,
name varchar(30),
address varchar(30)
);

create table accident(
report_number int primary key,
date date,
location varchar(30)
);

create table car(
regno varchar(30),
model varchar(30),
```

```
yea int
```

```
);
```

```
alter table car
```

```
add primary key(regno);
```

```
create table owns(
```

```
driver_id varchar(30),
```

```
regno varchar(30),
```

```
foreign key(driver_id) references person(driver_id) on delete set null on update cascade,
```

```
foreign key(regno) references car(regno) on delete set null on update cascade
```

```
);
```

```
create table participated(
```

```
driver_id varchar(30),
```

```
regno varchar(30),
```

```
report_number int,
```

```
dam int,
```

```
foreign key(driver_id) references person(driver_id) on update cascade on delete set null,
```

```
foreign key(regno) references car(regno) on update cascade on delete set null,
```

```
foreign key(report_number) references accident(report_number) on update cascade on delete set null
```

```
);
```



















```
insert into person(driver_id,nam,address)
```

```
values('A01','Praveen','Karnataka'),('A02','Saquib','Jharkhand'),('A03','Vihari','Andhra Pradesh'),('A04','Karthik','Tamil Nadu'),('A05','Bumrah','Gujarat'),('A06','Hari','Karnataka');
```

|                          |  |      |  |      |  | driver_id | nam | address |                |
|--------------------------|--|------|--|------|--|-----------|-----|---------|----------------|
| <input type="checkbox"/> |  | Edit |  | Copy |  | Delete    | A01 | Praveen | Karnataka      |
| <input type="checkbox"/> |  | Edit |  | Copy |  | Delete    | A02 | Saquib  | Jharkhand      |
| <input type="checkbox"/> |  | Edit |  | Copy |  | Delete    | A03 | Vihari  | Andhra Pradesh |
| <input type="checkbox"/> |  | Edit |  | Copy |  | Delete    | A04 | Karthik | Tamil Nadu     |
| <input type="checkbox"/> |  | Edit |  | Copy |  | Delete    | A05 | Bumrah  | Gujarat        |
| <input type="checkbox"/> |  | Edit |  | Copy |  | Delete    | A06 | Hari    | Karnataka      |

insert into car(regno,model,yea)

values('KA37','MAHINDRA',2008),('KA35','SKODA',2008),('KA36','MARUTI',2009),('KA39','RENAULT',2010),('KA38','Honda',2012),('KA30','HYUNDAI',2014);

| <div><div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div></div><div></div></div> |  |  |  |      |          | regno | model | yea |
|---|--|--|--|------|----------|-------|-------|-----|
| <input type="checkbox"/>  |  Edit   |  Copy   |  Delete   | KA30 | HYUNDAI  | 2014  |       |     |
| <input type="checkbox"/>  |  Edit   |  Copy   |  Delete   | KA35 | SKODA    | 2008  |       |     |
| <input type="checkbox"/>  |  Edit   |  Copy   |  Delete   | KA36 | MARUTI   | 2009  |       |     |
| <input type="checkbox"/>  |  Edit   |  Copy   |  Delete   | KA37 | MAHINDRA | 2008  |       |     |
| <input type="checkbox"/>  |  Edit   |  Copy   |  Delete   | KA38 | Honda    | 2012  |       |     |
| <input type="checkbox"/>  |  Edit |  Copy |  Delete | KA39 | RENAULT  | 2010  |       |     |

insert into accident(report\_number,dat,location) values(12,'2008-10-11','Koppal'),(13,'2008-11-19','Hubli'),(14,'2008-08-11','Kolkata'),(15,'2008-08-08','Delhi'),(16,'2008-07-07','Bengaluru'),(17,'2008-06-05','Mumbai');

|                          |  |      |              | report_number | dat        | location  |
|--------------------------|--|------|--------------|---------------|------------|-----------|
| <input type="checkbox"/> |  | Edit | Copy  Delete | 12            | 2008-10-11 | Koppal    |
| <input type="checkbox"/> |  | Edit | Copy  Delete | 13            | 2008-11-19 | Hubli     |
| <input type="checkbox"/> |  | Edit | Copy  Delete | 14            | 2008-08-11 | Kolkata   |
| <input type="checkbox"/> |  | Edit | Copy  Delete | 15            | 2008-08-08 | Delhi     |
| <input type="checkbox"/> |  | Edit | Copy  Delete | 16            | 2008-07-07 | Bengaluru |
| <input type="checkbox"/> |  | Edit | Copy  Delete | 17            | 2008-06-05 | Mumbai    |

insert into owns(driver\_id,regno)

values('A01','KA37'),('A02','KA35'),('A03','KA36'),('A0','KA39'),('A05','KA38'),('A06','KA30');

| driver_id | regno |
|-----------|-------|
| A01       | KA37  |
| A02       | KA35  |
| A03       | KA36  |
| A04       | KA39  |
| A05       | KA38  |
| A06       | KA30  |

```
insert into participated(driver_id,regno,report_number,dam)
values('A01','KA37',12,2000),('A02','KA35',13,1500),('A03','KA36',14,2000),('A04','KA39',15,2500),('A05','KA38',16,3000),('A06','KA30',17,4000);
```

| driver_id | regno | report_number | dam  |
|-----------|-------|---------------|------|
| A01       | KA37  | 12            | 2000 |
| A02       | KA35  | 13            | 1500 |
| A03       | KA36  | 14            | 2000 |
| A04       | KA39  | 15            | 2500 |
| A05       | KA38  | 16            | 3000 |
| A06       | KA30  | 17            | 4000 |

```
select * from person;
```

```
select * from car;
```

```
select * from accident;
```

```
select * from owns;
```

```
select * from participated;
```

```
update participated
```

```
set dam=2500
```

```
where report_number=12 and regno='KA37';
```

| driver_id | regno | report_number | dam  |
|-----------|-------|---------------|------|
| A01       | KA37  | 12            | 2500 |
| A02       | KA35  | 13            | 1500 |
| A03       | KA36  | 14            | 2000 |
| A04       | KA39  | 15            | 2500 |
| A05       | KA38  | 16            | 3000 |
| A06       | KA30  | 17            | 4000 |
| A09       | KA31  | 12            | 2000 |

insert into accident(report\_number,dat,location) values(18,'2008-11-19','Koppal');

insert into accident(report\_number,dat,location) values(19,'2000-11-19','Koppal');

|                          |                    | report_number | dat        | location  |
|--------------------------|--------------------|---------------|------------|-----------|
| <input type="checkbox"/> | Edit  Copy  Delete | 12            | 2008-10-11 | Koppal    |
| <input type="checkbox"/> | Edit  Copy  Delete | 13            | 2008-11-19 | Hubli     |
| <input type="checkbox"/> | Edit  Copy  Delete | 14            | 2008-08-11 | Kolkata   |
| <input type="checkbox"/> | Edit  Copy  Delete | 15            | 2008-08-08 | Delhi     |
| <input type="checkbox"/> | Edit  Copy  Delete | 16            | 2008-07-07 | Bengaluru |
| <input type="checkbox"/> | Edit  Copy  Delete | 17            | 2008-06-05 | Mumbai    |
| <input type="checkbox"/> | Edit  Copy  Delete | 18            | 2008-11-19 | Koppal    |
| <input type="checkbox"/> | Edit  Copy  Delete | 19            | 2000-11-19 | Koppal    |

insert into person(driver\_id,nam,address) values('A09','Hari K','Karnataka');

|                          |                    | driver_id | nam     | address        |
|--------------------------|--------------------|-----------|---------|----------------|
| <input type="checkbox"/> | Edit  Copy  Delete | A01       | Praveen | Karnataka      |
| <input type="checkbox"/> | Edit  Copy  Delete | A02       | Saquib  | Jharkhand      |
| <input type="checkbox"/> | Edit  Copy  Delete | A03       | Vihari  | Andhra Pradesh |
| <input type="checkbox"/> | Edit  Copy  Delete | A04       | Karthik | Tamil Nadu     |
| <input type="checkbox"/> | Edit  Copy  Delete | A05       | Bumrah  | Gujarat        |
| <input type="checkbox"/> | Edit  Copy  Delete | A06       | Hari    | Karnataka      |
| <input type="checkbox"/> | Edit  Copy  Delete | A09       | Hari K  | Karnataka      |

insert into car(regno,model,yea) values('KA31','MARUTI',2008);

|                          |                    | regno | model    | yea  |
|--------------------------|--------------------|-------|----------|------|
| <input type="checkbox"/> | Edit  Copy  Delete | KA30  | HYUNDAI  | 2014 |
| <input type="checkbox"/> | Edit  Copy  Delete | KA31  | MARUTI   | 2008 |
| <input type="checkbox"/> | Edit  Copy  Delete | KA35  | SKODA    | 2008 |
| <input type="checkbox"/> | Edit  Copy  Delete | KA36  | MARUTI   | 2009 |
| <input type="checkbox"/> | Edit  Copy  Delete | KA37  | MAHINDRA | 2008 |
| <input type="checkbox"/> | Edit  Copy  Delete | KA38  | Honda    | 2012 |
| <input type="checkbox"/> | Edit  Copy  Delete | KA39  | RENAULT  | 2010 |

insert into participated(driver\_id,regno,report\_number,dam) values('A09','KA31',12,2000);

| driver_id | regno | report_number | dam  |
|-----------|-------|---------------|------|
| A01       | KA37  | 12            | 2500 |
| A02       | KA35  | 13            | 1500 |
| A03       | KA36  | 14            | 2000 |
| A04       | KA39  | 15            | 2500 |
| A05       | KA38  | 16            | 3000 |
| A06       | KA30  | 17            | 4000 |
| A09       | KA31  | 12            | 2000 |

select count(distinct driver\_id) cnt from participated a,accident b where  
b.report\_number=b.report\_number and b.dat like '%08';

```
select count(distinct driver_id) cnt from participated a,accident b where b.report_number=b.report_number and b.dat like '%08'
```

☐ Profiling [Edit inline] [Edit] [Explain SQL]

☐ Show all | Number of rows: 25 ▼ Filter rows: Search this table

+ Options

**cnt**

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select count(distinct report\_number) cn from car x,participated y where y.regno=x.regno and  
x.model='MARUTI';

```
select count(distinct report_number) cn from car x,participated y where y.regno=x.regno and x.model='MARUTI'
```

☐ Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code]

☐ Show all | Number of rows: 25 ▼ Filter rows: Search this table

+ Options

**cn**

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select \* from participated order by dam desc;

select avg(dam) av from participated;

SET SQL\_SAFE\_UPDATES=0;

delete from participated

where dam<=2500;

select nam from person p ,participated q where p.driver\_id=q.driver\_id and dam>2500;

```
select nam,dam from person p ,participated q where p.driver_id=q.driver_id and dam>2500;
```