NAME: KUSUM M R   **DATE:28/04/2021**

USN:1BM19CS077

DBMS LAB-1

PROGRAM 1: INSURANCE DATABASE

QUESTION:

Consider the Insurance database given below. The primary keys are underlined and the

data types are specified.

PERSON (driver-id #: String, name: String, address: String)

CAR (Regno: String, model: String, year: int)

ACCIDENT (report-number: int, adate: date, location: String)

OWNS (driver-id #: String, Regno: String)

PARTICIPATED (driver-id: String, Regno: String, report-number: 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 for the car with a specific Regno in the accident with report number 12 to

25000.

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 were involved.

PROGRAM CODE:

create database Insurance;

use Insurance;

CREATE TABLE PERSON(DRIVER_ID VARCHAR(10),NAME VARCHAR(20),ADDRESS VARCHAR(15),PRIMARY KEY(DRIVER_ID));

show tables;

desc PERSON;

SELECT *FROM PERSON;

```sql
create table car(regno varchar(10),Model varchar(20),Year date,Primary key(Regno));

create table Accident(report_no int,ADATE DATE,Location varchar(15),Primary key(report_no));

create table owns(driver_id varchar(10),regno varchar(10),primary key(driver_id,regno),
 foreign key(driver_id) references person(driver_id) on delete cascade, foreign key(regno) references
car(regno) on delete cascade);

 CREATE TABLE PARTICIPATED(driver_id varchar(10),regno varchar(10),report_no int, damage_amt
float,

foreign key (driver_id,regno) references OWNS(driver_id,regno) ON DELETE CASCADE,

foreign key (REPORT_NO) references ACCIDENT(REPORT_NO) ON DELETE CASCADE);

show tables;

insert into PERSON(DRIVER_ID,NAME,ADDRESS)values('1111','RAMU', 'K.S.LAYOUT');

insert into PERSON(DRIVER_ID,NAME,ADDRESS)values('2222','JOHN', 'INDIRANAGAR');

insert into PERSON(DRIVER_ID,NAME,ADDRESS)values('3333','PRIYA','JAYANAGAR');

insert into PERSON(DRIVER_ID,NAME,ADDRESS)values('4444','GOPAL','WHITEFIELD');

insert into PERSON(DRIVER_ID,NAME,ADDRESS)values('5555','LATHA',' VIJAYANAGAR');

COMMIT;

desc PERSON;

SELECT *FROM PERSON;

insert into car(regno,Model,Year)values('KA04Q2301','MARUTHI-DX', '2000-10-11');

insert into car(regno,Model,Year)values('KA05P1000',' FORDICON','2000-09-08');

insert into car(regno,Model,Year)values('KA03L1234','ZEN-VXI', '1999-07-06');

insert into car(regno,Model,Year)values('KA03L9999',' MARUTH-DX', '2002-06-05');

insert into car(regno,Model,Year)values('KA01P4020',' INDICA-VX', '2002-05-04');

COMMIT;

desc car;

SELECT *FROM car;

insert into Accident(report_no,ADATE,Location)values('12',' 2002-06-02',' M G ROAD');

insert into Accident(report_no,ADATE,Location)values('200',' 2002-12-10',' DOUBLEROAD');

insert into Accident(report_no,ADATE,Location)values('300',' 1999-07-10','M G ROAD');

insert into Accident(report_no,ADATE,Location)values('25000',' 2000-06-11',' RESIDENCY ROAD');

insert into Accident(report_no,ADATE,Location)values('26500',' 2001-08-12',' RICHMOND ROAD');

COMMIT;
```

```sql
desc Accident;

SELECT *FROM Accident;

insert into owns(driver_id,regno)values('1111', 'KA04Q2301');

insert into owns(driver_id,regno)values('1111','KA05P1000');

insert into owns(driver_id,regno)values('2222','KA03L1234');

insert into owns(driver_id,regno)values('3333','KA03L9999');

insert into owns(driver_id,regno)values('4444','KA01P4020');

COMMIT;

desc owns;

SELECT *FROM owns;

insert into PARTICIPATED(driver_id,regno,report_no,damage_amt)values('1111', 'KA04Q2301',' 12','
20000');

insert into PARTICIPATED(driver_id,regno,report_no,damage_amt)values('2222','KA03L1234','200','
500');

insert into PARTICIPATED(driver_id,regno,report_no,damage_amt)values('3333','KA03L9999','300','
10000');

insert into PARTICIPATED(driver_id,regno,report_no,damage_amt)values('4444','KA01P4020','25000
','2375');

insert into
PARTICIPATED(driver_id,regno,report_no,damage_amt)values('1111','KA05P1000','26500','70000');

COMMIT;

desc PARTICIPATED ;

SELECT *FROM PARTICIPATED;

/*

a. Update the damage amount for the car with a specific Regno in the accident with report number
12 to

25000.

*/

UPDATE PARTICIPATED SET DAMAGE_AMT=25000 WHERE REPORT_NO =12 AND
REGNO='KA04Q2301';

COMMIT;

desc PARTICIPATED ;

SELECT *FROM PARTICIPATED;
```

```
/*
```

b. Add a new accident to the database

```
*/
```

insert into Accident(report_no,ADATE,Location)values('500',' 2005-06-02','Mysore Road');

desc Accident;

SELECT *FROM Accident;

```
/*
```

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

```
*/
```

select count(*) from Accident where year(ADATE)=2008;

```
/*
```

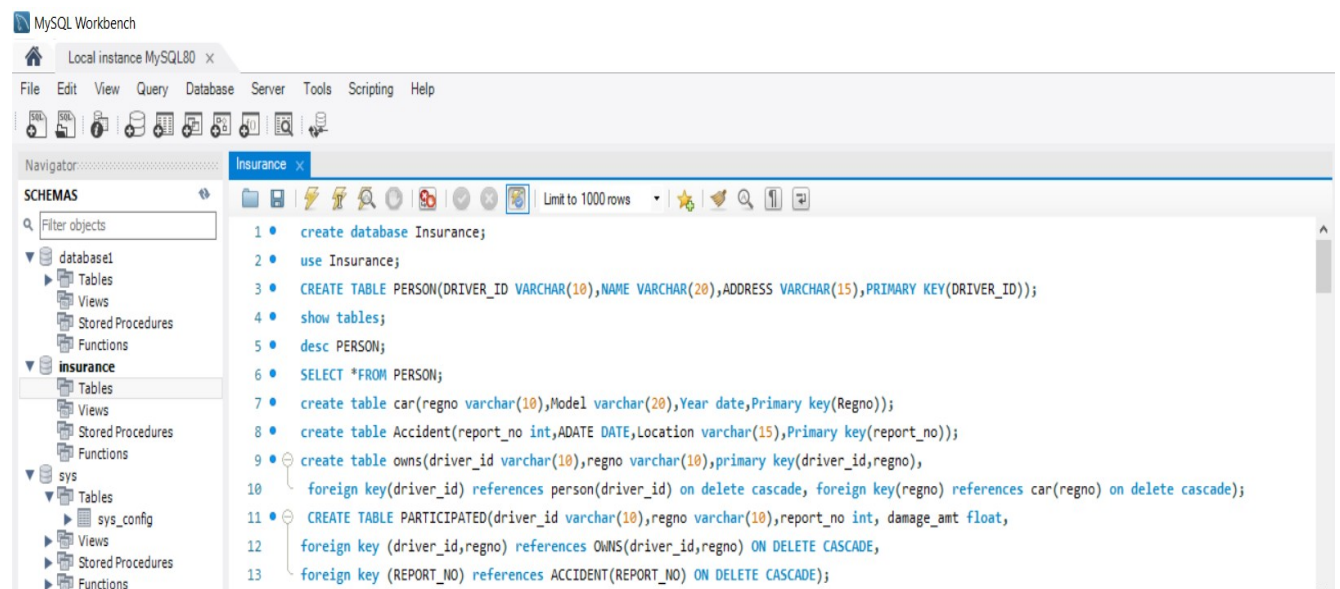V. Find the number of accidents in which cars belonging to a specific model were involved

```
*/
```

SELECT COUNT(A.REPORT_NO) FROM ACCIDENT A, PARTICIPATED P, CAR C

 WHERE A.REPORT_NO=P.REPORT_NO AND

 P.REGNO=C.REGNO AND C.MODEL='MARUTHI-DX';

SCREENSHOTS OF THE PROGRAM:

File   Edit   View   Query   Database   Server   Tools   Scripting   Help

Navigator

SCHEMAS

Filter objects

▼ database1
  ▶ Tables
     Views
     Stored Procedures
     Functions
▼ insurance
     Tables
     Views
     Stored Procedures
     Functions
▼ sys
  ▼ Tables
    ▶ sys_config
  ▶ Views
  ▶ Stored Procedures
  ▶ Functions

Insurance ×

Limit to 1000 rows

```
14 •    show tables;
15 •    insert into PERSON(DRIVER_ID,NAME,ADDRESS)values('1111','RAMU', 'K.S.LAYOUT');
16 •    insert into PERSON(DRIVER_ID,NAME,ADDRESS)values('2222','JOHN', 'INDIRANAGAR');
17 •    insert into PERSON(DRIVER_ID,NAME,ADDRESS)values('3333','PRIYA','JAYANAGAR');
18 •    insert into PERSON(DRIVER_ID,NAME,ADDRESS)values('4444','GOPAL','WHITEFIELD');
19 •    insert into PERSON(DRIVER_ID,NAME,ADDRESS)values('5555','LATHA', 'VIJAYANAGAR');
20 •    COMMIT;
21 •    desc PERSON;
22 •    SELECT *FROM PERSON;
23 •    insert into car(regno,Model,Year)values('KA04Q2301','MARUTHI-DX', '2000-10-11');
24 •    insert into car(regno,Model,Year)values('KA05P1000',' FORDICON','2000-09-08');
25 •    insert into car(regno,Model,Year)values('KA03L1234','ZEN-VXI', '1999-07-06');
26 •    insert into car(regno,Model,Year)values('KA03L9999',' MARUTH-DX', '2002-06-05');
```

File   Edit   View   Query   Database   Server   Tools   Scripting   Help

Navigator

SCHEMAS

Filter objects

▼ database1
  ▶ Tables
     Views
     Stored Procedures
     Functions
▼ insurance
     Tables
     Views
     Stored Procedures
     Functions
▼ sys
  ▼ Tables
    ▶ sys_config
  ▶ Views
  ▶ Stored Procedures
  ▶ Functions

Insurance ×

Limit to 1000 rows

```
27 •    insert into car(regno,Model,Year)values('KA01P4020',' INDICA-VX', '2002-05-04');
28 •    COMMIT;
29 •    desc car;
30 •    SELECT *FROM car;
31 •    insert into Accident(report_no,ADATE,Location)values('12',' 2002-06-02',' M G ROAD');
32 •    insert into Accident(report_no,ADATE,Location)values('200',' 2002-12-10',' DOUBLEROAD');
33 •    insert into Accident(report_no,ADATE,Location)values('300',' 1999-07-10','M G ROAD');
34 •    insert into Accident(report_no,ADATE,Location)values('25000',' 2000-06-11',' RESIDENCY ROAD');
35 •    insert into Accident(report_no,ADATE,Location)values('26500',' 2001-08-12',' RICHMOND ROAD');
36 •    COMMIT;
37 •    desc Accident;
38 •    SELECT *FROM Accident;
39 •    insert into owns(driver_id,regno)values('1111', 'KA04Q2301');
```

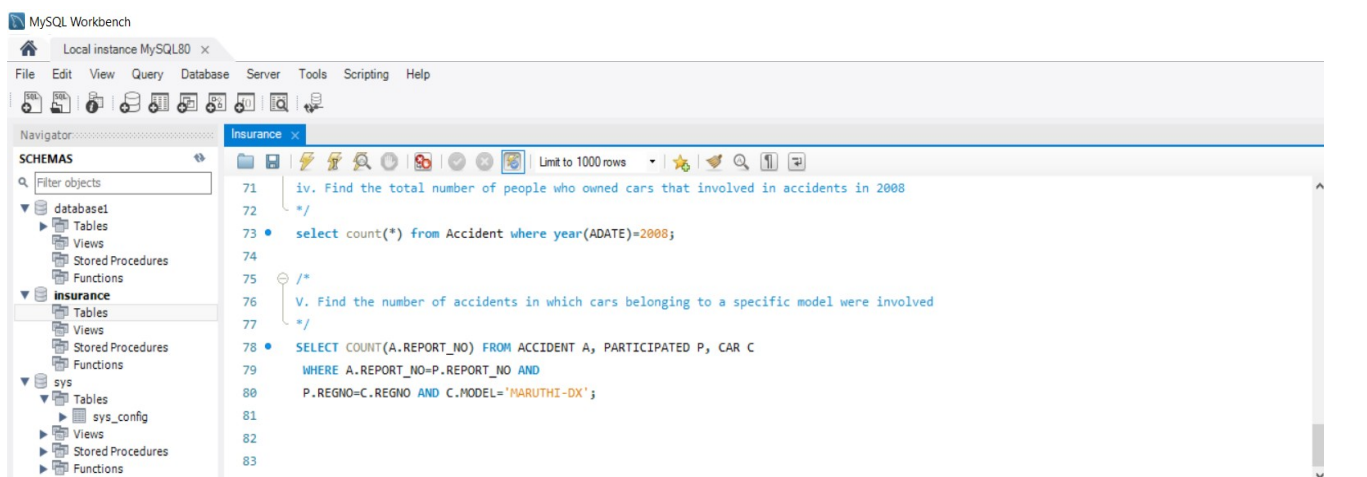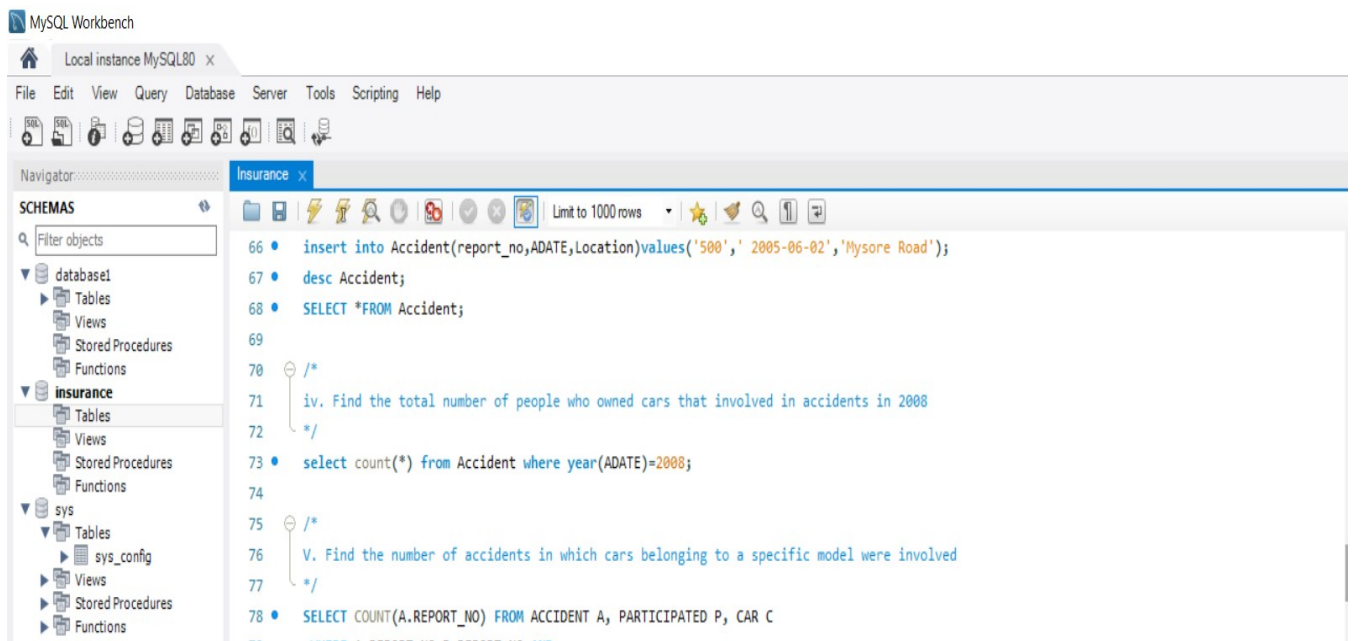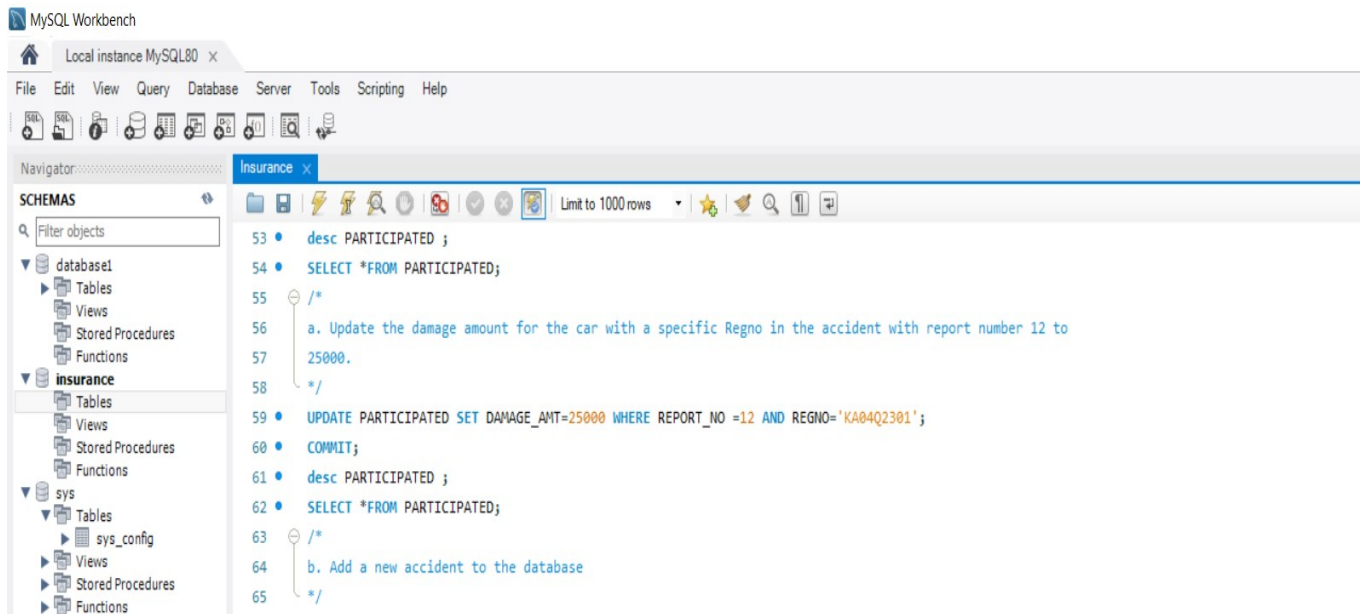File   Edit   View   Query   Database   Server   Tools   Scripting   Help

Navigator

SCHEMAS

Filter objects

▼ database1
  ▶ Tables
     Views
     Stored Procedures
     Functions
▼ insurance
     Tables
     Views
     Stored Procedures
     Functions
▼ sys
  ▼ Tables
    ▶ sys_config
  ▶ Views
  ▶ Stored Procedures
  ▶ Functions

Insurance ×

Limit to 1000 rows

```
40 •    insert into owns(driver_id,regno)values('1111','KA05P1000');
41 •    insert into owns(driver_id,regno)values('2222','KA03L1234');
42 •    insert into owns(driver_id,regno)values('3333','KA03L9999');
43 •    insert into owns(driver_id,regno)values('4444','KA01P4020');
44 •    COMMIT;
45 •    desc owns;
46 •    SELECT *FROM owns;
47 •    insert into PARTICIPATED(driver_id,regno,report_no,damage_amt)values('1111', 'KA04Q2301',' 12',' 20000');
48 •    insert into PARTICIPATED(driver_id,regno,report_no,damage_amt)values('2222','KA03L1234','200',' 500');
49 •    insert into PARTICIPATED(driver_id,regno,report_no,damage_amt)values('3333','KA03L9999','300',' 10000');
50 •    insert into PARTICIPATED(driver_id,regno,report_no,damage_amt)values('4444','KA01P4020','25000 ','2375');
51 •    insert into PARTICIPATED(driver_id,regno,report_no,damage_amt)values('1111','KA05P1000','26500','70000');
52 •    COMMIT;
```

```
53 •   desc PARTICIPATED ;
54 •   SELECT *FROM PARTICIPATED;
55     /*
56     a. Update the damage amount for the car with a specific Regno in the accident with report number 12 to
57     25000.
58     */
59 •   UPDATE PARTICIPATED SET DAMAGE_AMT=25000 WHERE REPORT_NO =12 AND REGNO='KA04Q2301';
60 •   COMMIT;
61 •   desc PARTICIPATED ;
62 •   SELECT *FROM PARTICIPATED;
63     /*
64     b. Add a new accident to the database
65     */
```

```
66 •   insert into Accident(report_no,ADATE,Location)values('500',' 2005-06-02','Mysore Road');
67 •   desc Accident;
68 •   SELECT *FROM Accident;
69
70     /*
71     iv. Find the total number of people who owned cars that involved in accidents in 2008
72     */
73 •   select count(*) from Accident where year(ADATE)=2008;
74
75     /*
76     V. Find the number of accidents in which cars belonging to a specific model were involved
77     */
78 •   SELECT COUNT(A.REPORT_NO) FROM ACCIDENT A, PARTICIPATED P, CAR C
```

```
71     iv. Find the total number of people who owned cars that involved in accidents in 2008
72     */
73 •   select count(*) from Accident where year(ADATE)=2008;
74
75     /*
76     V. Find the number of accidents in which cars belonging to a specific model were involved
77     */
78 •   SELECT COUNT(A.REPORT_NO) FROM ACCIDENT A, PARTICIPATED P, CAR C
79     WHERE A.REPORT_NO=P.REPORT_NO AND
80     P.REGNO=C.REGNO AND C.MODEL='MARUTHI-DX';
81
82
83
```

SCREENSHOTS OF OUTPUT:

MySQL Workbench — Insurance*

```
1 •   create database Insurance;
2 •   use Insurance;
3 •   CREATE TABLE PERSON(DRIVER_ID VARCHAR(10),NAME VARCHAR(20),ADDRESS VARCHAR(15),PRIMARY KEY(DRIVER_ID));
4 •   show tables;
5 •   desc PERSON;
6 •   SELECT *FROM PERSON;
7 •   create table car(regno varchar(10),Model varchar(20),Year date,Primary key(Regno));
8 •   create table Accident(report_no int,ADATE DATE,Location varchar(15),Primary key(report_no));
9 •   create table owns(driver_id varchar(10),regno varchar(10),primary key(driver_id,regno),
10        foreign key(driver_id) references person(driver_id) on delete cascade, foreign key(regno) references car(regno) on delete cascade);
```

Result Grid — Tables_in_insurance

Tables_in_insurance
accident
car
owns
participated
person

MySQL Workbench — Insurance*

```
16 •   insert into PERSON(DRIVER_ID,NAME,ADDRESS)values('2222','JOHN', 'INDIRANAGAR');
17 •   insert into PERSON(DRIVER_ID,NAME,ADDRESS)values('3333','PRIYA','JAYANAGAR');
18 •   insert into PERSON(DRIVER_ID,NAME,ADDRESS)values('4444','GOPAL','WHITEFIELD');
19 •   insert into PERSON(DRIVER_ID,NAME,ADDRESS)values('5555','LATHA',' VIJAYANAGAR');
20 •   COMMIT;
21 •   desc PERSON;
22    SELECT *FROM PERSON;
23 •   insert into car(regno,Model,Year)values('KA04Q2301','MARUTHI-DX', '2000-10-11');
24 •   insert into car(regno,Model,Year)values('KA05P1000',' FORDICON','2000-09-08');
25 •   insert into car(regno,Model,Year)values('KA03L1234','ZEN-VXI', '1999-07-06');
```

Result Grid

DRIVER_ID	NAME	ADDRESS
1111	RAMU	K.S.LAYOUT
2222	JOHN	INDIRANAGAR
3333	PRIYA	JAYANAGAR
4444	GOPAL	WHITEFIELD
5555	LATHA	VIJAYANAGAR
NULL	NULL	NULL

MySQL Workbench

Local instance MySQL80 ×

File   Edit   View   Query   Database   Server   Tools   Scripting   Help

Navigator

Insurance* ×

SCHEMAS

Filter objects

▼ 📀 database1
  ▶ 📁 Tables
    📁 Views
    📁 Stored Procedures
    📁 Functions
▼ 📀 insurance
    📁 Tables
    📁 Views
    📁 Stored Procedures
    📁 Functions
▼ 📀 sys
  ▼ 📁 Tables
    ▶ 📄 sys_config
  ▶ 📁 Views
  ▶ 📁 Stored Procedures
  ▶ 📁 Functions

Limit to 1000 rows

```
28 •   COMMIT;
29 •   desc car;
30 •   SELECT *FROM car;
31 •   insert into Accident(report_no,ADATE,Location)values('12',' 2002-06-02',' M G ROAD');
32 •   insert into Accident(report_no,ADATE,Location)values('200',' 2002-12-10',' DOUBLEROAD');
33 •   insert into Accident(report_no,ADATE,Location)values('300',' 1999-07-10','M G ROAD');
34 •   insert into Accident(report_no,ADATE,Location)values('25000',' 2000-06-11',' RESIDENCY ROAD');
35 •   insert into Accident(report_no,ADATE,Location)values('26500',' 2001-08-12',' RICHMOND ROAD');
36 •   COMMIT;
37 •   desc Accident;
```

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Content:

regno	Model	Year
KA01P4020	INDICA-VX	2002-05-04
KA03L1234	ZEN-VXI	1999-07-06
KA03L9999	MARUTH-DX	2002-06-05
KA04Q2301	MARUTHI-DX	2000-10-11
KA05P1000	FORDICON	2000-09-08
NULL	NULL	NULL

Result Grid

Form Editor

Field Types

MySQL Workbench

Local instance MySQL80 ×

File   Edit   View   Query   Database   Server   Tools   Scripting   Help

Navigator

Insurance* ×

SCHEMAS

Filter objects

▼ 📀 database1
  ▶ 📁 Tables
    📁 Views
    📁 Stored Procedures
    📁 Functions
▼ 📀 insurance
    📁 Tables
    📁 Views
    📁 Stored Procedures
    📁 Functions
▼ 📀 sys
  ▼ 📁 Tables
    ▶ 📄 sys_config
  ▶ 📁 Views
  ▶ 📁 Stored Procedures
  ▶ 📁 Functions

Limit to 1000 rows

```
37 •   desc Accident;
38 •   SELECT *FROM Accident;
39 •   insert into owns(driver_id,regno)values('1111', 'KA04Q2301');
40 •   insert into owns(driver_id,regno)values('1111','KA05P1000');
41 •   insert into owns(driver_id,regno)values('2222','KA03L1234');
42 •   insert into owns(driver_id,regno)values('3333','KA03L9999');
43 •   insert into owns(driver_id,regno)values('4444','KA01P4020');
44 •   COMMIT;
45 •   desc owns;
46 •   SELECT *FROM owns;
```

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Content:

report_no	ADATE	Location
12	2002-06-02	M G ROAD
200	2002-12-10	DOUBLEROAD
300	1999-07-10	M G ROAD
25000	2000-06-11	RESIDENCY ROAD
26500	2001-08-12	RICHMOND ROAD
NULL	NULL	NULL

Result Grid

Form Editor

Field Types

Local instance MySQL80 ×

File   Edit   View   Query   Database   Server   Tools   Scripting   Help

Navigator:

Insurance* ×

SCHEMAS

Filter objects

▼ database1
  ▶ Tables
    Views
    Stored Procedures
    Functions
▼ insurance
    Tables
    Views
    Stored Procedures
    Functions
▼ sys
  ▼ Tables
    ▶ sys_config
  ▶ Views
  ▶ Stored Procedures
  ▶ Functions

Limit to 1000 rows

```
38 ●   SELECT *FROM Accident;
39 ●   insert into owns(driver_id,regno)values('1111', 'KA04Q2301');
40 ●   insert into owns(driver_id,regno)values('1111','KA05P1000');
41 ●   insert into owns(driver_id,regno)values('2222','KA03L1234');
42 ●   insert into owns(driver_id,regno)values('3333','KA03L9999');
43 ●   insert into owns(driver_id,regno)values('4444','KA01P4020');
44 ●   COMMIT;
45 ●   desc owns;
46 ●   SELECT *FROM owns;
47 ●   insert into PARTICIPATED(driver id,regno,report no,damage amt)values('1111', 'KA04Q2301',' 12',' 20000');
```

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Content:

driver_id	regno
4444	KA01P4020
2222	KA03L1234
3333	KA03L9999
1111	KA04Q2301
1111	KA05P1000
NULL	NULL

Result Grid

Form Editor

Field Types

Administration   Schemas

Local instance MySQL80 ×

File   Edit   View   Query   Database   Server   Tools   Scripting   Help

Navigator:

Insurance* ×

SCHEMAS

Filter objects

▼ database1
  ▶ Tables
    Views
    Stored Procedures
    Functions
▼ insurance
    Tables
    Views
    Stored Procedures
    Functions
▼ sys
  ▼ Tables
    ▶ sys_config
  ▶ Views
  ▶ Stored Procedures
  ▶ Functions

Limit to 1000 rows

```
46 ●   SELECT *FROM owns;
47 ●   insert into PARTICIPATED(driver_id,regno,report_no,damage_amt)values('1111', 'KA04Q2301',' 12',' 20000');
48 ●   insert into PARTICIPATED(driver_id,regno,report_no,damage_amt)values('2222','KA03L1234','200',' 500');
49 ●   insert into PARTICIPATED(driver_id,regno,report_no,damage_amt)values('3333','KA03L9999','300',' 10000');
50 ●   insert into PARTICIPATED(driver_id,regno,report_no,damage_amt)values('4444','KA01P4020','25000 ','2375');
51 ●   insert into PARTICIPATED(driver_id,regno,report_no,damage_amt)values('1111','KA05P1000','26500','70000');
52 ●   COMMIT;
53 ●   desc PARTICIPATED ;
54 ●   SELECT *FROM PARTICIPATED;
55
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

driver_id	regno	report_no	damage_amt
1111	KA04Q2301	12	20000
2222	KA03L1234	200	500
3333	KA03L9999	300	10000
4444	KA01P4020	25000	2375
1111	KA05P1000	26500	70000

Result Grid

Form Editor

Field Types

```
50 •  insert into PARTICIPATED(driver_id,regno,report_no,damage_amt)values('4444','KA01P4020','25000 ','2375');
51 •  insert into PARTICIPATED(driver_id,regno,report_no,damage_amt)values('1111','KA05P1000','26500','70000');
52 •  COMMIT;
53 •  desc PARTICIPATED ;
54 •  SELECT *FROM PARTICIPATED;
55 •  UPDATE PARTICIPATED SET DAMAGE_AMT=25000 WHERE REPORT_NO =12 AND REGNO='KA04Q2301';
56 •  COMMIT;
57 •  desc PARTICIPATED ;
58 •  SELECT *FROM PARTICIPATED;
59
```

driver_id	regno	report_no	damage_amt
1111	KA04Q2301	12	25000
2222	KA03L1234	200	500
3333	KA03L9999	300	10000
4444	KA01P4020	25000	2375
1111	KA05P1000	26500	70000

```
59 •  UPDATE PARTICIPATED SET DAMAGE_AMT=25000 WHERE REPORT_NO =12 AND REGNO='KA04Q2301';
60 •  COMMIT;
61 •  desc PARTICIPATED ;
62 •  SELECT *FROM PARTICIPATED;
63    /*
64    b. Add a new accident to the database
65    */
66 •  insert into Accident(report_no,ADATE,Location)values('500',' 2005-06-02','Mysore Road');
67 •  desc Accident;
68 •  SELECT *FROM Accident;
69
```

report_no	ADATE	Location
12	2002-06-02	M G ROAD
200	2002-12-10	DOUBLEROAD
300	1999-07-10	M G ROAD
500	2005-06-02	Mysore Road
25000	2000-06-11	RESIDENCY ROAD
26500	2001-08-12	RICHMOND ROAD
NULL	NULL	NULL