# DBMS Lab(3K section)

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```
create database insurance1;
use insurance1;
create table person(
driver_id varchar(10),
name varchar(20),
address varchar(30),
primary key(driver_id));
desc person;
create table car(
reg_num varchar(10),
model varchar(10),
year int,
primary key(reg_num)
);
desc car;
create table accident(
report_num int,
accident_date date,
location varchar(20),
primary key(report_num));
desc accident;
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));
desc owns;
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 participated;
insert into person values('A01','Richard','Srinivas Nagar'),
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('A02','Pradeep','Rajaji nagar'),
('A03','Smith','Ashok nagar'),
('A04','Venu','N R Colony'),
('A05','Jhon','Hanumanth nagar');
commit;
select * from person;
insert into car values('KA052250','Indica',1990),
('KA031181','Lancer',1957),
('KA095477','Toyota',1998),
('KA053408','Honda',2008),
('KA041702','Audi',2005);
commit;
select *from car;
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');
commit;
select * from accident;
insert into owns values ('A01', 'KA052250'),
('A02','KA053408'),
('A03','KA031181'),
('A04','KA095477'),
('A05', 'KA041702');
commit;
select * from owns;
insert into participated values ('A01','KA052250',11,10000),
('A02','KA053408',12,50000),
('A03','KA095477',13,25000),
('A04','KA031181',14,3000),
('A05','KA041702',15,5000);
commit;
```

select \* from participated;

- -- queries
- -- Show all accidents (date and location)

SELECT accident\_date, location

FROM accident;

	accident_date	location	
•	2003-01-01	mysore road	
	2004-02-02	South end Circle	
	2003-01-21	Bull temple Road	
	2008-02-17	mysore road	
	2005-03-04	Kanakpura Road	

-- Find drivers who caused damage ≥ 25000

SELECT DISTINCT driver\_id, name

FROM person

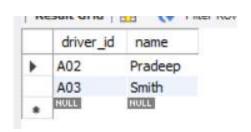
WHERE driver\_id IN (

SELECT driver\_id

FROM participated

WHERE damage\_amount >= 25000

);



-- 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;



-- Show accidents and the drivers involved (including damage amount)

 ${\tt SELECT\ accident.report\_num,\ accident\_accident\_date,\ accident.location,\ person.name,\ participated.damage\_amount}$ 

FROM accident, participated, person

WHERE accident.report\_num = participated.report\_num

AND participated.driver\_id = person.driver\_id;

	report_num	accident_date	location	name	damage_amount
Þ	11	2003-01-01	mysore road	Richard	10000
	12	2004-02-02	South end Circle	Pradeep	50000
	13	2003-01-21	Bull temple Road	Smith	25000
	14	2008-02-17	mysore road	Venu	3000
	15	2005-03-04	Kanakpura Road	Jhon	5000

-- Total damage per accident report

SELECT report\_num, SUM(damage\_amount) AS total\_damage

FROM participated

GROUP BY report\_num;

	report_num	total_damage
١	11	10000
	12	50000
	13	25000
	14	3000
	15	5000

-- Drivers who were involved in more than one accident

SELECT driver\_id

FROM participated

GROUP BY driver\_id

HAVING COUNT(DISTINCT report\_num) > 1;

```
driver_id
```

-- 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)



-- Latest accident (most recent accident\_date)

SELECT \*

FROM accident

ORDER BY accident\_date DESC

### LIMIT 1;

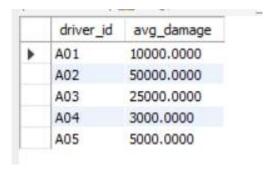


-- Average damage amount per driver

SELECT driver\_id, AVG(damage\_amount) AS avg\_damage

FROM participated

GROUP BY driver\_id;



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

**UPDATE** participated

SET damage\_amount = 25000

WHERE reg\_num = 'KA052250' AND report\_num = 11;

select \* from participated;

	driver_id	reg_num	report_num	damage_amount
•	A01	KA052250	11	25000
	A02	KA053408	12	50000
	A03	KA095477	13	25000
	A04	KA031181	14	3000
	A05	KA041702	15	5000
	HULL	HULL	NULL	HULL

-- Find drivers who caused the maximum damage in any single accident

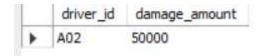
SELECT driver\_id, damage\_amount

FROM participated

WHERE damage\_amount = (

SELECT MAX(damage\_amount) FROM participated

);



-- Show cars (model) involved in accidents with total damage > 20000

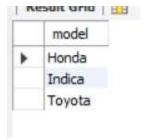
SELECT DISTINCT car.model

FROM car, participated

WHERE car.reg\_num = participated.reg\_num

GROUP BY participated.report\_num, car.model

HAVING SUM(participated.damage\_amount) > 20000;



-- Create a view summarizing accidents with participants count and total damage

### CREATE VIEW accident\_summary AS

#### **SELECT**

a.report\_num,

a.accident\_date,

a.location,

COUNT(p.driver\_id) AS participants\_count,

SUM(p.damage\_amount) AS total\_damage

FROM accident a, participated p

WHERE a.report\_num = p.report\_num

GROUP BY a.report\_num, a.accident\_date, a.location;

## SELECT \* FROM accident\_summary;

	report_num	accident_date	location	participants_count	total_damage
•	11	2003-01-01	mysore road	1	25000
	12	2004-02-02	South end Circle	1	50000
	13	2003-01-21	Bull temple Road	1	25000
	14	2008-02-17	mysore road	1	3000
	15	2005-03-04	Kanakpura Road	1	5000