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Assignment 3

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1) person (driver_id, name, address)
car (license, model, year)
accident (report_number, date, location)
owns (driver_id, license)
participated (driver_id, car, report_number, damage_amoun

fig :- insurance database

a) Find the total no. of people who owned cars that wer involved in accidents in 2020.

→

```
select count (distinct driver_id)
from accident, participated,
where accident.report_numbe r= participated.report_numbe
and date between '2020-01-01' and '2020-12-31':
```

b) Find the no. of accidents in which the car belonging to "Black Smith" were involved.

→

```
select count (distinct *)
from accident
where exists ( select * from participated, person
               where participated.driver_id = person.driver_id
               and person.name = 'Black Smith'
               and accident.report_number = participated.
                                            report_number )
```

c) Delete the "Range Rover" belonging to "Black Smith".

```
Delete from person Natural Join car Natural JOIN
owns
where name = "Black Smith" and model = "Range Rover");
```

d) Update the damage amount for the car with license number "AABB2001" in the accident with report number "BR2197" to $4000.

```
update participated
set damage_amount = 4000
where report_number = "BR2197" and driver_id in
( select driver_id from owns
    where license = "AABB2001")
```

2) Consider the employee. Give an expression in SQL

employee (<u>employee-number</u>, street, city)
works (<u>employee-name</u>, company-name, salary)
company (<u>company-name</u>, city)
manages (<u>employee-name</u>, manager-name)

fig :- employee db

a) find names of all employee who work for First Bank Corporation

```
select employee_name
from works
where company_name = 'First Bank Corporation'
```

b) ⇒ Find names & cities of residence of all employees who work for 1st Bank Corporation

```
select e.employee_name, city
from employee, works
where w.company_name = "1st Bank Corpn" and
      w.employee_name = e.employee_name
```

c) Find name, street addr and cities of residence of all employees who work for 1st Bank Corporation and earn more than $10,000

```
select * from employee
where employee_name in
    (select employee_name from works
     where company_name = '1st Bank Corporation' and
           salary > 10000)
```

d) Find all employees in the db who live in same cities as company for which they work.

```
select e.employee-name
from employee e, works w, company c
where e.employee = w.employee-name and
                   e.city = c.city and
      w.company-name = c.company-name
```

e) Find all employees in db who live in same cities and on the same streets as do their manager.

```
create view managerinfo AS (select employee-name
        street, city from employee, manages
    where employee.employee-name = manages.managername)

select e.employe-name
from employee e, managerinfo m
where e.employee-name = m.employee-name
    and e.city = m.city and
        e.street = m.street
```

f) find all employee in db who don't work for 1st bank corporation.

```
select employee-name
```

from works
where company-name <> 'First Bank Corporation'

g) Find all employee in db who earn more than every employee of Small Bank Corporation

select employee-name
from works
where salary > all
(select salary from works where
company-name = "Small Bank Corporation")

h) Find the company that has the smallest payroll

select company-name
from works
group by company-name
having sum(salary) <= all (select sum (salary)
from works
group by company-name)

i) Find those companies whose employee earn a higher salary, on average, than avg salary at 1st B Corp.

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```
select company_name
from works
group by company-name
having avg(salary) > (select avg (salary) from
                      works
                      where company_name =
                      "1st Bank Corporation")
```

j) Modify the db so that Jones now lives in Newtown.

```
update employee
set city = 'Newton'
where person-name = 'Jones'
```

k) Give all employees of 1st B corpn a 10-percent raise.

```
update works
set salary = salary * 1.1
where company_name = '1st B corpn'
```

l) Give all managers of 1st Bank corpn a 10-% raise

```
update works
set salary = salary * 1.1
where employee_name in (select manager_name
```

from manages)
and company-name = '1st Bank Corp'';

m) delete all tuples in the works relation for employee of 'Small Bank Corpor"

delete from works
where
company-name = "Small Bank corporation'