

HW3-2

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3.8、3.9参见上次HW3提交

3.13

Figure:

person (driver_id, name, address)
car (license_plate, model, year)
accident (report_number, year, location)
owns (driver_id, license_plate)
participated (report_number, license_plate, driver_id, damage_amount)

Figure 3.17 Insurance database

SQL:

```
1  a)
2  create table person
3  (
4      driver_id varchar(99),
5      name varchar(99),
6      address varchar(99),
7      primary key(driver_id)
8  )
9  b)
10 create table car
11 (
12     license_plate varchar(99),
13     model varchar(99),
14     year Integer,
15     primary key(license_plate)
16 )
17 c)
18 create table accident
19 (
20     report_number Integer,
21     location varchar(99),
22     year Integer,
23     primary key(report_number)
24 )
25 d)
26 create table owns
27 (
28     driver_id varchar(99),
29     license_plate varchar(99),
30     primary key(driver_id, license_plate)
31     foreign key(driver_id) references person
```

```

32     foreign key(license_plate) references car
33 )
34 e)
35 create table participated
36 (
37     report_number Integer,
38     license_plate varchar(99),
39     driver_id varchar(99),
40     damage_amount Integer,
41     primary key(report_number, license_plate)
42     foreign key(report_number) references accident
43     foreign key(license_plate) references car
44 )

```

3.16

Figure:

employee (ID, person_name, street, city)
works (ID, company_name, salary)
company (company_name, city)
manages (ID, manager_id)

Figure 3.19 Employee database.

SQL:

```

1  1)
2  select e.ID and e.person_name
3  from employee e, works w, company c
4  where e.ID = w.ID and e.city = c.city and w.company_name = c.compan_ name
5  2)
6  select P.ID and P.person_name
7  from employee P, employee R, manages M
8  where P.ID = M.ID and M.manager_id = R.ID and P.street = R.street and P.city
   = R.city
9  3)
10 select e.ID and e.person_name
11 from works T, employee e
12 where salary > (select avg (salary)
13                 from works S
14                 where T.company name = S.company name
15                 where T.ID = e.ID)
16 4)
17 select company_name
18 from works group by company_name
19 having sum (salary) <= all (select sum (salary)
20                             from works
21                             group by company_name)

```

