HW4

3200105787 张云策

3.10

```
1  a)
2  update employee
3  set city="Newton"
4  where ID="12345"
5  b)
6  updata works
7  set salary =case
8  when salary <= 100000 then
9  else salary*1.03
10 end
11 where company_name = 'First Bank Corporation'
```

3.11

```
1  a)
2  select name, ID
3  from student natural join takes natural join course
4  where course.dept = 'Comp. Sci.'
5  b)
6  select id, name
7  from student
8  except
9  select id, name
10 from student natural join takes
11 where year < 2017
12 c)
13 select dept, max(salary)
14 from instructor
15 group by dept
16 d)
17 select min(maxsalary)
18 from (select dept, max(salary) as maxsalary
19 from instructor
20 group by dept)
```

3.15

Figure:

branch(*branch_name*, *branch_city*, *assets*)
customer (*ID*, *customer_name*, *customer_street*, *customer_city*)
loan (*loan_number*, *branch_name*, *amount*)
borrower (*ID*, *loan_number*)
account (*account_number*, *branch_name*, *balance*)
depositor (*ID*, *account_number*)

Figure 3.18 Banking database.

SQL:

```
a)
with branchcount as
    (select count(*)
    branch
    where branch_city = 'Brooklyn')
select ID,customer_name,customer_city
    from customer c
    where branchcount =
            (select count(distinct branch_name)
from (customer natural join depositor natural join account natural join branch) as d
            where d.ID = c.ID)
b)
    select sum(amount)
    from loan
c)
select branch_name
    from branch
where assets > some
            (select assets
            from branch
            where branch_city = 'Brooklyn')
```