3-8

```sql
#a.找到所有无贷款顾客的ID，即存款人与借款人的差集
(select ID from depositor)
except
(select ID from borrower);

#b.与ID为12345的顾客同在一个街道和城市的顾客ID
select `F.ID
from    customer as A,customer as B
where   A.customer_street = B.customer_street
        and A.customer_city = B.customer_city
        and S.ID = '12345';

#c.拥有至少一个住在“Harrison”的有账户的顾客的支行
select  distinct branch_name
from    account,depositor,customer
where   customer.ID=depositor.ID
        and depositor.account_number=account.account_number
        and customer.customer_city='Harrison';
```

3-9

```sql
#a.为公司工作的雇员ID，姓名，城市
select  ID,person_name,city
from    employee,works
where   employee.ID=works.ID
        and works.company_name='First Bank Corporation';

#b.添加薪水要求
select  ID,person_name,city
from    employee,works
where   employee.ID=works.ID
        and works.company_name='First Bank Corporation'
        and works.salary>10000;

#c.不在公司工作的雇员ID
select  ID
from    works
where   company_name<>'First Bank Corporation';

#d.薪水大于某公司所有员工的员工ID
select  ID
from    works
where   salary >
        all(select  salary
            from    works
            where   company_name='Small Bank Corporation');

#e.在某公司所在城市都有分公司的公司，公司城市之间作差集后无元素的公司名。
select  A.company_name
from    company as A
where   not exists (
        (select city
```

```
        from company
        where company_name = 'Small Bank Corporation')
        except
        (select city
        from company as B
        where A.company_name = B.company_name));

#f.最多员工
select  company_name
from    works
group by company_name
having  count(ID) >=
        all(select ID
            from works
            group by company_name);

#g.比某公司平均薪水高的公司
select  company_name
from    works
group by company_name
having avg(salary) >
        (select avg(salary)
         from works
         where company_name = 'First Bank Corporation');

```

3-10

```
#a.
update  employee
set     city = 'Newtown'
where   ID = '12345';

#b.顺序执行下列语句
update works as A
set A.salary=
    (case
        when A.salary*1.1>100000 then A.salary*1.03
        else A.salary*1.1
     end)
where A.ID in(select B.ID
              from manages as B)
      and A.company_name = 'First Bank Corporation';

```

3-11

```
#a.
select ID,name
from student natural join takes natural join course
where course.dept_name = 'Comp.Sci.';

#b.
(select ID,name from student)
except
(select ID,name from student natural join takes where year <2017);
```

```sql

#c.
select dept_name,max(salary)
from instructor
group by dept_name;

#d.
select min(maxsalary)
from (select dept_name,max(salary) as maxsalary
      from instructor
      group by dept_name);

```

3-15

```sql
#a.
select ID,name
from customer as A
where (select count(*) from branch where branch_city = 'Brooklyn')
        =
      (select count(distinct branch_name) from
       (customer natural join depositor natural join account natural join branch) as B
       where B.ID = A.ID and B.branch_city = 'Brooklyn');

#b.
select sum(amount) from loan;

#c.
select branch_name
from branch
where assets>
    some(select assets
         from branch
         where branch_city = 'Brooklyn');

```