数据库作业Week3

3.8

> a. Find the ID of each customer of the bank who has an account but not a loan

```
(select ID
from deposior)
except
(select ID
from loan);
```

> b.Find the ID of each customer who lives on the same street and in the same city as customer '12345'.

```
select
from customer as A,customer as B
where A.customer_street = B.customer_street and
A.customer_city = B.customer_city and
B.ID = '12345';
```

> c. Find the name of each branch that has at least one customer who has an account in the bank and who lives in “Harrison”.

```
select distinct branch_name
from customer natural join account natural join depositor
where customer_city = 'Harrison';
```

3.9

> a. Find the ID, name, and city of residence of each employee who works for “First Bank Corporation”.

```
select ID,name,city
from employee natural join works
where company_name = 'First Bank Corporation';
```

> b. Find the ID, name, and city of residence of each employee who works for “First Bank Corporation” and earns more than $10000.

```
select ID,name,city
from employee natural join works
where company_name = 'First Bank Corporation' and salary > $10000;
```

> c. Find the ID of each employee who does not work for “First Bank Corporation”.

```
select ID
from works
where company_name <> 'First Bank Corporation';
```

> d. Find the ID of each employee who earns more than every employee of “Small Bank Corporation”.

```
select ID
from works
where salary > (select max(salary)
                from works
                where company_name = 'Small Bank Corporation');
```

> e. Assume that companies may be located in several cities. Find the name of each company that is located in every city in which “Small Bank Corporation” is located.

```
select A.company_name
from company as A
where not exists (select company_name
                  from company as B
                  where B.company_name = 'Small Bank Corporation'
                  except(
                  select company_name
                  form comnpany as C
                  where A.city = C.city
                  ) );
```

> f. Find the name of the company that has the most employees (or companies, in the case where there is a tie for the most).

```
select company_name
from works
group by company_name
having count(distinct id) >= all(select count(distinct id)
                         from works
                         group by company_name);
```

> g. Find the name of each company whose employees earn a higher salary,on average, than the average salary at “First Bank Corporation”.

```
select company_name
from works
group company_name having avg(salary)>(select avg(salary)
                                       from works as A
                                       where A.company_name = 'First Bank
Corporation');
```