Homework #4

3.10

a.

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

b.

```
update works as W
set W.salary = W.salary *
    (case
        when(W.salary <= 100000)
            then 1.1
        else 1.03
    end)
where W.ID in (select manager_id
                from manages)
        and W.company_name = 'First Bank Corporation';
```

3.11

a.

```
select distinct S.ID, S.name
from student as S inner join takes on S.ID = takes.ID
                inner join course on course.course_id = takes.course_id
where course.dept_name = 'Comp.Sci.';
```

b.

```
select S.ID, S.name
from student as S
where not exists (select *
                    from takes
                    where takes.year < 2017
                        and S.ID = takes.ID);
```

c.

```
select max(salary)
from instructor
group by dept_name;
```

d.

```
select min(max_salary)
from (select max(salary)
      from instructor
      group by dept_name) as max_salary;
```

3.15

a.

```
select ID, customer_name
from customer
where not exists(select branch_name
                 from branch
                 where branch_city = 'Brooklyn')
                except
                (select branch_name
                 from account inner join depositor
                 on account.account_number = depositor.account_number
                 where depositor.ID = customer.ID);
```

b.

```
select sum(loan_amount)
from loan;
```

c.

```
select B1.branch_name
from branch as B1
where B1.assets > some (select B2.assets
                        from branch as B2
                        where B2.branch_city = 'Brooklyn');
```