

- 1. Find the names of all employees who work for First Bank Corporation**

```
select employee-name
from works
where company-name = 'First Bank Corporation'
```

- 2. Find the names and cities of residence of all employees who work for First Bank Corporation.**

```
select e.employee-name, city
from employee e, works w
where w.company-name = 'First Bank Corporation' and
      w.employee-name = e.employee-name
```

Correct as *e.city*

- 3. Find the names, street address, and cities of residence of all employees who work for First Bank Corporation and earn more than \$10,000**

```
select *
from employee
where employee-name in
      (select employee-name
       from works
       where company-name = 'First Bank Corporation' and salary > 10000)
```

Correction: *salary*>10000

- 4. Find all employees in the database who live in the same cities as the companies for which they work.**

```
select e.employee-name
from employee e, works w, company c
where e.employee-name = w.employee-name and e.city = c.city and
      w.company -name = c.company -name
```

- 5. Find all employees in the database who live in the same cities and on the same streets as do their managers**

```
select P.employee-name
from employee P, employee R, manages M
where P.employee-name = M.employee-name and
      M.manager-name = R.employee-name and
      P.street = R.street and P.city = R.city
```

6. Find all employees in the database who do not work for First Bank Corporation.

```
select employee-name
from works
where company-name  $\neq$  'First Bank Corporation'
```

7. Find all employees in the database who earn more than every employee of Small Bank Corporation.

```
select employee-name
from works
where salary > all
      (select salary
       from works
       where company-name = 'Small Bank Corporation')
```

Or

Select *employee-name*

From *works*

Where *salary* > (select max(*salary*) from *company-name* = 'Small Bank Corporation')

8. Assume that the companies may be located in several cities. Find all companies located in every city in which Small Bank Corporation is located

```
select S.company-name
from company S
where not exists ((select city
                   from company
                   where company-name = 'Small Bank Corporation')
except
(select city
 from company T
 where S.company-name = T.company-name))
```

9. Find all employees who earn more than the average salary of all employees

of their company

```
select employee-name
from works T
where salary > (select avg (salary)
                 from works S
                 where T.company-name = S.company-name)
```

10. Find the company that has the most employees

```
select company-name
from works
group by company-name
having count (distinct employee-name) >= all
      (select count (distinct employee-name)
       from works
       group by company-name)
```

11. Find the company that has the smallest payroll

```
select company-name
from works
group by company-name
having avg (salary) > (select avg (salary)
                       from works
                       where company-name = 'First Bank Corporation')
```

12. Modify the database so that Jones now lives in Newtown.

```
update employee
set city = 'Newton'
where person-name = 'Jones'
```

```
update works
set salary = salary * 1.1
where company-name = 'First Bank Corporation'
```

```
update works
set salary = salary * 1.1
where employee-name in (select manager-name
                           from manages)
      and company-name = 'First Bank Corporation'
```

```
delete works
where company-name = 'Small Bank Corporation'
```