

SCHOOL OF SOFTWARE, TSINGHUA UNIVERSITY

Computer System Software(2)

Structured Query Language

Qingfu Wen

2011013239 thssvince@163.com

March 20, 2014

I. PROBLEM 1

Find the names of all employees who work for "First Bank Corporation".

```
select person_name from works  
where company_name = 'First Bank Corporation'
```

II. PROBLEM 2

Find the names of all employees in this database who do not work for "First Bank Corporation".

```
select person_name from employee  
except  
select person_name from works where company_name = 'First Bank Corporation'
```

III. PROBLEM 3

Find the names of all employees who live in the same city and on the same street as do their managers.

```
select T.person_name from employee as T, manages, employee as S  
where T.person_name = manages.person_name and S.person_name = manages.manager_name  
and T.city = S.city and T.street = S.street
```

IV. PROBLEM 4

Find the names of all employees who earn more than every employee of "Small Bank Corporation".

```
select person_name from works  
except  
select T.person_name from works as T, works as S where S.company_name = 'Small Bank Corporation' and S.salary >= T.salary
```

PROBLEM 5

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

```
select employee.person_name, employee.city from employee, works  
where employee.person_name = works.person_name and works.company_name = 'First Bank Corporation'
```

V. PROBLEM 6

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

select employee.person_name, employee.city **from** employee, works
where employee.person_name = works.person_name **and** works.company_name = 'First Bank Corporation' **and** works.salary >= 10,000

VI. PROBLEM 7

Find the names of all employees in this database who live in the same city as the company for which they work.

select employee.person_name **from** employee, works, company
where employee.person_name = works.person_name **and** works.company_name = company.company_name **and** employee.city = company.city

VII. PROBLEM 8

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

select *
from company as S
where not exists
((**select** T.city **from** company as T **where** T.company_name='Small Bank Corporation')
except
(**select** R.city **from** company as R **where** R.company_name=S.company_name))