SQL Queries Part 2

Consider the relational database whose schema is shown below:

\[ \text{lives(person-name, street, city)} \quad \text{works(person-name, company-name, salary)} \]

\[ \text{located-in(company-name, city)} \quad \text{manages(person-name, manager-name)} \]

The primary key for each relation is denoted by the underlined attribute. Provide SQL code for the following queries:

1. Find all employees who earn more than every employee of City Bank Corporation.

   Select x.pname
   
   From works x
   
   Where x.salary > all (select y.salary
       
       From works y
       
       Where y.cname='City Bank');

2. Find the number of employees who live in Boston.

   Select count(*)
   
   From lives x
   
   Where x.city='Boston';

3. Find the company with the most employees.

   Select w.cname
   
   From works w
   
   Groupby w.cname
Having count(*) > all (select count(*))

    From works
    Groupby cname);

4. Find the company with the smallest payroll (payroll is the sum of all salaries).

    Select cname
    From works
    Groupby cname
    Having sum(salary) <= all (select sum(salary)

        From works
        Groupby cname);

5. Find the companies that pay more, on average, than the average salary paid by City Bank corporation.

    Select cname
    From works
    Groupby cname
    Having avg(salary) > (select avg(salary)

        From works
        Where cname= ‘City Bank);