SQL Queries Part 1

Consider the relational database whose schema is shown below:

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

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

The primary key for each relation is denoted by the underlined attribute. Provide SQL code for the following queries. For convenience I am using pname instead of person-name, and cname instead of company-name etc.:

1. Find the name of all employees who work for the City Bank company (which is a specific company in the database).

Select pname

From works

Where cname='City Bank';

2. Find the name, street and city of all employees who work for City Bank and earn more than $10,000.

Select x.pname, x.city, x.street

From lives x, works w

Where w.cname='City Bank' and w.pname=x.pname and w.salary>10000;

3. Find all employees who live in the same city as the company they work for.

Select x.pname

From lives x, works y, located-in z

Where x.pname=y.pname and y.cname=z.cname and x.city=z.city;
4. Find all employees who live in the same city and on the same street as their manager.

    Select x.pname
    From lives x, y manages m
    Where x.pname = m.pname and y.pname = m.manager-name and x.city = y.city and x.street = y.street;

5. Find all persons who do not work for City Bank

    Select pname
    From works
    Where cname <> 'City Bank';

6. Find names of all companies which have (at least one) employees living in the city that the company is located in.

    select y.cname
    from lives x, works y, locatedin z
    where x.pname = y.pname and y.cname = z.cname and x.city = z.city
    groupby y.cname
    having count(*) >= 1;