|  |
| --- |
| **3)Consider the given Database Schema:**  **employee (employee-name, street, city)**  **works (employee-name, company-name, salary)**  **company (company-name, city)**  **manages (employee-name, manager-name)**  **1. Find the names of all employees who work for First Bank Corporation.**  **2. Find the names and cities of residence of all employees who work for First Bank Corporation.**  **3. Find the names, street addresses, and cities of residence of all employees**  **who work for First Bank Corporation and earn more than $10,000.**  **4. Find all employees in the database who live in the same cities as the companies for which**  **they work.**  **5. Find all employees in the database who live in the same cities and on the**  **same streets as do their managers.**  **6. Find all employees in the database who do not work for First Bank Corporation.**  **7. Find all employees in the database who earn more than each employee ofSmall Bank Corporation.**  **8. Assume that the companies may be located in several cities. Find all companies loacted in every city in which Small Bank Corporation is located.**  **9. Find all employees who earn more than the average salary of all employees of their company.**  **10. Find the company that has the most employees.**  **11. Find the company that has the smallest payroll.**  **12. Find those companies whose employees earn a higher salary, on average, than the average salary at First Bank Corporation.** |

#DISPLAYING ALL TABLES

mysql> show tables;

+-----------------+

| Tables\_in\_data3 |

+-----------------+

| company |

| employee |

| manager |

| works |

+-----------------+

mysql> desc company;

+--------------+--------------+------+-----+---------+-------+

| Field | Type | Null | Key | Default | Extra |

+--------------+--------------+------+-----+---------+-------+

| company\_name | varchar(100) | NO | PRI | NULL | |

| city | varchar(20) | YES | | NULL | |

+--------------+--------------+------+-----+---------+-------+

mysql> desc employee;

+-------------+--------------+------+-----+---------+-------+

| Field | Type | Null | Key | Default | Extra |

+-------------+--------------+------+-----+---------+-------+

| person\_name | varchar(100) | NO | PRI | NULL | |

| street | varchar(50) | YES | | NULL | |

| city | varchar(20) | YES | | NULL | |

+-------------+--------------+------+-----+---------+-------+

mysql> desc manager;

+--------------+--------------+------+-----+---------+-------+

| Field | Type | Null | Key | Default | Extra |

+--------------+--------------+------+-----+---------+-------+

| person\_name | varchar(100) | YES | MUL | NULL | |

| manager\_name | varchar(50) | YES | | NULL | |

+--------------+--------------+------+-----+---------+-------+

mysql> desc works;

+--------------+--------------+------+-----+---------+-------+

| Field | Type | Null | Key | Default | Extra |

+--------------+--------------+------+-----+---------+-------+

| person\_name | varchar(100) | YES | MUL | NULL | |

| company\_name | varchar(100) | YES | MUL | NULL | |

| salary | int(11) | YES | | NULL | |

+--------------+--------------+------+-----+---------+-------+

mysql> select \*from employee;

+-------------------+--------------+--------------+

| person\_name | street | city |

+-------------------+--------------+--------------+

| Amy Baker | Sixth Street | Pennsylvania |

| Daniff Hernandez | Oak Street | New York |

| Janet King | Elm Street | Illinois |

| Jayne Horton | Ceder Street | New York |

| Mia Brown | Park Street | Florida |

| Nan Singh | Fifth Street | Ohio |

| Renee Becker | View Street | Florida |

| Smith Leighann | Sixth Street | New York |

| William LaRotonda | Pine Street | Ohio |

+-------------------+--------------+--------------+

mysql> select \*from manager;

+-------------------+----------------+

| person\_name | manager\_name |

+-------------------+----------------+

| Amy Baker | Elisa Bramante |

| William LaRotonda | Michael Albert |

| Renee Becker | Elijiah Gray |

| Nan Singh | Amy Dunn |

| Janet King | Kelley Spirea |

| Mia Brown | David Stanley |

| Smith Leighann | John Harison |

+-------------------+----------------+

mysql> select \*from company;

+--------------------------+--------------+

| company\_name | city |

+--------------------------+--------------+

| AmerisourcBergen | Pennsylvania |

| Discover Finances | Illinois |

| NextEra energy | Florida |

| Penske Automotive groups | New York |

| PepsiCo | New York |

| Progressive | Ohio |

| US Foods | Illinois |

+--------------------------+--------------+

mysql> select \*from works;

+-------------------+--------------------------+--------+

| person\_name | company\_name | salary |

+-------------------+--------------------------+--------+

| Amy Baker | AmerisourcBergen | 120000 |

| William LaRotonda | Progressive | 150000 |

| Smith Leighann | PepsiCo | 120000 |

| Daniff Hernandez | Penske Automotive groups | 140000 |

| Janet King | US Foods | 125000 |

| Jayne Horton | Penske Automotive groups | 205000 |

| Mia Brown | NextEra energy | 105000 |

| Nan Singh | Progressive | 255000 |

| Renee Becker | NextEra energy | 145000 |

+-------------------+--------------------------+--------+

======================================================================================

1. Find the names of all employees who work for NextEra energy.

======================================================================================

mysql> Select person\_name from works Where company\_name="NextEra energy";

+--------------+

| person\_name |

+--------------+

| Mia Brown |

| Renee Becker |

+--------------+

======================================================================================

2. Find the names and cities of residence of all employees who work for Progressive.

======================================================================================

mysql> select \* from employee where person\_name in (select person\_name from works where company\_name="Progressive");

+-------------------+--------------+------+

| person\_name | street | city |

+-------------------+--------------+------+

| William LaRotonda | Pine Street | Ohio |

| Nan Singh | Fifth Street | Ohio |

+-------------------+--------------+------+

======================================================================================

3. Find the names, street addresses, and cities of residence of all employees

who work for Progressive and earn more than $10,000.

======================================================================================

mysql> select \* from employee where person\_name in (select person\_name from works where company\_name="Progressive" and salary>150000);

+-------------+--------------+------+

| person\_name | street | city |

+-------------+--------------+------+

| Nan Singh | Fifth Street | Ohio |

+-------------+--------------+------+

1 row in set (0.00 sec)

mysql> select E.person\_name, street, city from employee as E, works as W where E.person\_name=W.person\_name and W.company\_name="Progressive" and W.salary>10000;

+-------------------+--------------+------+

| person\_name | street | city |

+-------------------+--------------+------+

| William LaRotonda | Pine Street | Ohio |

| Nan Singh | Fifth Street | Ohio |

+-------------------+--------------+------+

======================================================================================

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

they work.

======================================================================================mysql> select E.person\_name from employee as E, works as W, company as C where E.person\_name=W.person\_name and E.city=C.city and W.company\_name=C.company\_name;

+-------------------+

| person\_name |

+-------------------+

| Amy Baker |

| William LaRotonda |

| Smith Leighann |

| Daniff Hernandez |

| Janet King |

| Jayne Horton |

| Mia Brown |

| Nan Singh |

| Renee Becker |

+-------------------+

======================================================================================

5. Find all employees in the database who live in the same cities and on the

same streets as do their managers.

======================================================================================

mysql> Select E1.person\_name From employee as E1, employee as E2, manager as M Where E1.person\_name=M.person\_name and E2.person\_name=M.manager\_name and E1.street=E2.street and E1.city=E2.city;

Empty set (0.03 sec)

======================================================================================

6. Find all employees in the database who do not work for Progressive.

======================================================================================

mysql> select person\_name from works where company\_name <> "Progressive";

+------------------+

| person\_name |

+------------------+

| Amy Baker |

| Smith Leighann |

| Daniff Hernandez |

| Janet King |

| Jayne Horton |

| Mia Brown |

| Renee Becker |

+------------------+

======================================================================================

7. Find all employees in the database who earn more than each employee of Penske Automotive groups.

======================================================================================

mysql> select person\_name from works where salary > all ( select salary from works where company\_name="Penske Automotive groups");

+-------------+

| person\_name |

+-------------+

| Nan Singh |

+-------------+

mysql> select person\_name from works where salary > all ( select salary from works where company\_name="NextEra energy");

+-------------------+

| person\_name |

+-------------------+

| William LaRotonda |

| Jayne Horton |

| Nan Singh |

+-------------------+

OR

mysql> select person\_name from works where salary>(select max(salary) from works where company\_name="NextEra energy");

+-------------------+

| person\_name |

+-------------------+

| William LaRotonda |

| Jayne Horton |

| Nan Singh |

======================================================================================

8. Assume that the companies may be located in several cities. Find all companies loacted in every city in which Progressive is located.

======================================================================================

mysql> select T.company\_name from company T where T.city in(select city from company where company\_name="Progressive");

+--------------+

| company\_name |

+--------------+

| Progressive |

+--------------+

mysql> select T.company\_name from company T where T.city in(select city from company where company\_name="PepsiCo");

+--------------------------+

| company\_name |

+--------------------------+

| Penske Automotive groups |

| PepsiCo |

+--------------------------+

======================================================================================

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

======================================================================================mysql> select person\_name from works t where salary >(select avg(salary) from works s where t.company\_name = s.company\_name);

+--------------+

| person\_name |

+--------------+

| Jayne Horton |

| Nan Singh |

| Renee Becker |

+--------------+

======================================================================================

10. Find the company that has the most employees.

======================================================================================

mysql> select company\_name from works group by company\_name having count(distinct person\_name)>=all ( select count(distinct person\_name) from works group by company\_name);

+--------------------------+

| company\_name |

+--------------------------+

| NextEra energy |

| Penske Automotive groups |

| Progressive |

+--------------------------+

======================================================================================

11. Find the company that has the smallest payroll.

======================================================================================

mysql> select company\_name from works group by company\_name having sum(salary) <= all (select sum(salary) from works group by company\_name);

+------------------+

| company\_name |

+------------------+

| AmerisourcBergen |

| PepsiCo |

+------------------+

======================================================================================

12. Find those companies whose employees earn a higher salary, on average, than the average salary at NextEra energy.

======================================================================================

mysql> select company\_name from works group by company\_name having avg(salary)>(select avg(salary) from works where company\_name="NextEra energy");

+--------------------------+

| company\_name |

+--------------------------+

| Penske Automotive groups |

| Progressive |

+--------------------------+

======================================================================================