-- 1. Find the names of 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, E.city

FROM Employee E, Works W

WHERE E.employee\_name = W.employee\_name

AND W.company\_name = '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.

SELECT E.employee\_name, E.street, E.city

FROM Employee E, Works W

WHERE E.employee\_name = W.employee\_name

AND W.company\_name = 'First Bank Corporation'

AND W.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 W.company\_name = C.company\_name

AND E.city = C.city;

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

SELECT E.employee\_name

FROM Employee E, Employee M, Manages Mng

WHERE E.employee\_name = Mng.employee\_name

AND Mng.manager\_name = M.employee\_name

AND E.city = M.city

AND E.street = M.street;

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

SELECT employee\_name

FROM Works

WHERE company\_name != 'First Bank Corporation';

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

SELECT E.employee\_name

FROM Works E

WHERE E.salary > ALL (SELECT W.salary

FROM Works W

WHERE W.company\_name = 'Small Bank Corporation');

-- 8. Find all companies located in every city in which Small Bank Corporation is located.

SELECT DISTINCT C.company\_name

FROM Company C

WHERE NOT EXISTS (SELECT city

FROM Company SC

WHERE SC.company\_name = 'Small Bank Corporation'

AND SC.city NOT IN (SELECT city

FROM Company

WHERE company\_name = C.company\_name));

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

SELECT E.employee\_name

FROM Works E

WHERE E.salary > (SELECT AVG(W.salary)

FROM Works W

WHERE W.company\_name = E.company\_name);

-- 10. Find the company that has the most employees.

SELECT W.company\_name

FROM Works W

GROUP BY W.company\_name

ORDER BY COUNT(W.employee\_name) DESC

LIMIT 1;

-- 11. Find the company that has the smallest payroll.

SELECT W.company\_name

FROM Works W

GROUP BY W.company\_name

ORDER BY SUM(W.salary) ASC

LIMIT 1;

-- 12. Find those companies whose employees earn a higher salary, on average, than the average salary at First Bank Corporation.

SELECT W.company\_name

FROM Works W

GROUP BY W.company\_name

HAVING AVG(W.salary) > (SELECT AVG(W2.salary)

FROM Works W2

WHERE W2.company\_name = 'First Bank Corporation');

-- 13. Modify the database so that “Jones” now lives in Newtown.

UPDATE Employee

SET city = 'Newtown'

WHERE employee\_name = 'Jones';

-- 14. Give all employees of First Bank Corporation a 10% raise.

UPDATE Works

SET salary = salary \* 1.10

WHERE company\_name = 'First Bank Corporation';

-- 15. Delete all tuples in the Works relation for employees of Small Bank Corporation.

DELETE FROM Works

WHERE company\_name = 'Small Bank Corporation';