

WHERE emp.employee\_id NOT IN (SELECT mgr.manager\_id FROM employees mgr);

Notice that the null value as part of the results set of a subquery is not a problem if you use the IN operator. The IN operator is equivalent to  $\neq$  ANY. For example, to display the employees who have subordinates, use the following SQL statement:

```
SELECT emp.last_name
FROM employees emp
WHERE emp.employee_id IN (SELECT mgr.manager_id FROM employees mgr);
```

Display all employees who do not have any subordinates:

```
SELECT last_name FROM employees
WHERE employee_id NOT IN (SELECT manager_id FROM employees WHERE manager_id
IS NOT NULL);
```

Find the Solution for the following:

1. The HR department needs a query that prompts the user for an employee last name. The query then displays the last name and hire date of any employee in the same department as the employee whose name they supply (excluding that employee). For example, if the user enters Zlotkey, find all employees who work with Zlotkey (excluding Zlotkey).

```
Select last_name, hire_date
from employees
where department_id = ALL (select department_id
                           from employees
                           where last_name = 'Zlotkey')
AND last_name != 'Zlotkey';
```

2. Create a report that displays the employee number, last name, and salary of all employees who earn more than the average salary. Sort the results in order of ascending salary.

```
Select Employee_id, LAST_NAME, SALARY
FROM EMPLOYEE
where Salary > (select Avg(salary) from employees)
order By salary ASC;
```

3. Write a query that displays the employee number and last name of all employees who work in a department with any employee whose last name contains a "u".

```
Select Employee_id, last_name
From employees
where Department_id IN (select Department_id
                        from employees where last_name like "%u%" and last_name
                        like "%u%");
```

4. The HR department needs a report that displays the last name, department number, and job ID of all employees whose department location ID is 1700.

```
SELECT e.last_name, e.department_id, e.job_id
FROM employees e
INNER JOIN department d ON e.department_id = d.dept_id
WHERE e.department_id IN (
    SELECT dept_id
    FROM department
    WHERE location_id = 1700 );
```

5. Create a report for HR that displays the last name and salary of every employee who reports to King.

```
SELECT e.last_name, e.salary
FROM employees e
WHERE e.manager_id IN (SELECT d.manager_id
                        FROM department d
                        WHERE d.manager_name = 'King');
```

6. Create a report for HR that displays the department number, last name, and job ID for every employee in the Executive department.

```
SELECT e.department_id, e.last_name, e.job_id
FROM employees e
JOIN department d ON e.department_id = d.dept_id
WHERE d.dept_name = 'Executive';
```

7. Modify the query 3 to display the employee number, last name, and salary of all employees who earn more than the average salary and who work in a department with any employee whose last name contains a u.

```
SELECT e.employee_id, e.last_name, e.salary
FROM employees e
WHERE e.salary > (SELECT AVG(salary) FROM employees)
AND e.department_id IN (SELECT x.department_id
                        FROM employees x
                        WHERE x.last_name LIKE '%a%' AND x.last_name
                        LIKE '%u%');
```