데이터베이스 Lab4(Displaying data from multiple tables)

1.
```
SELECT e.last_name, d.department_id, d.department_name
FROM employees e NATURAL JOIN departments d;
//Natural join

SELECT e.last_name, e.department_id, d.department_name
FROM employees e INNER JOIN departments d
ON e.department_id = d.department_id
```

2.
```
SELECT DISTINCT e.job_id, d.location_id
FROM employees e NATURAL JOIN departments d
WHERE d.department_id = 80;
//Natural join

SELECT distinct e.job_id, d.location_id
FROM      employees e INNER JOIN departments d
ON e.department_id = 80;
```

3.
```
SELECT e.last_name, d.department_name, d.location_id, l.city
FROM employees e, departments d, location l
WHERE e.department_id = d.department_id
AND d.location_id = l.location_id
AND e.commission_pct IS NOT NULL;
```
// 세개의 테이블 조인할때 이런방법밖에 없을까(아마)

4.
```
SELECT e.last_name, d.department_name
FROM employees e NATURAL JOIN departments d
WHERE e.last_name LIKE '%a%';
```

5. ***어려움
```
SELECT e.last_name, e.jod_id, d.department_id, d.department_name
FROM (employees e INNER JOIN departments d ON (e.department_id = d.department_id)) INNER JOIN locations
l ON(d.location_id = l.location_id)
WHERE l.city = 'Toronto';
```
// 세개 테이블 조인 (JOIN, ON 키워드 사용)

6.
```
SELECT worker.last_name as "Employee", worker.employee_id as "Emp#", manager.last_name as "Manager",
manager.employee_id as "Mgr#"
FROM employees worker LEFT OUTER JOIN employees manager
ON worker.manager_id = worker.employee_id;
//LEFT OUTER JOIN
```

7. ***

```
SELECT emp.department_id as “DEPARTMENT”, emp.last_name as “EMPLOYEE”, col.last_name as “COLLEAGUE”
FROM employees emp INNER JOIN employees col
ON emp.department_id = col.department_id
WHERE emp.employee_id <> col.employee_id
ORDER BY emp.department, emp.employee, col.colleague ASC;
```

8. ***

```
SELECT last_name, hire_date
FROM employees
WHERE hire_date >=
(select hire_date
        from    employees
        where   last_name = 'Davies')
```

9.

```
SELECT e1.last_name, e1.hire_date, e2.last_name, e2.hire_date
FROM employees e1 LEFT OUTER JOIN employees e2
ON e1.manager_id = e2.employee_id
WHERE e1.hire_date < e2.hire_date;
```