데이터베이스 Lab5(Aggregating data using group functions)

1.
SELECT MAX(salary) as "Maximum", MIN(salary) as "Minimum", SUM(salary) as "Sum", AVG(salary) as "Average"
FROM employees;

2.
SELECT job_id, MAX(salary) as "Maximum", MIN(salary) as "Minimum", SUM(salary) as "Sum", AVG(salary) as "Average"
FROM employees
GROUP BY job_id;

3.
SELECT job_id, COUNT(*)
FROM employees
GROUP BY job_id;

4.
SELECT COUNT(DISTINCT manager_id) as "Number of Managers"
FROM employees;

5.
SELECT (MAX(salary) – MIN(salary)) as "DIFFERENCE"
FROM employees;

6. ***
SELECT manager_id, MIN(salary)
FROM employees
WHERE manager_id IS NOT NULL
GROUP BY manager_id
HAVING MIN(salary) >= 6000
ORDER BY MIN(salary) DESC;

7.
SELECT d.department_name as "Name", d.location_id as "Location", COUNT(e.employment_id) as "Number of People", ROUND(AVG(e.salary), 3) as "Salary"
FROM employees e NATURAL JOIN departments d
GROUP BY d.department_name;

8. ***
SELECT COUNT(employee_id) as "TOTAL"
SUM(DECODE(SUBSTR(hire_date, 8, 9), '05', 1)) as "2005",
SUM(DECODE(SUBSTR(hire_date, 8, 9), '06', 1)) as "2006",
SUM(DECODE(SUBSTR(hire_date, 8, 9), '07', 1)) as "2007",
SUM(DECODE(SUBSTR(hire_date, 8, 9), '08', 1)) as "2008"
FROM employees;

*** DECODE(TO_CHAR(hire_date, 'YYYY'), 2005, 1, 0)
// 다른표현
SELECT COUNT(E.EMPLOYEE_ID) AS TOTAL
, COUNT(CASE TO_CHAR(E.HIRE_DATE, 'YYYY') WHEN '2005' THEN 1 END) AS "2005"
, COUNT(CASE TO_CHAR(E.HIRE_DATE, 'YYYY') WHEN '2006' THEN 1 END) AS "2006"
, COUNT(CASE TO_CHAR(E.HIRE_DATE, 'YYYY') WHEN '2007' THEN 1 END) AS "2007"
, COUNT(CASE TO_CHAR(E.HIRE_DATE, 'YYYY') WHEN '2008' THEN 1 END) AS "2008"
FROM EMPLOYEES E

9. *** 모르겠음

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SELECT job_id AS "Job", SUM(salary) AS "Dept 20", SUM(salary) AS "Dept 50", SUM(salary) AS "Dept 80",
SUM(salary) AS "Dept 90", SUM(salary) AS "Total"
FROM employees
GROUP by job_id, department_id = 20, department_id = 50, department_id = 80, department_id = 90;
```

9. *** 모르겠음

```
SELECT job_id AS "Job", SUM(salary) AS "Dept 20", SUM(salary) AS "Dept 50", SUM(salary) AS "Dept 80",
SUM(salary) AS "Dept 90", SUM(salary) AS "Total"
FROM employees
GROUP by job_id, department_id = 20, department_id = 50, department_id = 80, department_id = 90;
```