# MI 1.02: Report #5

Due on

*Nghiem Thi Phuong 5:30pm*

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## Problem 1

1. What is the average salary of each employee?

```sql
SELECT
    emp_no,
    AVG(salary)
FROM salaries
GROUP BY emp_no;
```

| | emp_no | `AVG(salary)` |
|---|---|---|
| 1 | 10001 | 75388.9412 |
| 2 | 10002 | 68854.5000 |
| 3 | 10003 | 43030.2857 |
| 4 | 10004 | 56512.2500 |
| 5 | 10005 | 87275.7692 |
| 6 | 10006 | 50514.9167 |
| 7 | 10007 | 70826.7143 |
| 8 | 10008 | 49307.6667 |
| 9 | 10009 | 78284.5556 |

2. How much was each employee paid in total?

```
SELECT
    emp_no,
    SUM(salary)
FROM salaries
GROUP BY emp_no;
```

| | emp_no | `SUM(salary)` |
|---|---|---|
| 1 | 10001 | 1281612 |
| 2 | 10002 | 413127 |
| 3 | 10003 | 301212 |
| 4 | 10004 | 904196 |
| 5 | 10005 | 1134585 |
| 6 | 10006 | 606179 |
| 7 | 10007 | 991574 |
| 8 | 10008 | 147923 |
| 9 | 10009 | 1409122 |

3. Minimum, maximum and total salaries of each department?

```
SELECT
    dept_emp.dept_no,
    SUM(salaries.salary),
    MIN(salary),
    MAX(salary)
FROM dept_emp
    JOIN salaries ON dept_emp.emp_no = salaries.emp_no
GROUP BY dept_emp.dept_no;
```

| | dept_no | `SUM(salaries.salary)` | `MIN(salary)` | `MAX(salary)` |
|---|---|---|---|---|
| 1 | d001 | 13725425266 | 39127 | 145128 |
| 2 | d002 | 11650834677 | 38812 | 142395 |
| 3 | d003 | 9363811425 | 38735 | 141953 |
| 4 | d004 | 41554438942 | 38623 | 138273 |
| 5 | d005 | 48179456393 | 38849 | 144434 |
| 6 | d006 | 10865203635 | 38786 | 132103 |
| 7 | d007 | 40030089342 | 39169 | 158220 |
| 8 | d008 | 11969730427 | 38851 | 130211 |
| 9 | d009 | 13143639841 | 38836 | 144866 |

4. Which departments have paid more than 20 billion dollars for their employees?

```
SELECT
   dept_emp.dept_no,
   SUM(salaries.salary)
FROM dept_emp
5    JOIN salaries ON dept_emp.emp_no = salaries.emp_no
GROUP BY dept_emp.dept_no
HAVING SUM(salaries.salary) > 20000000000;
```

| | dept_no | `SUM(salaries.salary)` |
|---|---------|------------------------|
| 1 | d004 | 41554438942 |
| 2 | d005 | 48179456393 |
| 3 | d007 | 40030089342 |

5. Total salaries of male employees in each department?

```
SELECT
   dept_emp.dept_no,
   SUM(salaries.salary)
FROM dept_emp
5    JOIN employees ON dept_emp.emp_no = employees.emp_no
   JOIN salaries ON dept_emp.emp_no = salaries.emp_no
WHERE employees.gender = 'M'
GROUP BY dept_emp.dept_no;
```

| | dept_no | `SUM(salaries.salary)` |
|---|---------|------------------------|
| 1 | d001 | 8352455367 |
| 2 | d002 | 6940675318 |
| 3 | d003 | 5619533959 |
| 4 | d004 | 24873889749 |
| 5 | d005 | 28961357095 |
| 6 | d006 | 6472073211 |
| 7 | d007 | 24051537190 |
| 8 | d008 | 7174578852 |
| 9 | d009 | 7865587983 |

6. Total salaries of department managers for each department, from highest to lowest?

```sql
SELECT
  dept_manager.dept_no,
  SUM(salaries.salary) AS total_salary
FROM dept_manager
  JOIN salaries ON dept_manager.emp_no = salaries.emp_no
GROUP BY dept_manager.dept_no
ORDER BY total_salary DESC;
```

| | dept_no | total_salary |
|---|---|---|
| 1 | d006 | 4162118 |
| 2 | d004 | 3374004 |
| 3 | d009 | 3187661 |
| 4 | d001 | 3093009 |
| 5 | d007 | 2915118 |
| 6 | d008 | 2558661 |
| 7 | d002 | 2549372 |
| 8 | d003 | 2098298 |
| 9 | d005 | 2028376 |