7. Employees, osa 2

a)

```
mysql> SELECT * FROM employees ORDER BY last_name LIMIT 10;
+--------+------------+------------+-----------+--------+------------+
| emp_no | birth_date | first_name | last_name | gender | hire_date  |
+--------+------------+------------+-----------+--------+------------+
|  11761 | 1964-07-17 | Bartek     | Aamodt    | M      | 1991-06-12 |
|  15427 | 1959-03-06 | Aluzio     | Aamodt    | M      | 1985-03-03 |
|  18182 | 1963-02-23 | Dekang     | Aamodt    | F      | 1988-05-25 |
|  16572 | 1956-11-26 | Matt       | Aamodt    | M      | 1987-06-16 |
|  12791 | 1960-06-16 | Mokhtar    | Aamodt    | M      | 1994-08-14 |
|  12516 | 1958-06-25 | Sreenivas  | Aamodt    | F      | 1990-03-06 |
|  12982 | 1952-12-08 | Sachem     | Aamodt    | F      | 1992-01-11 |
|  17400 | 1962-03-22 | Basim      | Aamodt    | F      | 1991-09-15 |
|  19898 | 1957-03-09 | Vidar      | Aamodt    | M      | 1988-08-06 |
|  17885 | 1954-02-01 | Takanari   | Aamodt    | M      | 1996-08-19 |
+--------+------------+------------+-----------+--------+------------+
```

b)

```
mysql> SELECT * FROM employees ORDER BY last_name, first_name LIMIT 10;
+--------+------------+------------+-----------+--------+------------+
| emp_no | birth_date | first_name | last_name | gender | hire_date  |
+--------+------------+------------+-----------+--------+------------+
| 258641 | 1961-05-23 | Abdelkader | Aamodt    | M      | 1994-12-02 |
| 258005 | 1953-02-17 | Adhemar    | Aamodt    | F      | 1991-01-21 |
| 455773 | 1960-05-04 | Aemilian   | Aamodt    | M      | 1988-04-21 |
| 436560 | 1959-03-16 | Alagu      | Aamodt    | F      | 1991-10-17 |
| 266651 | 1959-05-28 | Aleksander | Aamodt    | F      | 1989-03-29 |
| 487598 | 1962-03-03 | Alexius    | Aamodt    | M      | 1994-12-30 |
| 216963 | 1960-07-16 | Alois      | Aamodt    | M      | 1995-08-24 |
|  15427 | 1959-03-06 | Aluzio     | Aamodt    | M      | 1985-03-03 |
| 100860 | 1964-06-20 | Amabile    | Aamodt    | F      | 1993-02-06 |
| 107070 | 1954-04-24 | Anestis    | Aamodt    | M      | 1990-10-30 |
+--------+------------+------------+-----------+--------+------------+
```

c)

```
mysql> SELECt * FROM employees ORDER BY hire_date DESC LIMIT 5;
+--------+------------+------------+-----------+--------+------------+
| emp_no | birth_date | first_name | last_name | gender | hire_date  |
+--------+------------+------------+-----------+--------+------------+
| 463807 | 1964-06-12 | Bikash     | Covnot    | M      | 2000-01-28 |
| 428377 | 1957-05-09 | Yucai      | Gerlach   | M      | 2000-01-23 |
| 499553 | 1954-05-06 | Hideyuki   | Delgrande | F      | 2000-01-22 |
| 222965 | 1959-08-07 | Volkmar    | Perko     | F      | 2000-01-13 |
|  47291 | 1960-09-09 | Ulf        | Flexer    | M      | 2000-01-12 |
+--------+------------+------------+-----------+--------+------------+
```

d)

```
mysql> SELECT first_name, last_name, salary FROM employees
    -> JOIN salaries ON employees.emp_no = salaries.emp_no
    -> ORDER BY salary DESC LIMIT 1;
+------------+-----------+--------+
| first_name | last_name | salary |
+------------+-----------+--------+
| Tokuyasu   | Pesch     | 158220 |
+------------+-----------+--------+
1 row in set (2.21 sec)
```

e)

```
mysql> SELECT first_name, last_name, salary FROM employees
    -> JOIN salaries ON employees.emp_no = salaries.emp_no
    -> ORDER BY salary LIMIT 1;
+------------+-----------+--------+
| first_name | last_name | salary |
+------------+-----------+--------+
| Olivera    | Baek      |  38623 |
+------------+-----------+--------+
1 row in set (2.18 sec)
```

f)

```
mysql> SELECT first_name, last_name, salary FROM employees
    -> JOIN salaries ON employees.emp_no = salaries.emp_no
    -> WHERE salary > 150000 ORDER BY salary DESC;
+------------+-----------+--------+
| first_name | last_name | salary |
+------------+-----------+--------+
| Tokuyasu   | Pesch     | 158220 |
| Tokuyasu   | Pesch     | 157821 |
| Honesty    | Mukaidono | 156286 |
| Xiahua     | Whitcomb  | 155709 |
| Sanjai     | Luders    | 155513 |
| Tsutomu    | Alameldin | 155377 |
| Tsutomu    | Alameldin | 155190 |
```

g)

Sales:

```
mysql> SELECT COUNT(*) AS sales_total FROM departments JOIN dept_emp ON departments.dept_no
    ->  = dept_emp.dept_no WHERE departments.dept_name = 'Sales';
+-------------+
| sales_total |
+-------------+
|       52245 |
+-------------+
1 row in set (0.01 sec)
```

```
mysql> SELECT COUNT(*) AS marketing_total FROM departments JOIN dept_emp ON departments.dept_no
    -> = dept_emp.dept_no WHERE departments.dept_name = 'Marketing';
+-----------------+
| marketing_total |
+-----------------+
|           20211 |
+-----------------+
1 row in set (0.01 sec)
```

h)

SELECT employees.first_name, employees.last_name, departments.dept_name

FROM dept_manager

JOIN employees ON dept_manager.emp_no = employees.emp_no

JOIN departments ON dept_manager.dept_no = departments.dept_no;

```
mysql> SELECT employees.first_name, employees.last_name, departments.dept_name
    ->
    -> FROM dept_manager
    ->
    -> JOIN employees ON dept_manager.emp_no = employees.emp_no
    ->
    -> JOIN departments ON dept_manager.dept_no = departments.dept_no;
+------------+-------------+------------------+
| first_name | last_name   | dept_name        |
+------------+-------------+------------------+
| Tonny      | Butterworth | Customer Service |
| Marjo      | Giarratana  | Customer Service |
| Xiaobin    | Spinelli    | Customer Service |
| Yuchang    | Weedman     | Customer Service |
| DeForest   | Hagimont    | Development      |
| Leon       | DasSarma    | Development      |
| Ebru       | Alpin       | Finance          |
```

i)

SELECT AVG(salaries.salary) FROM employees

JOIN dept_emp ON employees.emp_no = dept_emp.emp_no

JOIN departments ON dept_emp.dept_no = departments.dept_no

JOIN salaries ON employees.emp_no = salaries.emp_no

WHERE departments.dept_name = 'Sales';

```
mysql> SELECT AVG(salaries.salary) FROM employees
    ->
    -> JOIN dept_emp ON employees.emp_no = dept_emp.emp_no
    ->
    -> JOIN departments ON dept_emp.dept_no = departments.dept_no
    ->
    -> JOIN salaries ON employees.emp_no = salaries.emp_no
    ->
    -> WHERE departments.dept_name = 'Sales';
+---------------------+
| AVG(salaries.salary) |
+---------------------+
|           80667.6058 |
+---------------------+
1 row in set (0.86 sec)
```

SELECT AVG(salaries.salary) FROM employees

JOIN dept_emp ON employees.emp_no = dept_emp.emp_no

JOIN departments ON dept_emp.dept_no = departments.dept_no

JOIN salaries ON employees.emp_no = salaries.emp_no

WHERE departments.dept_name = 'Marketing';

```
mysql> SELECT AVG(salaries.salary) FROM employees
    ->
    -> JOIN dept_emp ON employees.emp_no = dept_emp.emp_no
    ->
    -> JOIN departments ON dept_emp.dept_no = departments.dept_no
    ->
    -> JOIN salaries ON employees.emp_no = salaries.emp_no
    ->
    -> WHERE departments.dept_name = 'Marketing';
+---------------------+
| AVG(salaries.salary) |
+---------------------+
|           71913.2000 |
+---------------------+
1 row in set (0.58 sec)
```