1. Display the first and last names of only managers. How many were there?

```
mysql> SELECT distinct mgr.first_name, mgr.last_name FROM employees emp join employees mgr  on emp.manager_id = mgr.employee_id;
+------------+-----------+
| first_name | last_name |
+------------+-----------+
| Steven     | King      |
| Neena      | Kochhar   |
| Lex        | De Haan   |
| Alexander  | Hunold    |
| Nancy      | Greenberg |
| Den        | Raphaely  |
| Matthew    | Weiss     |
| Adam       | Fripp     |
| Payam      | Kaufling  |
| Shanta     | Vollman   |
| Kevin      | Mourgos   |
| John       | Russell   |
| Karen      | Partners  |
| Alberto    | Errazuriz |
| Gerald     | Cambrault |
| Eleni      | Zlotkey   |
| Michael    | Hartstein |
| Shelley    | Higgins   |
+------------+-----------+
18 rows in set (0.00 sec)

mysql>
```

2. Perform the query that displays a list employee's last names who work in the "Finance" department.

```
mysql> Select emp.last_name
    -> from employees emp join departments dp
    -> on emp.department_id = dp.department_id
    -> where dp.department_name = 'Finance';
+------------+
| last_name  |
+------------+
| Greenberg  |
| Faviet     |
| Chen       |
| Sciarra    |
| Urman      |
| Popp       |
+------------+
6 rows in set (0.00 sec)

mysql>
```

3. Perform 2 different queries that displays all employee first names which have 5 letters and the letter “e”. Hint: one method could use the OR operator and the second method either the UPPER/LOWER function.

```
mysql> Select emp.first_name
    -> From employees emp
    -> Where emp.first_name like '_____' and emp.first_name like '%e%';
+------------+
| first_name |
+------------+
| Neena      |
| Bruce      |
| Karen      |
| Kevin      |
| Irene      |
| James      |
| Mozhe      |
| James      |
| Hazel      |
| Peter      |
| Karen      |
| Eleni      |
| Peter      |
| Peter      |
| Ellen      |
| Kelly      |
| Vance      |
| Kevin      |
+------------+
18 rows in set (0.01 sec)

mysql>
```

4. What SQL query can be done to determine which department employs the most number of employees?

```
mysql> Select COUNT(emp.employee_id), dp.department_name  From employees emp join departments dp on emp.department_id = dp.departmen
t_id GROUP BY department_name;
+-----------------------+-----------------+
| COUNT(emp.employee_id) | department_name  |
+-----------------------+-----------------+
|                     1 | Administration   |
|                     2 | Marketing        |
|                     6 | Purchasing       |
|                     1 | Human Resources  |
|                    45 | Shipping         |
|                     5 | IT               |
|                     1 | Public Relations |
|                    34 | Sales            |
|                     3 | Executive        |
|                     6 | Finance          |
|                     2 | Accounting       |
+-----------------------+-----------------+
11 rows in set (0.00 sec)

mysql>
```

5. What SQL query determines the date the first person was hired? In other words, who is the most senior employee?

```
mysql> select emp.first_name, emp.hire_date
    -> from employees emp
    -> where hire_date =(select min(hire_date) from employees);
+------------+------------+
| first_name | hire_date  |
+------------+------------+
| Lex        | 2001-01-13 |
+------------+------------+
1 row in set (0.00 sec)

mysql>
```

6. Write a query that counts the number of months between the date the first person was hired and the date the last time a person was hired.

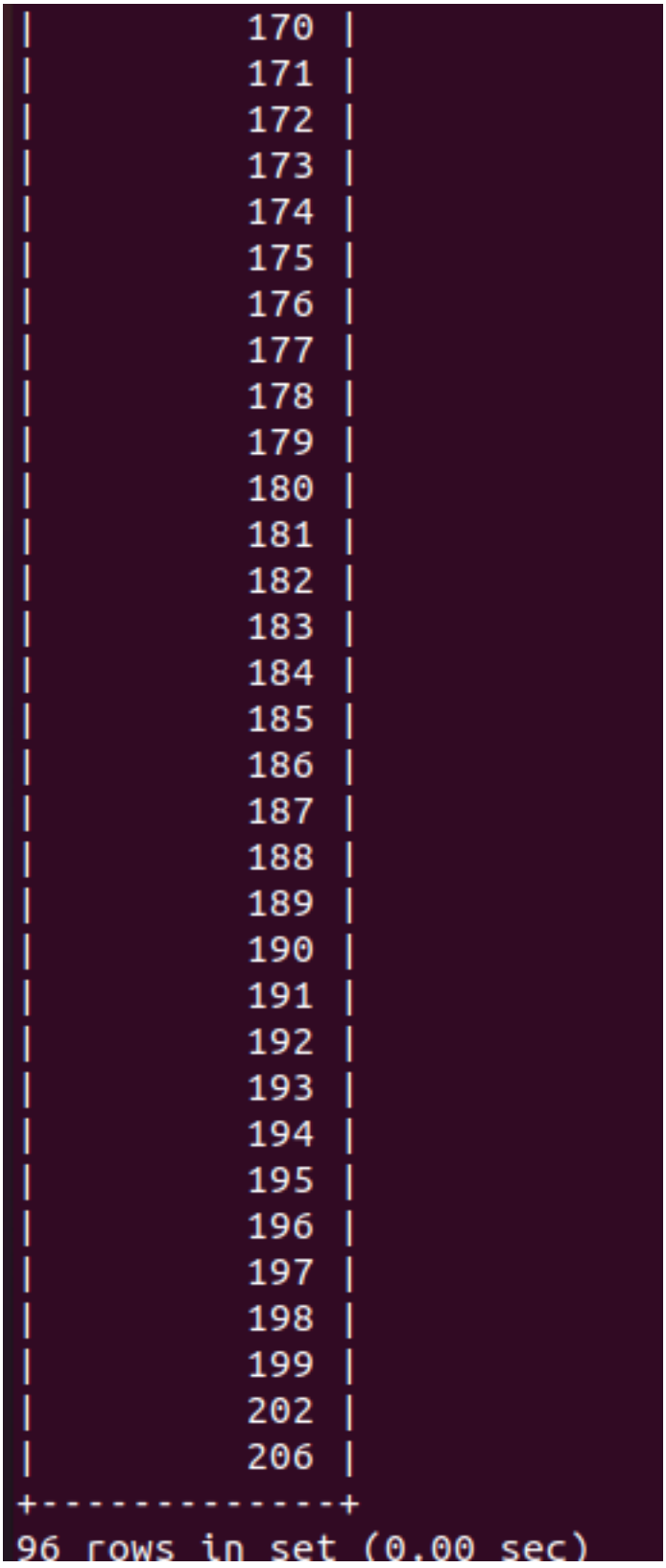
```
mysql> (select max(hire_date) from employees);
+----------------+
| max(hire_date) |
+----------------+
| 2008-04-21     |
+----------------+
1 row in set (0.00 sec)

mysql> select min(hire_date) from employees;
+----------------+
| min(hire_date) |
+----------------+
| 2001-01-13     |
+----------------+
1 row in set (0.01 sec)

mysql> SELECT TIMESTAMPDIFF(MONTH,'2001-01-13','2008-04-21');
+-----------------------------------------------------+
| TIMESTAMPDIFF(MONTH,'2001-01-13','2008-04-21') |
+-----------------------------------------------------+
|                                              87 |
+-----------------------------------------------------+
1 row in set (0.00 sec)
```

7. Display the list of employee id's who are not managers.

```
mysql> select emp.employee_id from employees emp left join departments mgr on emp.employee_id = mgr.manager_id where mgr.manager_id
is NULL;
```


| 170 |
| 171 |
| 172 |
| 173 |
| 174 |
| 175 |
| 176 |
| 177 |
| 178 |
| 179 |
| 180 |
| 181 |
| 182 |
| 183 |
| 184 |
| 185 |
| 186 |
| 187 |
| 188 |
| 189 |
| 190 |
| 191 |
| 192 |
| 193 |
| 194 |
| 195 |
| 196 |
| 197 |
| 198 |
| 199 |
| 202 |
| 206 |
+-------------+
96 rows in set (0.00 sec)

8. Display the names of employees who earn the highest salary in their respective department.

```
mysql>
mysql> select dp.department_name, emp.first_name, emp.salary
    -> from employees emp join departments dp where emp.department_id = dp.department_id
    -> and (dp.department_id, emp.salary) in (select department_id,max(salary) from employees group by department_id);
+-----------------+------------+----------+
| department_name  | first_name | salary   |
+-----------------+------------+----------+
| Administration   | Jennifer   |  4400.00 |
| Marketing        | Michael    | 13000.00 |
| Purchasing       | Den        | 11000.00 |
| Human Resources  | Susan      |  6500.00 |
| Shipping         | Adam       |  8200.00 |
| IT               | Alexander  |  9000.00 |
| Public Relations | Hermann    | 10000.00 |
| Sales            | John       | 14000.00 |
| Executive        | Steven     | 24000.00 |
| Finance          | Nancy      | 12008.00 |
| Accounting       | Shelley    | 12008.00 |
+-----------------+------------+----------+
11 rows in set (0.05 sec)

mysql>
```

9. Display a list of employee last names where the same last name is shared by multiple employees.

```
mysql> select count(*), emp.last_name
    -> from employees emp
    -> group by emp.last_name having count(*) > 1;
+----------+------------+
| count(*) | last_name |
+----------+------------+
|        2 | King       |
|        2 | Cambrault |
|        2 | Smith      |
|        2 | Taylor     |
|        2 | Grant      |
+----------+------------+
5 rows in set (0.02 sec)

mysql>
```

10. Are there any employee(s) who earn more than his/her manager? What is the query and results?

```
mysql> select distinct emp.first_name from employees emp left join employees mgr  on emp.employee_id = mgr.manager_id  where emp.salary < mgr.
salary;
+------------+
| first_name |
+------------+
| Gerald     |
| Eleni      |
+------------+
2 rows in set (0.00 sec)

mysql>
```