1) **Especificar campos no select em vez de usar "*"**

```
|       5 | 0.27060875 | select * from employees                                                         |
|       6 | 0.27349975 | select * from employees                                                         |
|       7 | 0.27165825 | select * from employees                                                         |
|       8 | 0.26991700 | select * from employees                                                         |
|       9 | 0.27019100 | select * from employees                                                         |
|      10 | 0.27229725 | select emp_no, birth_date, first_name, last_name, gender, hire_date from employees |
|      11 | 0.26986250 | select emp_no, birth_date, first_name, last_name, gender, hire_date from employees |
|      12 | 0.29060800 | select emp_no, birth_date, first_name, last_name, gender, hire_date from employees |
|      13 | 0.27120675 | select emp_no, birth_date, first_name, last_name, gender, hire_date from employees |
|      14 | 0.27217950 | select emp_no, birth_date, first_name, last_name, gender, hire_date from employees |
```

Média de tempo utilizando select * from table: 0,270191.

Média de tempo usando campos: 0,2698625.

A diferença não é significativa.

2) **Criar índices em colunas retornadas com uso de cláusula where**

```
+----------+------------+-------------------------------------------------------------------------------------------------------------+
| Query_ID | Duration   | Query                                                                                                       |
+----------+------------+-------------------------------------------------------------------------------------------------------------+
|       26 | 0.03201775 | alter table employees drop index data                                                                       |
|       27 | 1.83980550 | create index data on employees (birth_date, gender)                                                         |
|       28 | 0.19363250 | select * from employees where birth_date > '1958-01-01' and birth_date < '1980-01-01' and gender = 'F'      |
|       29 | 0.18939600 | select * from employees where birth_date > '1958-01-01' and birth_date < '1980-01-01' and gender = 'F'      |
|       30 | 0.14384200 | select * from employees where birth_date > '1958-01-01' and birth_date < '1980-01-01' and gender = 'F'      |
|       31 | 0.18894600 | select * from employees where birth_date > '1958-01-01' and birth_date < '1980-01-01' and gender = 'F'      |
|       32 | 0.14608675 | select * from employees where birth_date > '1958-01-01' and birth_date < '1980-01-01' and gender = 'F'      |
|       33 | 0.14551050 | select * from employees where birth_date > '1958-01-01' and birth_date < '1980-01-01' and gender = 'F'      |
|       34 | 0.02951950 | alter table employees drop index data                                                                       |
|       35 | 0.19417000 | select * from employees where birth_date > '1958-01-01' and birth_date < '1980-01-01' and gender = 'F'      |
|       36 | 0.14437825 | select * from employees where birth_date > '1958-01-01' and birth_date < '1980-01-01' and gender = 'F'      |
|       37 | 0.14666750 | select * from employees where birth_date > '1958-01-01' and birth_date < '1980-01-01' and gender = 'F'      |
|       38 | 0.14744100 | select * from employees where birth_date > '1958-01-01' and birth_date < '1980-01-01' and gender = 'F'      |
|       39 | 0.14998175 | select * from employees where birth_date > '1958-01-01' and birth_date < '1980-01-01' and gender = 'F'      |
|       40 | 0.15247700 | select * from employees where birth_date > '1958-01-01' and birth_date < '1980-01-01' and gender = 'F'      |
+----------+------------+-------------------------------------------------------------------------------------------------------------+
```

Média de tempo sem índices: 0,1451464167

Média de tempo usando índices: 0,1470091667

A diferença não é significativa.

3) **Restringir quantidade de resultados com limit**
   a) **Outra possibilidade: usar o limit para preparar a consulta, depois repetir a consulta com a quantidade total)**

```
|      45 | 0.19651400 | select * from employees where hire_date > '1990-01-01' and hire_date < '1997-01-01'           |
|      46 | 0.00051825 | select * from employees where hire_date > '1990-01-01' and hire_date < '1997-01-01' limit 10  |
|      47 | 0.20515025 | select * from employees where hire_date > '1990-01-01' and hire_date < '1997-01-01'           |
```

Tempo usando o limit: 0,20515025.

Média de tempo sem usar limit: 0,19651400.

A diferença não é significativa.

4) Criar relacionamentos com INNER JOIN em vez de WHERE

```
mysql> show profiles;
+----------+------------+--------------------------------------------------------------------------------------------------------------------------+
| Query_ID | Duration   | Query                                                                                                                    |
+----------+------------+--------------------------------------------------------------------------------------------------------------------------+
|       25 | 0.54339125 | SELECT employees.first_name, employees.last_name, departments.dept_name  FROM employees,departments, dept_emp WHERE employees.emp_no=dept_emp.emp_no and dept_emp.dept_no=departments.dep
t_no |
|       26 | 0.50585000 | SELECT employees.first_name, employees.last_name, departments.dept_name  FROM employees,departments, dept_emp WHERE employees.emp_no=dept_emp.emp_no and dept_emp.dept_no=departments.dep
t_no |
|       27 | 0.51209025 | SELECT employees.first_name, employees.last_name, departments.dept_name  FROM employees,departments, dept_emp WHERE employees.emp_no=dept_emp.emp_no and dept_emp.dept_no=departments.dep
t_no |
|       28 | 0.56411750 | SELECT employees.first_name, employees.last_name, departments.dept_name  FROM employees,departments, dept_emp WHERE employees.emp_no=dept_emp.emp_no and dept_emp.dept_no=departments.dep
t_no |
|       29 | 0.54580275 | SELECT employees.first_name, employees.last_name, departments.dept_name  FROM employees,departments, dept_emp WHERE employees.emp_no=dept_emp.emp_no and dept_emp.dept_no=departments.dep
t_no |
|       30 | 0.50619525 | SELECT employees.first_name, employees.last_name, departments.dept_name FROM (dept_emp join departments on dept_emp.dept_no=departments.dept_no) join employees on employees.emp_no=dept_
emp.emp_no |
|       31 | 0.51079775 | SELECT employees.first_name, employees.last_name, departments.dept_name FROM (dept_emp join departments on dept_emp.dept_no=departments.dept_no) join employees on employees.emp_no=dept_
emp.emp_no |
|       32 | 0.53600350 | SELECT employees.first_name, employees.last_name, departments.dept_name FROM (dept_emp join departments on dept_emp.dept_no=departments.dept_no) join employees on employees.emp_no=dept_
emp.emp_no |
|       33 | 0.57678700 | SELECT employees.first_name, employees.last_name, departments.dept_name FROM (dept_emp join departments on dept_emp.dept_no=departments.dept_no) join employees on employees.emp_no=dept_
emp.emp_no |
|       34 | 0.53043300 | SELECT employees.first_name, employees.last_name, departments.dept_name FROM (dept_emp join departments on dept_emp.dept_no=departments.dept_no) join employees on employees.emp_no=dept_
emp.emp_no |
```

Média de tempo utilizando where: 0,5080451667

Média de tempo utilizando inner join: 0,52574475.

A diferença não é significativa.