

Report.6.Subquery

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1 Who have the same name as the managers of the “Finance” department?

```
select distinct employees.emp_no,concat(first_name,'_',last_name)
as fullname
from employees join dept_emp on employees.emp_no=dept_emp.emp_no
join departments on departments.dept_no=dept_emp.dept_no
where last_name in (select last_name
from employees
join dept_manager on employees.emp_no = dept_manager.emp_no
join departments on departments.dept_no=dept_manager.dept_no
and dept_name='Finance');
```

487848	Arvind Alpin
488517	Shaw Alpin
488519	Qiwēn Alpin
488676	Kristine Alpin
489813	Conrado Alpin
490322	Uri Legleitner
493063	Danil Alpin
493266	Constantijn Legleitner
493332	Anoosh Legleitner
493821	Aiichiro Legleitner
495608	Gift Legleitner
496062	Xinan Legleitner
497267	Gilbert Alpin
497479	Ramalingam Alpin
497947	Ekawit Alpin
497954	Hilary Legleitner
498115	Geoffry Alpin
498634	Heping Alpin
499867	Hidde Alpin

408 rows in set (0.16 sec)

2 Who in the “Production” department were hired after the promotion of the last manager in that department?

```
select employees.emp_no, concat(first_name, ' ', last_name)
as fullname
from employees join dept_emp on employees.emp_no=dept_emp.emp_no
join departments on departments.dept_no=dept_emp.dept_no
and dept_name='Production'
where from_date > ( select from_date from dept_manager
where dept_no = (select dept_no from departments
where dept_name='Production'))
order by from_date desc limit 0,1);
```

499811	Danae Sevcikova
499833	Shirish Rettelbach
499855	Constantine Michaels
499856	Yoshinari Theuretzbacher
499864	Teiji Tsukuda
499874	Dharmaraja Range
499913	Masako Heiserman
499916	Florina Cusworth
499918	Hilary Rodiger
499923	Sergi Melton
499925	Tuval Hardjono
499948	Cordelia Paludetto
499971	Uwe Uludag
499974	Shuichi Piazza
499983	Uri Juneja
499993	DeForest Mullainathan
499995	Dekang Lichtner
499999	Sachin Tsukuda

-----+
19513 rows in set (0.14 sec)

3 Find the average salary of each department, from highest to lowest.

```
select dept_name, average from
(select dept_emp.dept_no, dept_name, avg(salary) as average
from salaries join employees on employees.emp_no=salaries.emp_no
join dept_emp on dept_emp.emp_no = employees.emp_no
join departments on dept_emp.dept_no = departments.dept_no
group by dept_emp.dept_no ) as averagel
order by average desc;
```

```
mysql> select dept_name, average from
-> ( select dept_emp.dept_no, dept_name, avg(salary) as average
-> from salaries join employees on employees.emp_no=salaries.emp_no
-> join dept_emp on dept_emp.emp_no = employees.emp_no
-> join departments on dept_emp.dept_no = departments.dept_no
-> group by dept_emp.dept_no ) as average1
[
-> order by average desc;
```

dept_name	average
Sales	80667.6058
Marketing	71913.2000
Finance	70489.3649
Research	59665.1817
Production	59605.4825
Development	59478.9012
Customer Service	58770.3665
Quality Management	57251.2719
Human Resources	55574.8794

```
9 rows in set (13.63 sec)
```

4 Find the average salary for each type of Engineer, from highest to lowest.

```
select title , avg(avgsalary) as averagesalary
from
(select emp_no,avg(salary) as avgsalary
from salaries group by emp_no) as average
join titles on average.emp_no=titles.emp_no
and title like '%Engineer%'
group by title
order by averagesalary desc;
```

```
mysql> select title, avg(avgsalary) as averagesalary
-> from
-> (select emp_no,avg(salary) as avgsalary
-> from salaries group by emp_no) as average
-> join titles on average.emp_no=titles.emp_no
-> and title like '%Engineer%'
-> group by title
-> order by averagesalary desc;
```

title	averagesalary
Senior Engineer	59144.76835191
Engineer	57244.45845623
Assistant Engineer	56963.53043254

```
3 rows in set (2.19 sec)
```