Check the following database:

DEPARTMENTS:

num	name	town_code
10	ACCOUNTING	SVQ
20	RESEARCH	MAD
30	SALES	BCN
40	PRODUCTION	BIO

EMPLOYEES:

num	surname	name	manager	start_date	salary	commission	dept_num	occu_code
800	BANDERAS	ANTONIO	7839	1991-01-09	2885	NULL	20	MAN
7369	SÁNCHEZ	SERGIO	7902	1990-12-17	1040	NULL	20	EMP
7499	ARROYO	MARTA	7698	1990-02-20	1500	390	30	SAL
7521	SALA	RAUL	7698	1991-02-22	1625	650	30	SAL
7566	JIMÉNEZ	JUDIT	7839	1991-04-02	2900	NULL	20	MAN
7654	MARTÍN	MONICA	7698	1991-09-29	1600	1020	30	SAL
7698	NEGRO	BARTOLOME	7839	1991-05-01	3005	NULL	30	MAN
7782	CEREZO	ENRIQUE	7839	1991-06-09	2885	NULL	10	MAN
7788	GIL	JESUS	7566	1991-11-09	3000	NULL	20	ANA
7844	TOVAR	LUIS	7698	1991-09-08	1350	0	30	SAL
7876	ALONSO	FERNANDO	7788	1991-09-23	1430	NULL	20	EMP
7900	JIMENO	XAVIER	7698	1991-12-03	1335	NULL	30	EMP
7902	FERNÁNDEZ	ANA	7566	1991-12-03	3000	NULL	20	ANA
7934	MUÑOZ	ANTONIA	7782	1992-01-23	1690	NULL	10	EMP
8001	RUIZ	FERNANDA	7839	1992-06-10	2885	NULL	20	MAN

OCCUPATIONS:

code	name
ANA	ANALYST
EMP	EMPLOYEE
MAN	MANAGER
PRE	PRESIDENT
SAL	SALESMAN

TOWNS:

code	name
BCN	BARCELONA
BIO	BILBAO
MAD	MADRID
SVQ	SEVILLA

Import the next database:

```
CREATE DATABASE IF NOT EXISTS `EMPLOYEESDBNORMAL`;
USE `EMPLOYEESDBNORMAL`;

CREATE TABLE IF NOT EXISTS `DEPARTMENTS` (
  `num` int(11) NOT NULL,
  `name` varchar(30) NOT NULL,
  `town_code` varchar(3) DEFAULT NULL,
  PRIMARY KEY (`num`),
  KEY `town_code` (`town_code`)
) ENGINE=InnoDB DEFAULT CHARSET=latin1;

INSERT INTO `DEPARTMENTS` (`num`, `name`, `town_code`) VALUES
(10, 'ACCOUNTING', 'SVQ'),
```

```
(20, 'RESEARCH', 'MAD'),
(30, 'SALES', 'BCN'),
(40, 'PRODUCTION', 'BIO');

CREATE TABLE IF NOT EXISTS `EMPLOYEES` (
  `num` int(11) NOT NULL,
  `surname` varchar(50) NOT NULL,
  `name` varchar(50) NOT NULL,
  `manager` int(11) DEFAULT NULL,
  `start_date` date DEFAULT NULL,
  `salary` int(11) DEFAULT NULL,
  `commission` int(11) DEFAULT NULL,
  `dept_num` int(11) DEFAULT NULL,
  `occu_code` varchar(3) DEFAULT NULL,
  PRIMARY KEY (`num`),
  KEY `dept_num` (`dept_num`),
  KEY `occu_code` (`occu_code`)
) ENGINE=InnoDB DEFAULT CHARSET=latin1;

INSERT INTO `EMPLOYEES` (`num`, `surname`, `name`, `manager`, `start_date`, `salary`,
`commission`, `dept_num`, `occu_code`) VALUES
(800, 'BANDERAS', 'ANTONIO', 7839, '1991-01-09', 2885, NULL, 20, 'MAN'),
(7369, 'SÁNCHEZ', 'SERGIO', 7902, '1990-12-17', 1040, NULL, 20, 'EMP'),
(7499, 'ARROYO', 'MARTA', 7698, '1990-02-20', 1500, 390, 30, 'SAL'),
(7521, 'SALA', 'RAUL', 7698, '1991-02-22', 1625, 650, 30, 'SAL'),
(7566, 'JIMÉNEZ', 'JUDIT', 7839, '1991-04-02', 2900, NULL, 20, 'MAN'),
(7654, 'MARTÍN', 'MONICA', 7698, '1991-09-29', 1600, 1020, 30, 'SAL'),
(7698, 'NEGRO', 'BARTOLOME', 7839, '1991-05-01', 3005, NULL, 30, 'MAN'),
(7782, 'CEREZO', 'ENRIQUE', 7839, '1991-06-09', 2885, NULL, 10, 'MAN'),
(7788, 'GIL', 'JESUS', 7566, '1991-11-09', 3000, NULL, 20, 'ANA'),
(7844, 'TOVAR', 'LUIS', 7698, '1991-09-08', 1350, 0, 30, 'SAL'),
(7876, 'ALONSO', 'FERNANDO', 7788, '1991-09-23', 1430, NULL, 20, 'EMP'),
(7900, 'JIMENO', 'XAVIER', 7698, '1991-12-03', 1335, NULL, 30, 'EMP'),
(7902, 'FERNÁNDEZ', 'ANA', 7566, '1991-12-03', 3000, NULL, 20, 'ANA'),
(7934, 'MUÑOZ', 'ANTONIA', 7782, '1992-01-23', 1690, NULL, 10, 'EMP'),
(8001, 'RUIZ', 'FERNANDA', 7839, '1992-06-10', 2885, NULL, 20, 'MAN');

CREATE TABLE IF NOT EXISTS `OCCUPATIONS` (
  `code` varchar(3) NOT NULL,
  `name` varchar(30) NOT NULL,
  PRIMARY KEY (`code`)
) ENGINE=InnoDB DEFAULT CHARSET=latin1;

INSERT INTO `OCCUPATIONS` (`code`, `name`) VALUES
('ANA', 'ANALYST'),
('EMP', 'EMPLOYEE'),
('MAN', 'MANAGER'),
('PRE', 'PRESIDENT'),
('SAL', 'SALESMAN');

CREATE TABLE IF NOT EXISTS `TOWNS` (
  `code` varchar(3) NOT NULL,
  `name` varchar(30) NOT NULL,
  PRIMARY KEY (`code`)
) ENGINE=InnoDB DEFAULT CHARSET=latin1;

INSERT INTO `TOWNS` (`code`, `name`) VALUES
('BCN', 'BARCELONA'),
('BIO', 'BILBAO'),
('MAD', 'MADRID'),
('SVQ', 'SEVILLA');

ALTER TABLE `DEPARTMENTS`
  ADD CONSTRAINT `DEPARTMENTS_ibfk_1` FOREIGN KEY (`town_code`) REFERENCES `TOWNS`
(`code`);

ALTER TABLE `EMPLOYEES`
```

```
  ADD CONSTRAINT `EMPLOYEES_ibfk_1` FOREIGN KEY (`dept_num`) REFERENCES `DEPARTMENTS`
(`num`),
  ADD CONSTRAINT `EMPLOYEES_ibfk_2` FOREIGN KEY (`occu_code`) REFERENCES `OCCUPATIONS`
(`code`);
```

Do the following queries with that database:

1. Display the number of employees in each department. Use GROUP BY to group by department.

```
+----------+-------------+
| dept_num | N_employees |
+----------+-------------+
|       10 |           2 |
|       20 |           7 |
|       30 |           6 |
+----------+-------------+
3 rows in set (0.001 sec)
```

```
1 •  SELECT dept_num, count(num) as N_employees FROM C04.EMPLOYEES where dept_num <=30 group by dept_num;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

dept_num	N_employees
10	2
20	7
30	6

2. For each occupations obtain the average of salary.

```
+----------+----------------+
| name     | average_salary |
+----------+----------------+
| ANALYST  |      3000.0000 |
| EMPLOYEE |      1373.7500 |
| MANAGER  |      2912.0000 |
| SALESMAN |      1518.7500 |
+----------+----------------+
4 rows in set (0.001 sec)
```

```
1 •  SELECT OCCUPATIONS.name, avg(EMPLOYEES.salary) as avergae_salary
2    FROM C04.EMPLOYEES
3    inner join OCCUPATIONS on EMPLOYEES.occu_code=OCCUPATIONS.code
4    group by EMPLOYEES.occu_code;
```

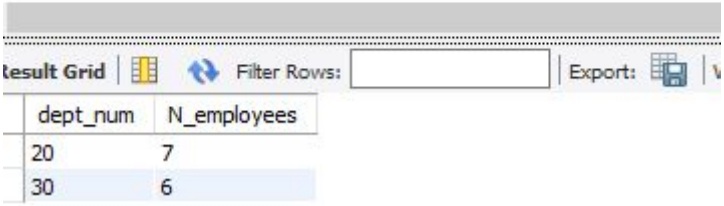
Result Grid | Filter Rows: | Export: | Wrap Cell Content:

name	avergae_salary
ANALYST	3000.0000
EMPLOYEE	1373.7500
MANAGER	2912.0000
SALESMAN	1518.7500

3. Display the departments with more than 5 employees. Use GROUP BY to group by department and HAVING to establish the condition on the groups.

```
+----------+---------------+
| dept_num | num_employees |
+----------+---------------+
|       20 |             7 |
|       30 |             6 |
+----------+---------------+
2 rows in set (0.001 sec)
```

```
1 •  SELECT dept_num, count(num) as N_employees
2    FROM C04.EMPLOYEES
3    group by dept_num
4    having count(num)>5;
```



dept_num	N_employees
20	7
30	6

4. Find the average wages (=”*media de los salarios*”) of each department (use the function avg and GROUP BY).

```
+----------+---------------+
| dept_num | average_wages |
+----------+---------------+
|       10 |     2287.5000 |
|       20 |     2448.5714 |
|       30 |     1735.8333 |
+----------+---------------+
3 rows in set (0.002 sec)
```

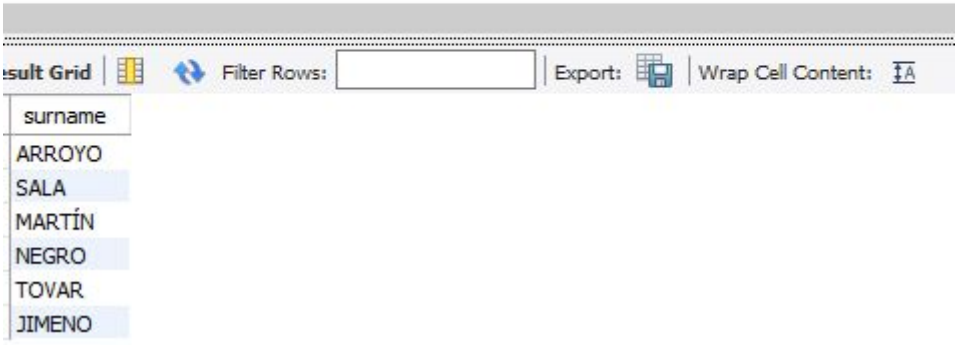
```
1 •  SELECT EMPLOYEES.dept_num, avg(EMPLOYEES.salary) as avergae_salary
2    FROM C04.EMPLOYEES
3    group by EMPLOYEES.dept_num;
```

dept_num	avergae_salary
10	2287.5000
20	2448.5714
30	1735.8333

5. Display the surname of the salesmen of the 'SALES' department.

```
+---------+
| surname |
+---------+
| ARROYO  |
| SALA    |
| MARTÍN  |
| TOVAR   |
+---------+
4 rows in set (0.001 sec)
```

```
1 •  SELECT EMPLOYEES.surname
2    FROM C04.EMPLOYEES
3    inner join DEPARTMENTS on EMPLOYEES.dept_num=DEPARTMENTS.num
4    where DEPARTMENTS.name="SALES";
```



I've got 6 workers on SALES i don't know why but i count in manually too.

6. Display the sum of salaries of the 'SALES' department.

```
+-------+-------+
| name  | total |
+-------+-------+
| SALES | 10415 |
+-------+-------+
1 row in set (0.001 sec)
```

```
select DEPARTMENTS.name, sum(EMPLOYEES.salary)...
(Se me olvido, el name)
```

```
1 •  SELECT sum(EMPLOYEES.salary)
2    FROM C04.EMPLOYEES
3    inner join DEPARTMENTS on EMPLOYEES.dept_num=DEPARTMENTS.num
4    where DEPARTMENTS.name="SALES";
```

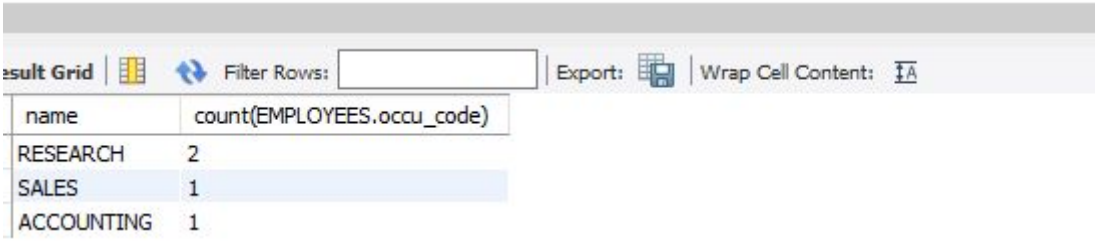
```
1    select D.name, sum(salary) as total
2    from EMPLOYEES as E, DEPARTMENTS as D
3    where E.dept_num = D.num
4    and D.name="SALES"
5    group by D.name;
```

name	total
SALES	10415

7. Display the count of employees with occupation “EMPLOYEE” in every department (show the name of the department).

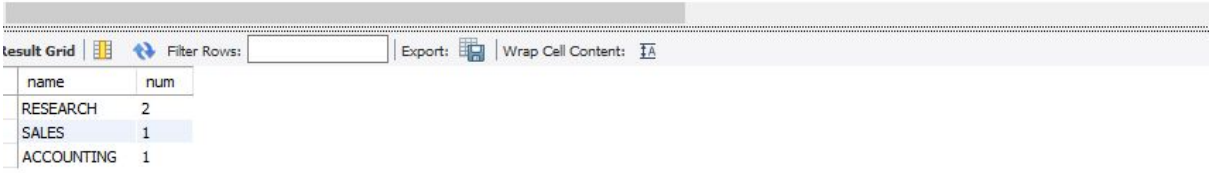
```
+------------+-----+
| name       | num |
+------------+-----+
| ACCOUNTING |   1 |
| RESEARCH   |   2 |
| SALES      |   1 |
+------------+-----+
3 rows in set (0.001 sec)
```

```
1 •  SELECT DEPARTMENTS.name, count(EMPLOYEES.occu_code) FROM C04.EMPLOYEES
2    inner join DEPARTMENTS on EMPLOYEES.dept_num=DEPARTMENTS.num
3    where occu_code="EMP"
4    group by EMPLOYEES.dept_num;
```



name	count(EMPLOYEES.occu_code)
RESEARCH	2
SALES	1
ACCOUNTING	1

```
1 •  SELECT DEPARTMENTS.name, count(OCCUPATIONS.name)  as num
2    from C04.EMPLOYEES, C04.DEPARTMENTS, C04.OCCUPATIONS
3    where EMPLOYEES.dept_num=DEPARTMENTS.num and EMPLOYEES.occu_code=OCCUPATIONS.code and OCCUPATIONS.name="EMPLOYEE"
4    group by DEPARTMENTS.name;
```



name	num
RESEARCH	2
SALES	1
ACCOUNTING	1

8. Show the number of different occupations in each department.

```
+------------+------------+----------------------+
| Department | Occupation | Number_of_employees |
+------------+------------+----------------------+
| ACCOUNTING | EMPLOYEE   |                    1 |
| ACCOUNTING | MANAGER    |                    1 |
| RESEARCH   | ANALYST    |                    2 |
| RESEARCH   | EMPLOYEE   |                    2 |
| RESEARCH   | MANAGER    |                    3 |
| SALES      | EMPLOYEE   |                    1 |
| SALES      | MANAGER    |                    1 |
| SALES      | SALESMAN   |                    4 |
+------------+------------+----------------------+
8 rows in set (0.004 sec)
```

```
1 • SELECT DEPARTMENTS.name as Department, OCCUPATIONS.name as Occupation, count(EMPLOYEES.num) as Number_of_employees
2   FROM C04.EMPLOYEES
3   inner join DEPARTMENTS on EMPLOYEES.dept_num=DEPARTMENTS.num
4   inner join OCCUPATIONS on EMPLOYEES.occu_code=OCCUPATIONS.code
5   group by DEPARTMENTS.name, OCCUPATIONS.name
```

esult Grid | Filter Rows: | Export: | Wrap Cell Content:

Department	Occupation	Number_of_employees
ACCOUNTING	MANAGER	1
ACCOUNTING	EMPLOYEE	1
RESEARCH	MANAGER	3
RESEARCH	EMPLOYEE	2
RESEARCH	ANALYST	2
SALES	SALESMAN	4
SALES	MANAGER	1
SALES	EMPLOYEE	1

9. Show departments that have more than two people working in the same occupation.

```
+------------+
| Department |
+------------+
| RESEARCH   |
| SALES      |
+------------+
2 rows in set (0.002 sec)
```

```
1 • SELECT DEPARTMENTS.name as Department
2   FROM C04.EMPLOYEES
3   inner join DEPARTMENTS on EMPLOYEES.dept_num=DEPARTMENTS.num
4   inner join OCCUPATIONS on EMPLOYEES.occu_code=OCCUPATIONS.code
5   group by DEPARTMENTS.name, OCCUPATIONS.name
6   having count(EMPLOYEES.num)>2;
```

esult Grid | Filter Rows: | Export: | Wrap Cell Content:

Department
RESEARCH
SALES

10. Displays a query that is the union between the table OCCUPATIONS and TOWNS.

```
1 •   SELECT * FROM C04.OCCUPATIONS
2     UNION
3     select * from C04.TOWNS;
```

esult Grid | Filter Rows:

code	name
ANA	ANALYST
EMP	EMPLOYEE
MAN	MANAGER
PRE	PRESIDENT
SAL	SALESMAN
BCN	BARCELONA
BIO	BILBAO
MAD	MADRID
SVQ	SEVILLA

11. Do the same query than in exercise 10 but order the results by name.

```
+------+-----------+
| code | name      |
+------+-----------+
| ANA  | ANALYST   |
| BCN  | BARCELONA |
| BIO  | BILBAO    |
| EMP  | EMPLOYEE  |
| MAD  | MADRID    |
| MAN  | MANAGER   |
| PRE  | PRESIDENT |
| SAL  | SALESMAN  |
| SVQ  | SEVILLA   |
+------+-----------+
9 rows in set (0.001 sec)
```

```
1 •   SELECT * FROM C04.OCCUPATIONS
2     UNION
3     select * from C04.TOWNS
4     order by name;
```

esult Grid | Filter Rows:

code	name
ANA	ANALYST
BCN	BARCELONA
BIO	BILBAO
EMP	EMPLOYEE
MAD	MADRID
MAN	MANAGER
PRE	PRESIDENT
SAL	SALESMAN
SVQ	SEVILLA

12. Select the occupation names of all the employees of the department with name ‘RESEARCH’ and do the union of this query with the selection of the occupation names of the employees of the department with name ‘SALES’. Use union operator.

```
+------+-----------+
| code | name      |
+------+-----------+
| ANA  | ANALYST   |
| EMP  | EMPLOYEE  |
| MAN  | MANAGER   |
| PRE  | PRESIDENT |
| SAL  | SALESMAN  |
| BCN  | BARCELONA |
| BIO  | BILBAO    |
| MAD  | MADRID    |
| SVQ  | SEVILLA   |
+------+-----------+
9 rows in set (0.001 sec)
```

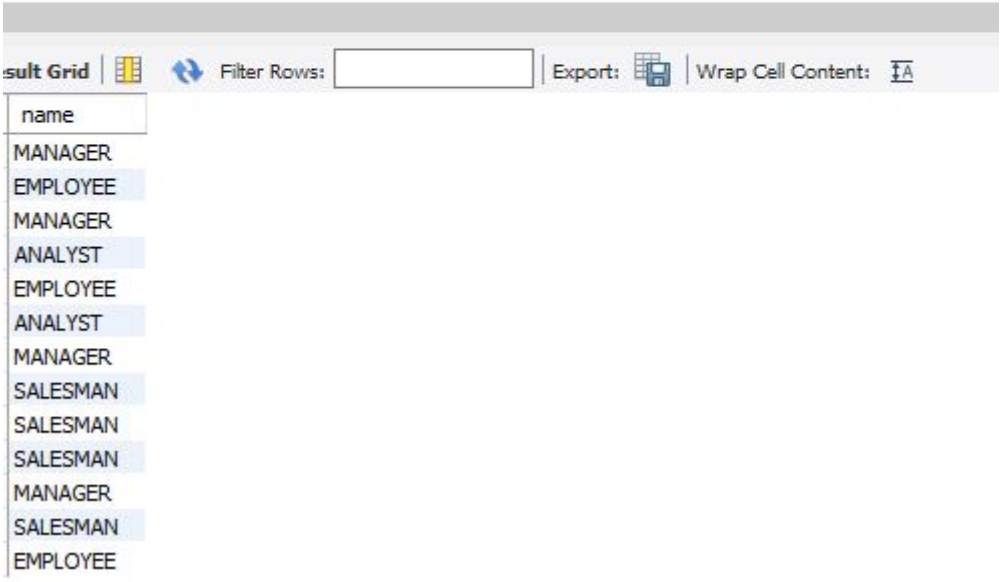
```
+----------+
| name     |
+----------+
| ANALYST  |
| EMPLOYEE |
| MANAGER  |
| SALESMAN |
+----------+
4 rows in set (0.001 sec)
```

```sql
SELECT OCCUPATIONS.name FROM C04.EMPLOYEES
inner join OCCUPATIONS on EMPLOYEES.occu_code=OCCUPATIONS.code
inner join DEPARTMENTS on EMPLOYEES.dept_num=DEPARTMENTS.num
where DEPARTMENTS.name="RESEARCH"
UNION
SELECT OCCUPATIONS.name FROM C04.EMPLOYEES
inner join OCCUPATIONS on EMPLOYEES.occu_code=OCCUPATIONS.code
inner join DEPARTMENTS on EMPLOYEES.dept_num=DEPARTMENTS.num
where DEPARTMENTS.name="SALES";
```

13. Repeat the last query showing the repeated results (union all).

```
+----------+
| name     |
+----------+
| ANALYST  |
| ANALYST  |
| EMPLOYEE |
| EMPLOYEE |
| MANAGER  |
| MANAGER  |
| MANAGER  |
| EMPLOYEE |
| MANAGER  |
| SALESMAN |
| SALESMAN |
| SALESMAN |
| SALESMAN |
+----------+
13 rows in set (0.001 sec)
```

```
1 •  SELECT OCCUPATIONS.name FROM C04.EMPLOYEES
2    inner join OCCUPATIONS on EMPLOYEES.occu_code=OCCUPATIONS.code
3    inner join DEPARTMENTS on EMPLOYEES.dept_num=DEPARTMENTS.num
4    where DEPARTMENTS.name="RESEARCH"
5    UNION ALL
6    SELECT OCCUPATIONS.name FROM C04.EMPLOYEES
7    inner join OCCUPATIONS on EMPLOYEES.occu_code=OCCUPATIONS.code
8    inner join DEPARTMENTS on EMPLOYEES.dept_num=DEPARTMENTS.num
9    where DEPARTMENTS.name="SALES";
```



14. Display the number of sellers in the 'SALES' department.

```
+-------------------+
| number_of_sellers |
+-------------------+
|                 4 |
+-------------------+
1 row in set (0.001 sec)
```

```
1 •  SELECT count(EMPLOYEES.num) as number_of_sellers
2    FROM C04.EMPLOYEES
3    inner join DEPARTMENTS on EMPLOYEES.dept_num=DEPARTMENTS.num
4    inner join OCCUPATIONS on EMPLOYEES.occu_code=OCCUPATIONS.code
5    where DEPARTMENTS.name="SALES" and OCCUPATIONS.name="SALESMAN";
```

15. Display the surnames and occupations of the employees of the 'SALES' department.

```
+---------+----------+
| surname | name     |
+---------+----------+
| JIMENO  | EMPLOYEE |
| NEGRO   | MANAGER  |
| ARROYO  | SALESMAN |
| SALA    | SALESMAN |
| MARTÍN  | SALESMAN |
| TOVAR   | SALESMAN |
+---------+----------+
6 rows in set (0.001 sec)
```

```
1 •  SELECT EMPLOYEES.surname, OCCUPATIONS.name
2    FROM C04.EMPLOYEES
3    inner join DEPARTMENTS on EMPLOYEES.dept_num=DEPARTMENTS.num
4    inner join OCCUPATIONS on EMPLOYEES.occu_code=OCCUPATIONS.code
5    where DEPARTMENTS.name="SALES";
```

esult Grid | Filter Rows: | Export: | Wrap Cell Content:

surname	name
ARROYO	SALESMAN
SALA	SALESMAN
MARTÍN	SALESMAN
NEGRO	MANAGER
TOVAR	SALESMAN
JIMENO	EMPLOYEE

16. Display the number of employees and occupations of the employees of the 'SALES' department.

```
+----------+---------------------+
| name     | number_of_employees |
+----------+---------------------+
| EMPLOYEE |                   1 |
| MANAGER  |                   1 |
| SALESMAN |                   4 |
+----------+---------------------+
3 rows in set (0.001 sec)
```

```
1 •  SELECT OCCUPATIONS.name, count(EMPLOYEES.num) as number_of_employees
2    FROM C04.EMPLOYEES
3    inner join DEPARTMENTS on EMPLOYEES.dept_num=DEPARTMENTS.num
4    inner join OCCUPATIONS on EMPLOYEES.occu_code=OCCUPATIONS.code
5    where DEPARTMENTS.name="SALES"
6    group by OCCUPATIONS.name;
```

esult Grid | Filter Rows: | Export: | Wrap Cell Content:

name	number_of_employees
SALESMAN	4
MANAGER	1
EMPLOYEE	1

17. Display the number of employees of each department whose profession is "EMPLOYEE".

```
+------------+---------------------+
| name       | number_of_employees |
+------------+---------------------+
| ACCOUNTING |                   1 |
| RESEARCH   |                   2 |
| SALES      |                   1 |
+------------+---------------------+
3 rows in set (0.001 sec)
```

```
1 •  SELECT DEPARTMENTS.name, count(EMPLOYEES.num) as number_of_employees
2    FROM C04.EMPLOYEES
3    inner join DEPARTMENTS on EMPLOYEES.dept_num=DEPARTMENTS.num
4    inner join OCCUPATIONS on EMPLOYEES.occu_code=OCCUPATIONS.code
5    where OCCUPATIONS.name="EMPLOYEE"
6    group by DEPARTMENTS.name;
```

esult Grid | Filter Rows: | Export: | Wrap Cell Content:

name	number_of_employees
RESEARCH	2
SALES	1
ACCOUNTING	1

18. Display the department names and the count of employees working into them.

```
+------------+---------------------+
| name       | number_of_employees |
+------------+---------------------+
| ACCOUNTING |                   2 |
| RESEARCH   |                   7 |
| SALES      |                   6 |
+------------+---------------------+
3 rows in set (0.001 sec)
```

```
1 •  SELECT DEPARTMENTS.name, count(EMPLOYEES.num) as number_of_employees
2    FROM C04.EMPLOYEES
3    inner join DEPARTMENTS on EMPLOYEES.dept_num=DEPARTMENTS.num
4    group by DEPARTMENTS.name;
```

sult Grid | Filter Rows: | Export: | Wrap Cell Content:

name	number_of_employees
ACCOUNTING	2
RESEARCH	7
SALES	6

19. Display the maximum number of employees of all the departments (clue: you need exercise 18 as a subquery and you should use MAX function).

```
+------------+
| max_number |
+------------+
|          7 |
+------------+
1 row in set (0.001 sec)
```

```
1  select max(al_fin.number_of_employees) as max_number
2  from (
3  SELECT count(EMPLOYEES.num) as number_of_employees
4  FROM C04.EMPLOYEES
5  inner join DEPARTMENTS on EMPLOYEES.dept_num=DEPARTMENTS.num
6  group by DEPARTMENTS.name) as al_fin;
```

esult Grid | Filter Rows: | Export: | Wrap Cell Content:

max_number
7

20. Show the departments whose average salary is greater than the average of salaries of all employees.

```
+----------+----------------+
| dept_num | average_salary |
+----------+----------------+
|       10 |      2287.5000 |
|       20 |      2448.5714 |
+----------+----------------+
2 rows in set (0.001 sec)
```

```
1  select *
2  from(
3  SELECT EMPLOYEES.dept_num, avg(EMPLOYEES.salary) as average_salary
4  FROM C04.EMPLOYEES
5  group by EMPLOYEES.dept_num) as al_fin
6  where al_fin.average_salary > (select avg(salary) from C04.EMPLOYEES)
7  ;
```

esult Grid | Filter Rows: | Export: | Wrap Cell Content:

dept_num	average_salary
10	2287.5000
20	2448.5714

21. DANGER, this is for PROS: Display the name of the department with more employees and its number of employees (clue you must use HAVING with a subselect inside).

```
+----------+---------------+
| name     | num_employees |
+----------+---------------+
| RESEARCH |             7 |
+----------+---------------+
1 row in set (0.001 sec)
```

```sql
select DEPARTMENTS.name, count(EMPLOYEES.num) as num_emp from C04.EMPLOYEES
inner join DEPARTMENTS on EMPLOYEES.dept_num=DEPARTMENTS.num
group by DEPARTMENTS.name
having num_emp = (select max(a.num_emp) from (select count(EMPLOYEES.num) as num_emp from C04.EMPLOYEES
inner join DEPARTMENTS on EMPLOYEES.dept_num=DEPARTMENTS.num
group by DEPARTMENTS.name) as a);
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

name	num_emp
RESEARCH	7

22. Repeat 12 changing “union” for “intersect”.

```
+----------+
| name     |
+----------+
| EMPLOYEE |
| MANAGER  |
+----------+
2 rows in set (0.002 sec)
```

```sql
SELECT OCCUPATIONS.name FROM C04.EMPLOYEES
inner join OCCUPATIONS on EMPLOYEES.occu_code=OCCUPATIONS.code
inner join DEPARTMENTS on EMPLOYEES.dept_num=DEPARTMENTS.num
where DEPARTMENTS.name="RESEARCH"
INTERSECT
SELECT OCCUPATIONS.name FROM C04.EMPLOYEES
inner join OCCUPATIONS on EMPLOYEES.occu_code=OCCUPATIONS.code
inner join DEPARTMENTS on EMPLOYEES.dept_num=DEPARTMENTS.num
where DEPARTMENTS.name="SALES";
```

My sql no lo soporta según tengo entendido, al menos esta versión

[intersection - problem with intersect operation in a sql query - Stack Overflow]

23. Repeat 22 but do not use intersect operator to query the same data (clue: IN operator).

```
+----------+
| name     |
+----------+
| EMPLOYEE |
| MANAGER  |
+----------+
2 rows in set (0.002 sec)
```

```
1  select  distinct a.name from (select OCCUPATIONS.name from C04.EMPLOYEES
2  inner join OCCUPATIONS on EMPLOYEES.occu_code=OCCUPATIONS.code
3  inner join DEPARTMENTS on EMPLOYEES.dept_num=DEPARTMENTS.num
4  where DEPARTMENTS.name = "Research") as a
5  inner join (select OCCUPATIONS.name from C04.EMPLOYEES
6  inner join OCCUPATIONS on EMPLOYEES.occu_code=OCCUPATIONS.code
7  inner join DEPARTMENTS on EMPLOYEES.dept_num=DEPARTMENTS.num
8  where DEPARTMENTS.name="SALES"
9  ) as b on b.name = a.name
```

esult Grid | Filter Rows: | Export: | Wrap Cell Content:

name
EMPLOYEE
MANAGER

This is one way I found to commit intersect using Inner join but couldn't find anything about using it in that way.
[Understanding SQL INTERSECT Operator (sqltutorial.org)]