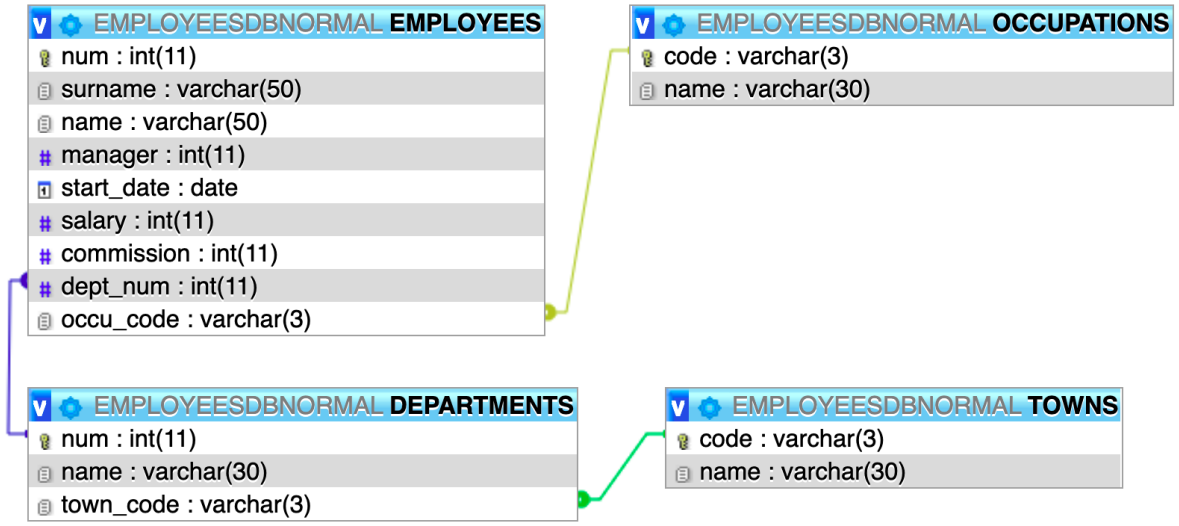
VIEWS


EMPLOYEESDBNORMAL EMPLOYEES
num : int(11)
surname : varchar(50)
name : varchar(50)
manager : int(11)
start_date : date
salary : int(11)
commission : int(11)
dept_num : int(11)
occu_code : varchar(3)
EMPLOYEESDBNORMAL OCCUPATIONS
code : varchar(3)
name : varchar(30)
EMPLOYEESDBNORMAL DEPARTMENTS
num : int(11)
name : varchar(30)
town_code : varchar(3)
EMPLOYEESDBNORMAL TOWNS
code : varchar(3)
name : varchar(30)

1. Create a view (with name V_DEPARTMENTS) that shows all the departments with their number of employees and their town name. 3

2. Update the last view to add a field with the average salary of every department. To alter a view you can check this link: https://mariadb.com/kb/en/library/alter-view/ 3

3. Insert a new departments (60 - 'HUMAN RESOURCES' - 'MAD') and a new employee with salary 9000€ who belongs to the new department (9999 - 'GONZALEZ' - 'SERGI' - NULL - '2019-01-01' - 9000 - NULL - 60 - NULL). Check if the data of the view changed automatically. Note that you must insert data into the tables EMPLOYEES and DEPARTMENTS (not into the view). 4

4. Create a view (with name V_EMPLOYEES) that shows all the employees with the name of their occupation name instead of the occupation code and the name of their department instead of the department number. 4

5. Create a view (with name V_EMPLOYEES_FULL) using V_EMPLOYEES that shows manager's surname and name instead of manager num (you can NOT use the table EMPLOYEES you must use the view V_EMPLOYEES). 5

6. Try to update the EMPLOYEE with number 9999 (for instance, try to change his/her surname) using the view V_EMPLOYEES. Did it work? 5

1. Create a view (with name V_DEPARTMENTS) that shows all the departments with their number of employees and their town name.

1. Create view

```
create view V_DEPARTMENTS as select d.num, d.name,
d.town_code, T.name as TownName, count(E.num) from
DEPARTMENTS as d
left outer join TOWNS T on d.town_code = T.code
left outer join EMPLOYEES E on d.num = E.dept_num
group by d.num;
```

```
04_views> create view V_DEPARTMENTS as select d.num, d.name, d.town_code, T.name as TownName, count(E.num) from DEPARTMENTS as d
          left outer join TOWNS T on d.town_code = T.code
          left outer join EMPLOYEES E on d.num = E.dept_num
          group by d.num
[2021-03-17 14:50:00] completed in 277 ms
```

2. Select view

```
select * from V_DEPARTMENTS;
```

	num	name	town_code	TownName	`count(E.num)`
1	10	ACCOUNTING	SVQ	SEVILLA	2
2	20	RESEARCH	MAD	MADRID	5
3	30	SALES	BCN	BARCELONA	6
4	40	PRODUCTION	BIO	BILBAO	0

2. Update the last view to add a field with the average salary of every department. To alter a view you can check this link: https://mariadb.com/kb/en/library/alter-view/

1. Alter view

```
alter view V_DEPARTMENTS as select d.num, d.name,
d.town_code, T.name as TownName, count(E.num) as
CounEmployees, avg(E.salary) as salary from DEPARTMENTS as d
left outer join TOWNS T on d.town_code = T.code
left outer join EMPLOYEES E on d.num = E.dept_num
group by d.num;
```

```
          alter view V_DEPARTMENTS as select d.num, d.name, d.town_code, T.name as TownName, count(E.num) as CounEmployees, avg(E.salary) as salary from D
          left outer join TOWNS T on d.town_code = T.code
          left outer join EMPLOYEES E on d.num = E.dept_num
          group by d.num
[2021-03-17 14:51:27] completed in 40 ms
```

2. Select view

```
select * from V_DEPARTMENTS;
```

	num	name	town_code	TownName	CounEmployees	salary
1	10	ACCOUNTING	SVQ	SEVILLA	2	2287.5000
2	20	RESEARCH	MAD	MADRID	5	2620.0000
3	30	SALES	BCN	BARCELONA	6	1735.8333
4	40	PRODUCTION	BIO	BILBAO	0	<null>

3. Insert a new departments (60 - 'HUMAN RESOURCES' - 'MAD') and a new employee with salary 9000€ who belongs to the new department (9999 - 'GONZALEZ' - 'SERGI' - NULL - '2019-01-01' - 9000 - NULL - 60 - NULL). Check if the data of the view changed automatically. Note that you must insert data into the tables EMPLOYEES and DEPARTMENTS (not into the view).

1. Insert data

```
insert into DEPARTMENTS value (60,'HUMAN RESOURCES','MAD');
insert into EMPLOYEES value (9999,'GONZALEZ','SERGI',NULL
,'2019-01-01',9000,NULL,60, NULL);
```

```
P04_views> insert into DEPARTMENTS value (60,'HUMAN RESOURCES','MAD')
[2021-03-17 14:53:44] 1 row affected in 35 ms
P04_views> insert into EMPLOYEES value (9999,'GONZALEZ','SERGI',NULL ,'2019-01-01',9000,NULL,60, NULL)
[2021-03-17 14:53:44] 1 row affected in 34 ms
```

2. select view

```
select * from V_DEPARTMENTS;
```

	num	name	town_code	TownName	CounEmployees	salary
1	10	ACCOUNTING	SVQ	SEVILLA	2	2287.5000
2	20	RESEARCH	MAD	MADRID	5	2620.0000
3	30	SALES	BCN	BARCELONA	6	1735.8333
4	40	PRODUCTION	BIO	BILBAO	0	<null>
5	60	HUMAN RESOURCES	MAD	MADRID	1	9000.0000

the view was updated

4. Create a view (with name V_EMPLOYEES) that shows all the employees with the name of their occupation name instead of the occupation code and the name of their department instead of the department number.

1. Create view

```
Create view V_EMPLOYEES as select
E.num,E.surname,E.name,E.manager,E.start_date,E.salary,E.comm
ission,D.name as dept_name ,O.name as occu_name from
EMPLOYEES as E
left outer join OCCUPATIONS O on O.code = E.occu_code
left outer join DEPARTMENTS D on D.num = E.dept_num;
```

```
P04_views> Create view V_EMPLOYEES as select E.num,E.surname,E.name,E.manager,E.start_date,E.salary,E.commission,D.name as dep
           left outer join OCCUPATIONS O on O.code = E.occu_code
           left outer join DEPARTMENTS D on D.num = E.dept_num
[2021-03-17 14:56:22] completed in 40 ms
```

2. Select view

```
select * from V_EMPLOYEES;
```

	num	surname	name	manager	start_date	salary	commission	dept_name	occu_name
1	800	BANDERAS	ANTONIO	<null>	1991-01-09	2885	<null>	RESEARCH	<null>
2	7369	SÁNCHEZ	SERGIO	7902	1990-12-17	1040	<null>	<null>	<null>
3	7499	ARROYO	MARTA	7698	1990-02-20	1500	390	SALES	SALESMAN
4	7521	AGUILO	JOSEP	7698	1991-02-22	1625	650	SALES	SALESMAN
5	7566	AROCA	JUDIT	7839	1991-04-02	2900	<null>	RESEARCH	MANAGER
6	7654	MARTÍN	MONICA	7698	1991-09-29	1600	1020	SALES	SALESMAN
7	7698	AMER	BARTOLOME	7839	1991-05-01	3005	<null>	SALES	<null>
8	7782	COLOM	ENRIQUE	7839	1991-06-09	2885	<null>	ACCOUNTING	MANAGER
9	7788	GIL	JAVIER	7566	1991-11-09	3000	<null>	RESEARCH	ANALYST
10	7844	TOVAR	LUIS	7698	1991-09-08	1350	0	SALES	SALESMAN
11	7876	ALONSO	FERNANDO	7788	1991-09-23	1430	<null>	RESEARCH	EMPLOYEE
12	7900	JIMENO	XAVIER	7698	1991-12-03	1335	<null>	SALES	EMPLOYEE
13	7902	FERNANDEZ	ANA	7566	1991-12-03	3000	<null>	<null>	ANALYST
14	7934	MUÑOZ	ANTONIA	7782	1992-01-23	1690	<null>	ACCOUNTING	EMPLOYEE
15	8001	RUIZ	FERNANDA	7839	1992-06-10	2885	<null>	RESEARCH	MANAGER
16	9999	GONZALEZ	SERGI	<null>	2019-01-01	9000	<null>	HUMAN RESOURCES	<null>

5. Create a view (with name V_EMPLOYEES_FULL) using V_EMPLOYEES that shows manager's surname and name instead of manager num (you can NOT use the table EMPLOYEES you must use the view V_EMPLOYEES).

1. Create view

```
create view V_EMPLOYEES_FULL as select
V_EMPLOYEES.num,V_EMPLOYEES.surname,V_EMPLOYEES.name,V_EMPLOY
EES.manager,V_EMPLOYEES.start_date,V_EMPLOYEES.salary,V_EMPLO
YEES.commission,V_EMPLOYEES.name as dept_name
,V_EMPLOYEES.name as occu_name, V.surname as man_surname,
V.name as man_name
from V_EMPLOYEES
left outer join V_EMPLOYEES as V on
V.num=V_EMPLOYEES.manager;
```

```
P04_views> create view V_EMPLOYEES_FULL as select V_EMPLOYEES.num,V_EMPLOYEES.surname,V_EMPLOYEE
           from V_EMPLOYEES
           left outer join V_EMPLOYEES as V on V.num=V_EMPLOYEES.manager
[2021-03-17 14:58:28] completed in 40 ms
```

2. Select view

```
select * from V_EMPLOYEES_FULL;
```

	num	surname	name	manager	start_date	salary	commission	dept_name	occu_name	man_surname	man_name
1	800	BANDERAS	ANTONIO	<null>	1991-01-09	2885	<null>	ANTONIO	ANTONIO	<null>	<null>
2	7369	SÁNCHEZ	SERGIO	7902	1990-12-17	1040	<null>	SERGIO	SERGIO	FERNÁNDEZ	ANA
3	7499	ARROYO	MARTA	7698	1990-02-20	1500	390	MARTA	MARTA	AMER	BARTOLOME
4	7521	AGUILO	JOSEP	7698	1991-02-22	1625	650	JOSEP	JOSEP	AMER	BARTOLOME
5	7566	AROCA	JUDIT	7839	1991-04-02	2900	<null>	JUDIT	JUDIT	<null>	<null>
6	7654	MARTÍN	MONICA	7698	1991-09-29	1600	1020	MONICA	MONICA	AMER	BARTOLOME
7	7698	AMER	BARTOLOME	7839	1991-05-01	3005	<null>	BARTOLOME	BARTOLOME	<null>	<null>
8	7782	COLOM	ENRIQUE	7839	1991-06-09	2885	<null>	ENRIQUE	ENRIQUE	<null>	<null>
9	7788	GIL	JAVIER	7566	1991-11-09	3000	<null>	JAVIER	JAVIER	AROCA	JUDIT
10	7844	TOVAR	LUIS	7698	1991-09-08	1350	0	LUIS	LUIS	AMER	BARTOLOME
11	7876	ALONSO	FERNANDO	7788	1991-09-23	1430	<null>	FERNANDO	FERNANDO	GIL	JAVIER
12	7900	JIMENO	XAVIER	7698	1991-12-03	1335	<null>	XAVIER	XAVIER	AMER	BARTOLOME
13	7902	FERNÁNDEZ	ANA	7566	1991-12-03	3000	<null>	ANA	ANA	AROCA	JUDIT
14	7934	MUÑOZ	ANTONIA	7782	1992-01-23	1690	<null>	ANTONIA	ANTONIA	COLOM	ENRIQUE
15	8001	RUIZ	FERNANDA	7839	1992-06-10	2885	<null>	FERNANDA	FERNANDA	<null>	<null>
16	9999	GONZALEZ	SERGI	<null>	2019-01-01	9000	<null>	SERGI	SERGI	<null>	<null>

6. Try to update the EMPLOYEE with number 9999 (for instance, try to change his/her surname) using the view V_EMPLOYEES. Did it work?

1. Update view

```
update V_EMPLOYEES_FULL
set surname='Piña'
where num=9999;
```

```
P04_views> update V_EMPLOYEES_FULL
           set surname='Piña'
           where num=9999
[2021-03-17 15:01:29] 1 row affected in 31 ms
```

2. Select view

```
select * from V_EMPLOYEES_FULL;
```

16	9999	Piña	SERGI	<null>	2019-01-01	9000	<null>	SERGI	SERGI	<null>	<null>