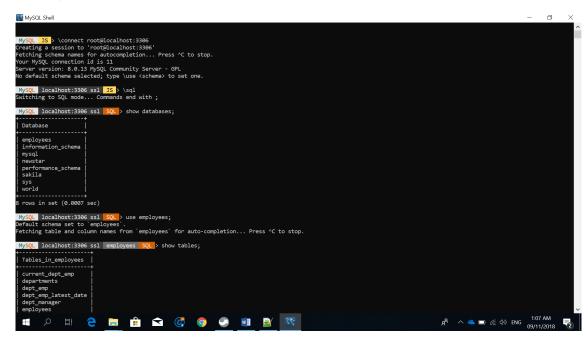
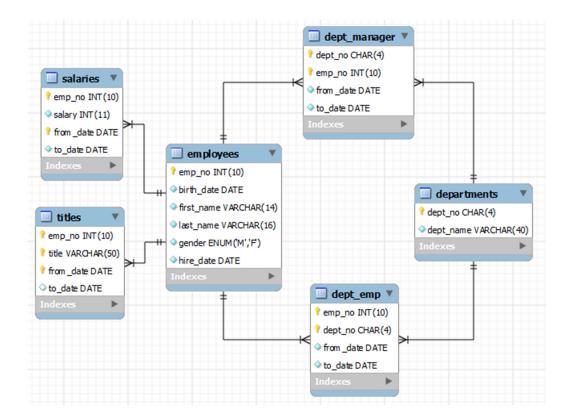
SQL Join Statements, Group By Statements

Start MySQL Shell



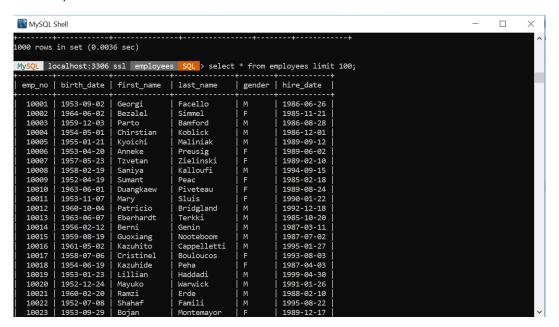
The Employees database contain our Employees data. The Employees database schema or EER diagram is as follows:



To show the top 100 content in Employees table:

Select * from employees

limit 100;



To show the number of groups in the gender variable:

Select * from employees

group by gender;



It shows that there are two groups in gender, F and M. The rest of the variables are the first occurrence when gender = M or F.

To get the frequency tables, we can write:

Select gender, count(gender)

from employees

group by gender;



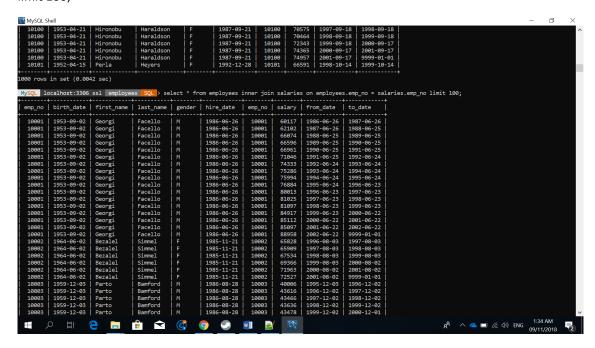
There are 179973 of M and 120051 of F.

To join employees table and the salaries table and get the top 100 rows:

Select * from employees

inner join salaries on employees.emp_no = salaries.emp_no

limit 100;

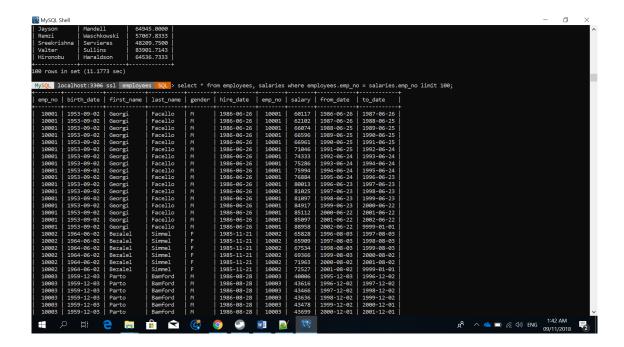


We can also write using:

Select * from employees, salaries

where employees.emp_no = salaries.emp_no

limit 100;



To get the frequency table after joining the two tables: Select gender, count(gender) from employees, salaries

where employees.emp_no = salaries.emp_no

group by gender;



We can also get the frequency table with salary after joining the tables:

Sum of salary

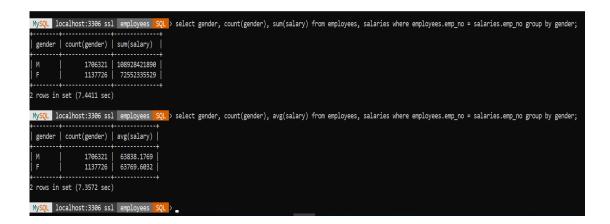
Select gender, count(gender), sum(salary) from employees, salaries

where employee.emp_no = salaries.emp_no

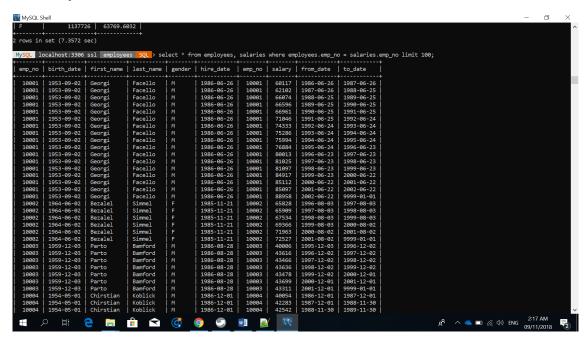
group by gender;

Average salary

Select gender, count(gender), avg(salary) from employees, salaries where employee.emp_no = salaries.emp_no group by gender;



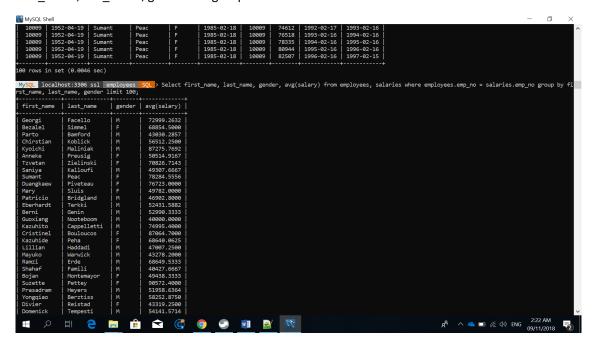
When we join the two tables:



We can see that Georgi Facello has many salaries over time. We may want to find the average salary of Georgi Facello and the first 100 employees:

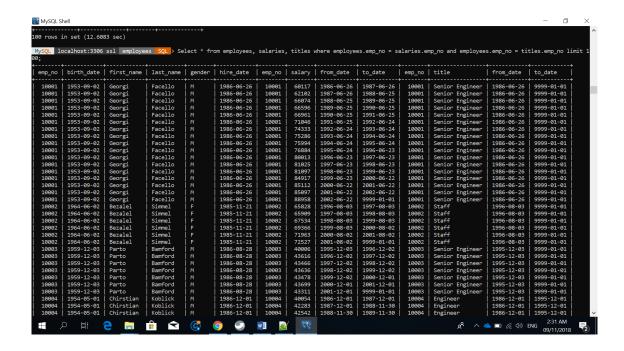
Select <u>first_name</u>, <u>last_name</u>, <u>gender</u>, avg(salary) from employees, salaries where employees.emp_no = salaries.emp_no group by <u>first_name</u>, <u>last_name</u>, <u>gender</u> limit 100;

first_name, last_name, gender is a group.



We can join three tables (first 100 rows) using

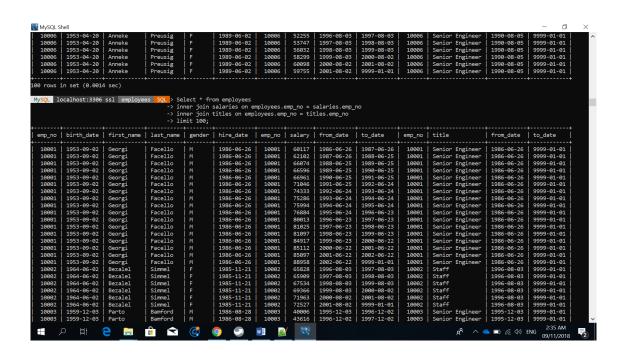
Select * from employees, salaries, titles
where employees.emp_no = salaries.emp_no
and
employees.emp_no = titles.emp_no
limit 100;



Or

Select * from employees

inner join salaries on employees.emp_no = salaries.emp_no
inner join titles on employees.emp_no = titles.emp_no
limit 100;



To be more specific, we can add in the table names:

 $Select\ employees. emp_no,\ employees. first_name,\ employees. last_name,\ employees. gender,\ salaries. salary,\ titles. title$

from employees, salaries, titles

where employees.emp_no = salaries.emp_no

and

employees.emp_no = titles.emp_no

limit 100;

