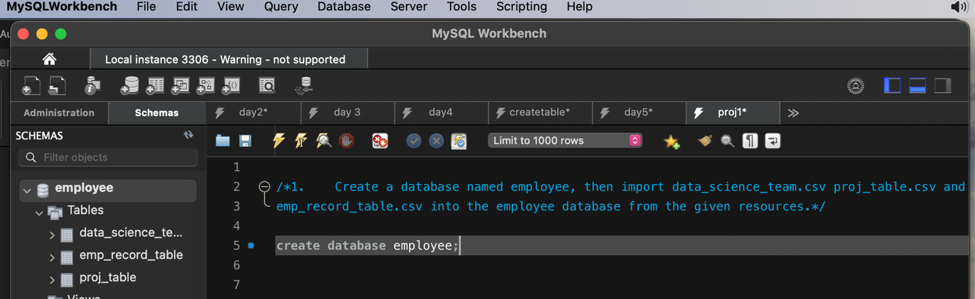
**SQL project 1 submission by Sandhya Banti Dutta Borah**

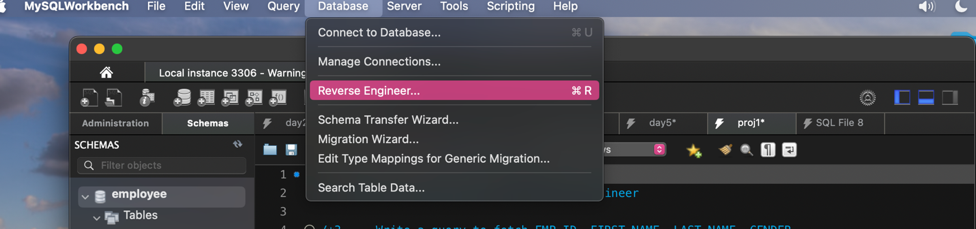
1. Create a database named *employee*, then import **data\_science\_team.csv proj\_table.csv** and **emp\_record\_table.csv** into the **employee** database from the given resources.

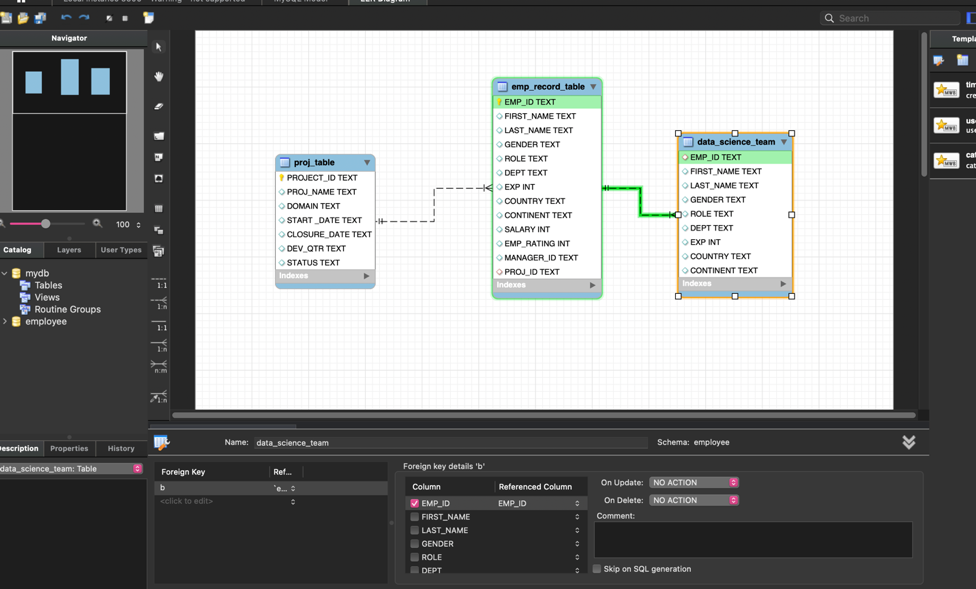
create database employee;



Ans of Q.1

1. Create an ER diagram for the given **employee** database.



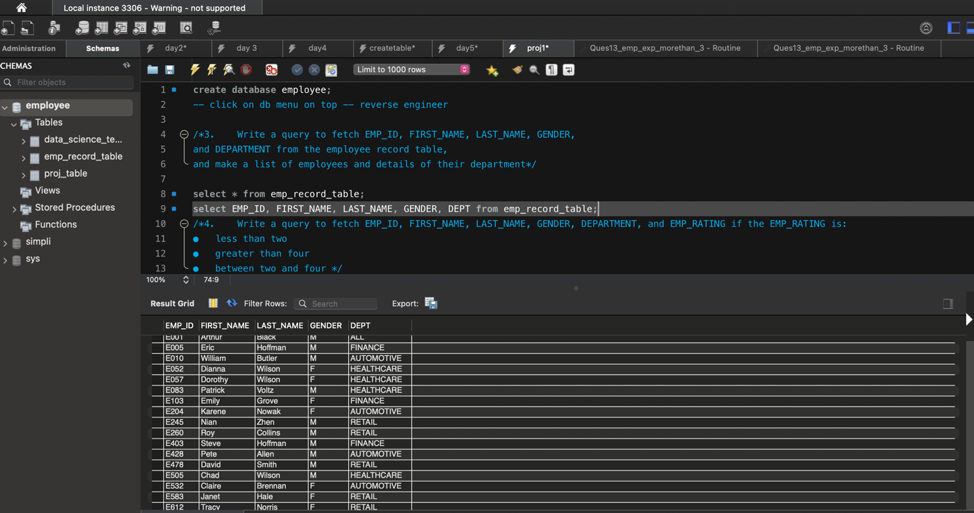


Ans to Q.2

1. Write a query to fetch EMP\_ID, FIRST\_NAME, LAST\_NAME, GENDER, and DEPARTMENT from the employee record table, andmake a list of employees and details of their department.

select \* from emp\_record\_table;

select EMP\_ID, FIRST\_NAME, LAST\_NAME, GENDER, DEPT from emp\_record\_table;



Ans to Q.3

1. Write a query to fetch EMP\_ID, FIRST\_NAME, LAST\_NAME, GENDER, DEPARTMENT, and EMP\_RATING if the EMP\_RATING is:

* less than two
* greater than four
* between two and four

SELECT EMP\_ID, FIRST\_NAME, LAST\_NAME, GENDER, DEPT, EMP\_RATING

FROM emp\_record\_table

WHERE EMP\_RATING < 2;

SELECT EMP\_ID, FIRST\_NAME, LAST\_NAME, GENDER, DEPT, EMP\_RATING

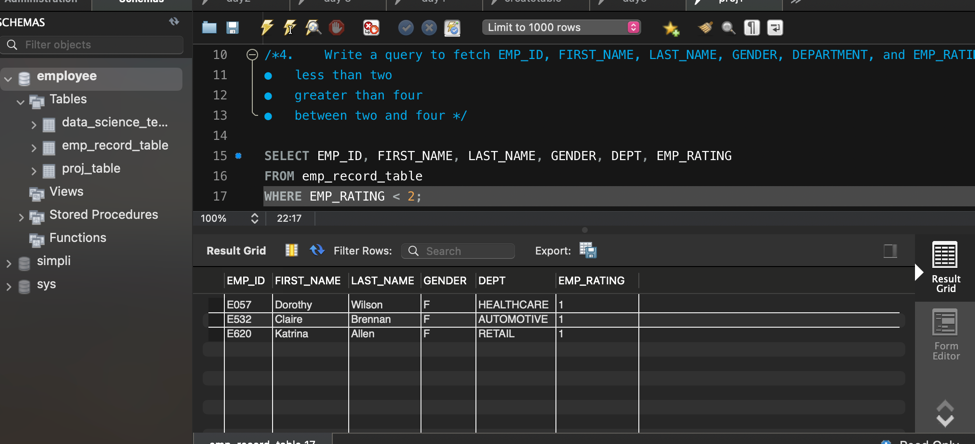
FROM emp\_record\_table

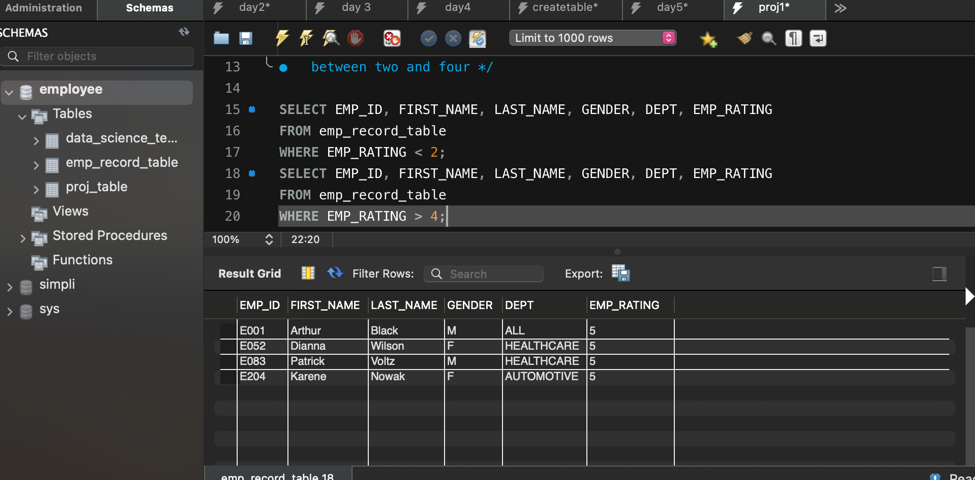
WHERE EMP\_RATING > 4;

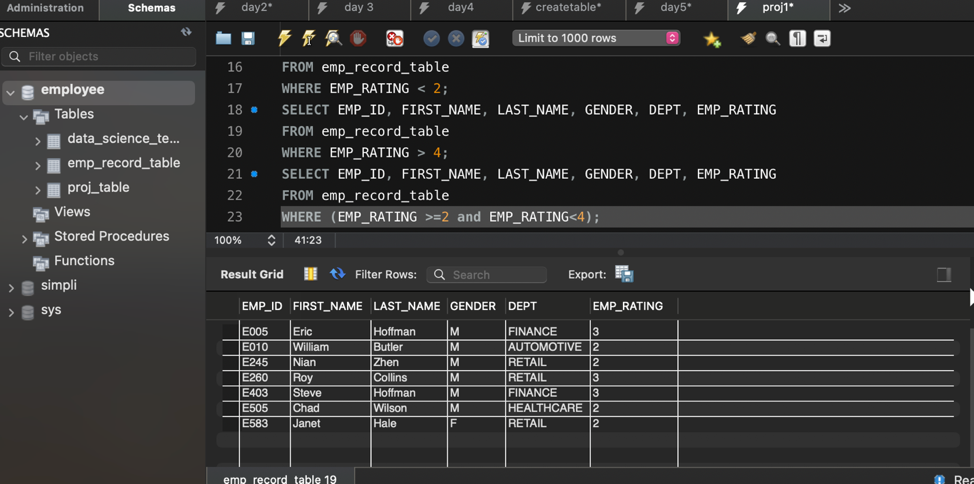
SELECT EMP\_ID, FIRST\_NAME, LAST\_NAME, GENDER, DEPT, EMP\_RATING

FROM emp\_record\_table

WHERE (EMP\_RATING >=2 and EMP\_RATING<4);







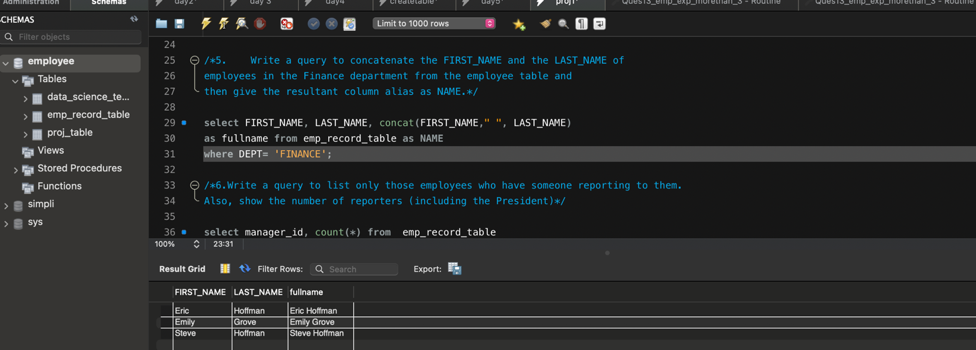
Ans to Q.4

1. Write a query to concatenate the FIRST\_NAME and the LAST\_NAME of employees in the *Finance* department from the employee table and then give the resultant column alias as NAME.

select FIRST\_NAME, LAST\_NAME, concat(FIRST\_NAME," ", LAST\_NAME)

as fullname from emp\_record\_table as NAME

where DEPT= 'FINANCE';

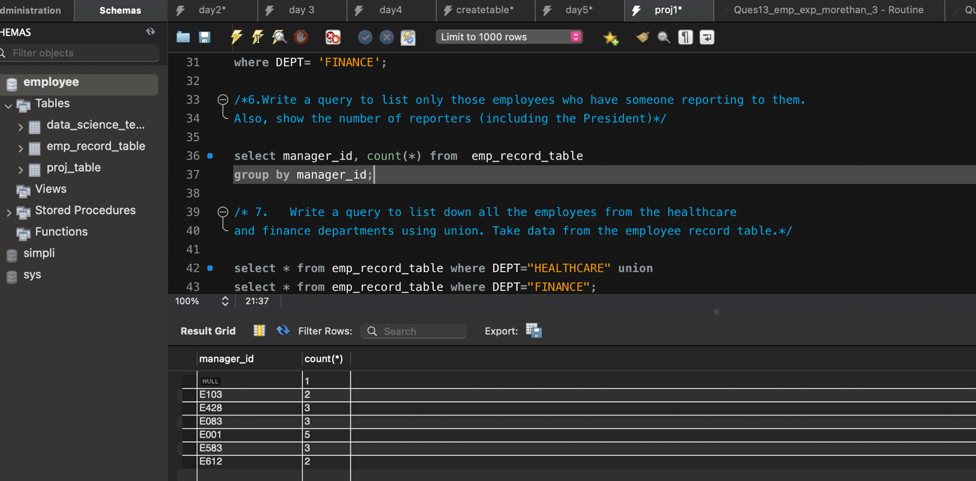


Ans to Q.5

1. Write a query to list only those employees who have someone reporting to them. Also, show the number of reporters (including the President).

select manager\_id, count(\*) from emp\_record\_table

group by manager\_id;

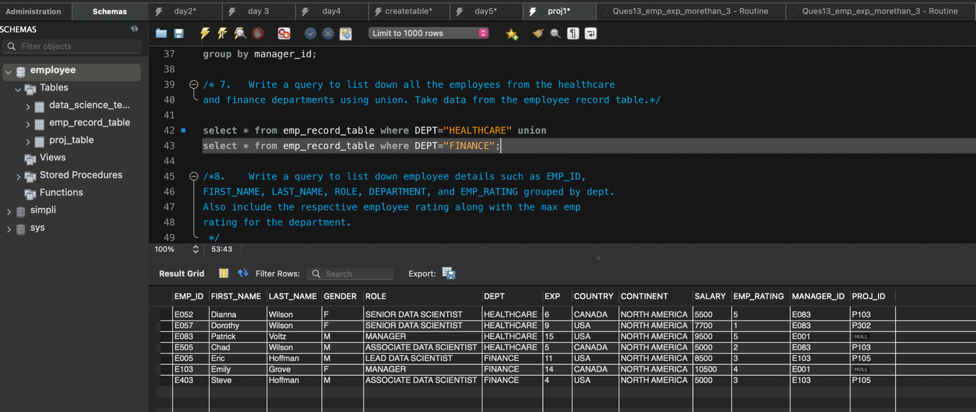


Ans to Q.6

1. Write a query to list down all the employees from the healthcare and finance departments using union. Take data from the employee record table.

select \* from emp\_record\_table where DEPT="HEALTHCARE" union

select \* from emp\_record\_table where DEPT="FINANCE";



Ans to Q.7

1. Write a query to list down employee details such as EMP\_ID, FIRST\_NAME, LAST\_NAME, ROLE, DEPARTMENT, and EMP\_RATING grouped by dept. Also include the respective employee rating along with the max emp rating for the department.

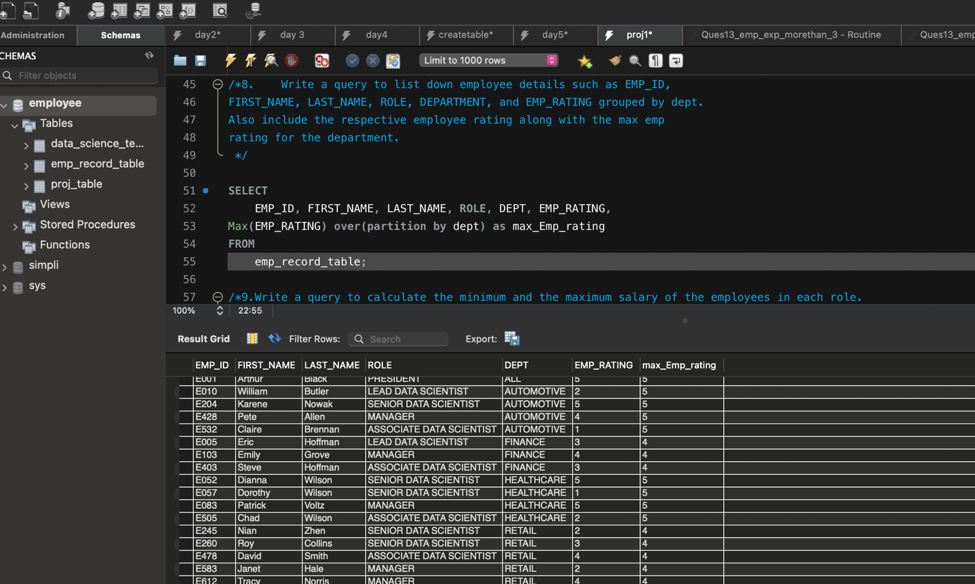
SELECT

EMP\_ID, FIRST\_NAME, LAST\_NAME, ROLE, DEPT, EMP\_RATING,

Max(EMP\_RATING) over(partition by dept) as max\_Emp\_rating

FROM

emp\_record\_table;

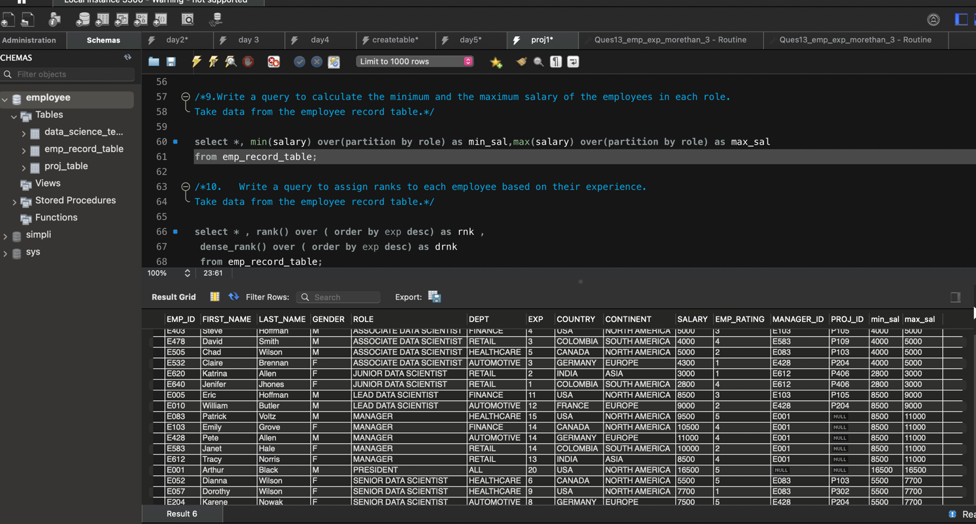


Ans to Q.8

Q.9. Write a query to calculate the minimum and the maximum salary of the employees in each role. Take data from the employee record table.

select \*, min(salary) over(partition by role) as min\_sal,max(salary) over(partition by role) as max\_sal

from emp\_record\_table;



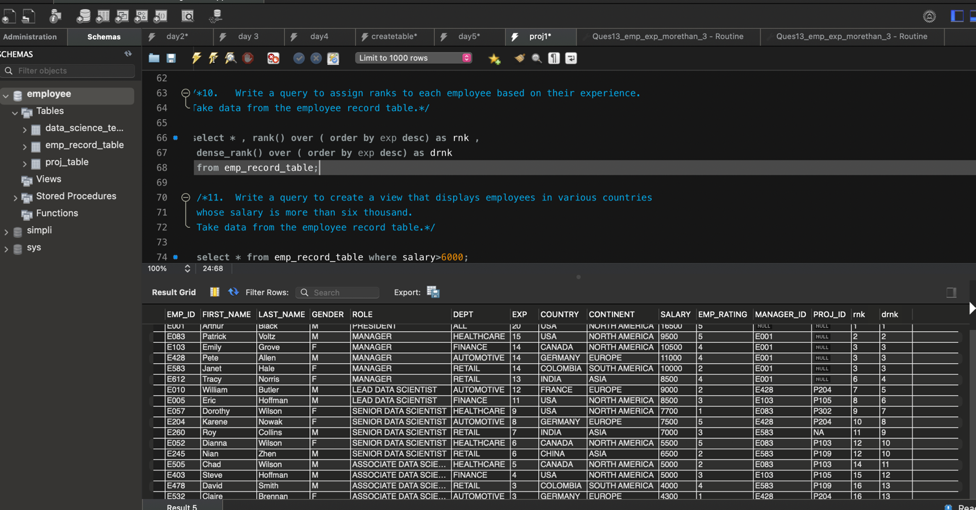
Ans to Q.9

Q.10. Write a query to assign ranks to each employee based on their experience. Take data from the employee record table.

select \* , rank() over ( order by exp desc) as rnk ,

dense\_rank() over ( order by exp desc) as drnk

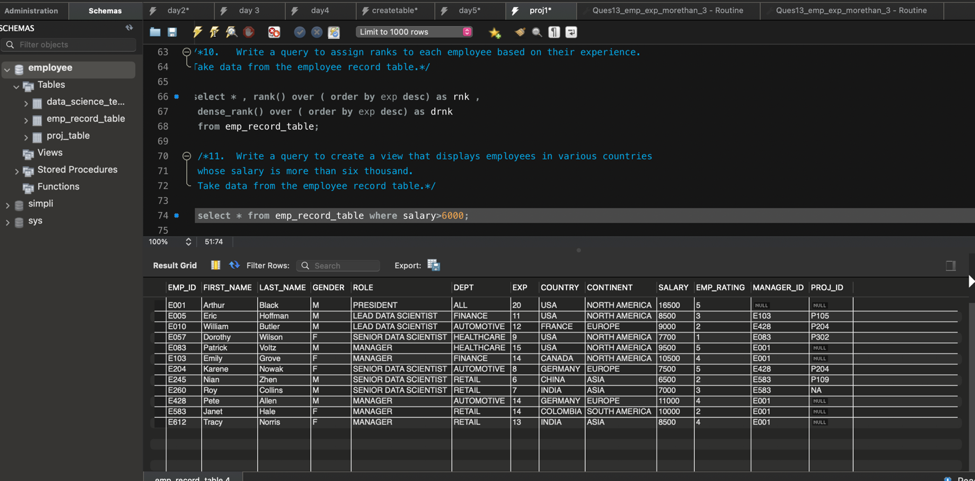
from emp\_record\_table;



Ans to Q.10

Q.11. Write a query to create a view that displays employees in various countries whose salary is more than six thousand**.** Take data from the employee record table.

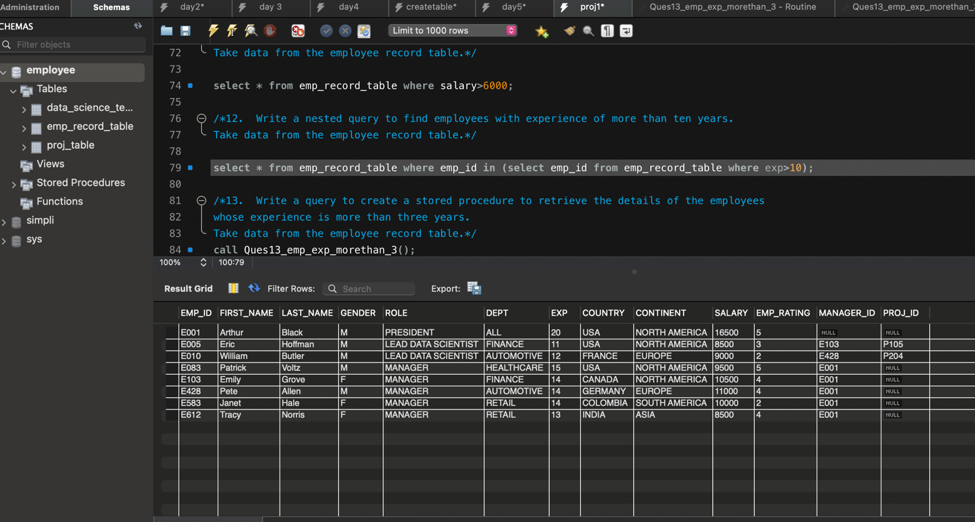
select \* from emp\_record\_table where salary>6000;



Ans to Q.11

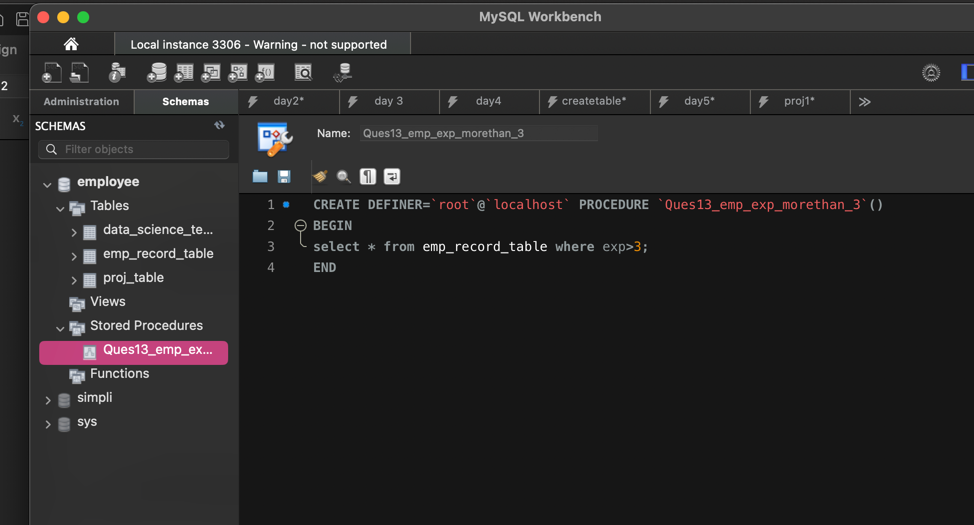
Q.12. Write a nested query to find employees with experience of more than ten years. Take data from the employee record table.

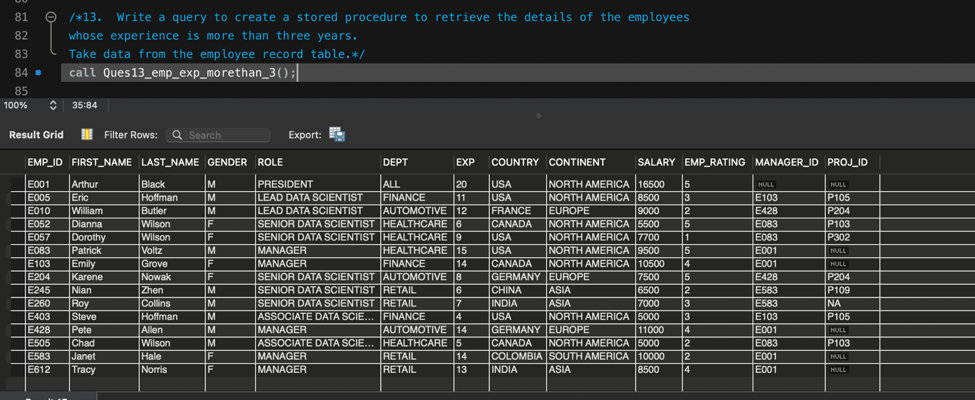
select \* from emp\_record\_table where emp\_id= (select emp\_id from emp\_record\_table where exp>10);



Ans to Q.12

Q.13. Write a query to create a stored procedure to retrieve the details of the employees whose experience is more than three years. Take data from the employee record table.





Ans to Q.13

Q.14. Write a query using stored functions in the project table to check whether the job profile assigned to each employee in the data science team matches the organization’s set standard.

The standard being:

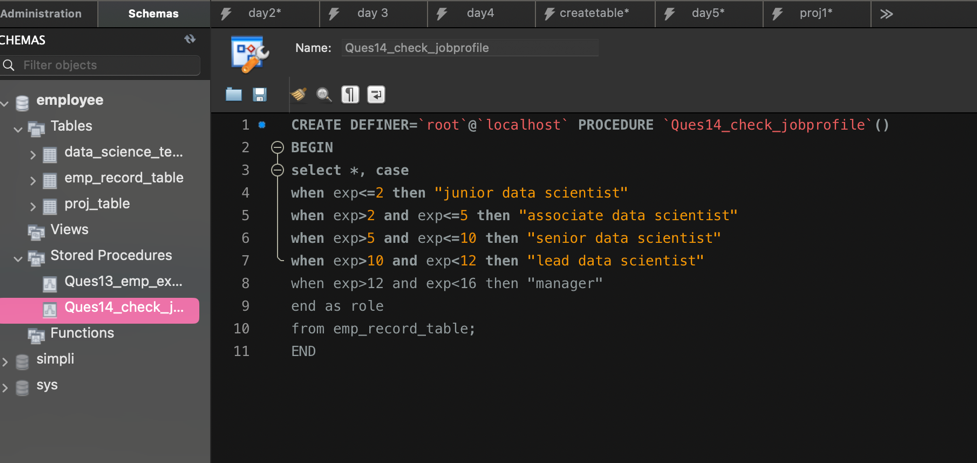
For an employee with experience less than or equal to 2 years assign 'JUNIOR DATA SCIENTIST',

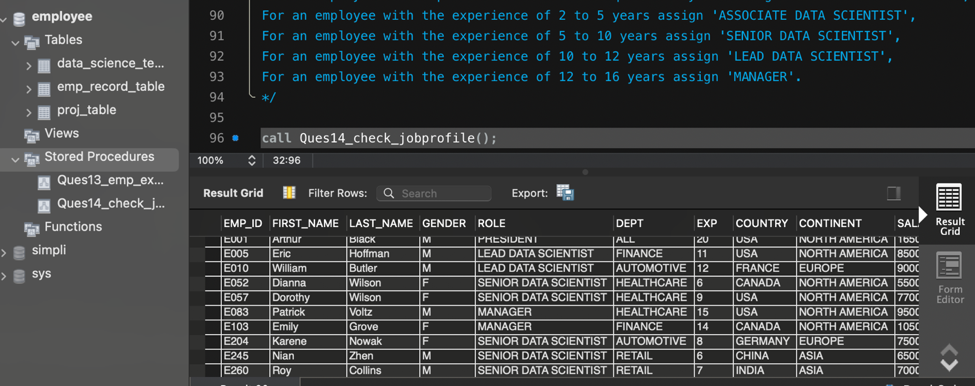
For an employee with the experience of 2 to 5 years assign 'ASSOCIATE DATA SCIENTIST',

For an employee with the experience of 5 to 10 years assign 'SENIOR DATA SCIENTIST',

For an employee with the experience of 10 to 12 years assign 'LEAD DATA SCIENTIST',

For an employee with the experience of 12 to 16 years assign 'MANAGER'.



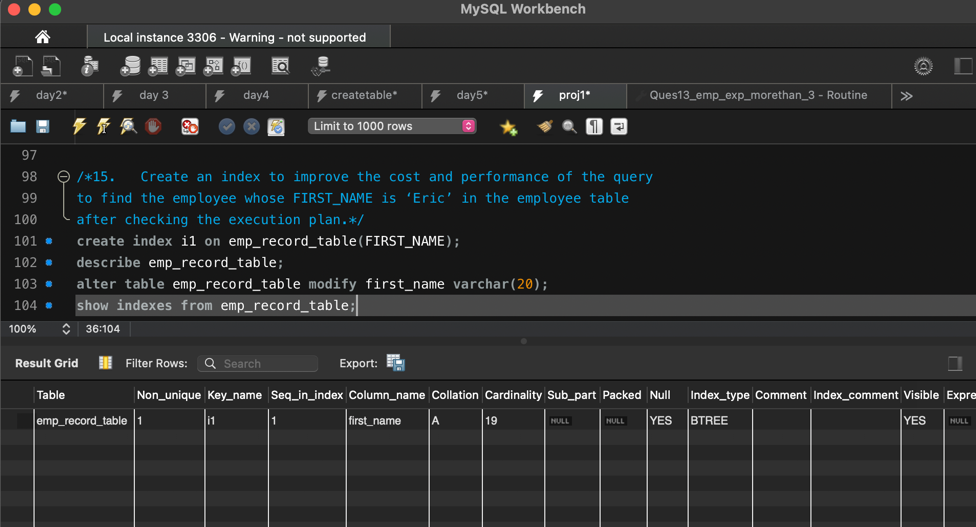


Ans to Q.14

Q.15. Create an index to improve the cost and performance of the query to find the employee whose FIRST\_NAME is ‘Eric’ in the employee table after checking the execution plan.

Create index i1 on emp\_record\_table(FIRST\_NAME);

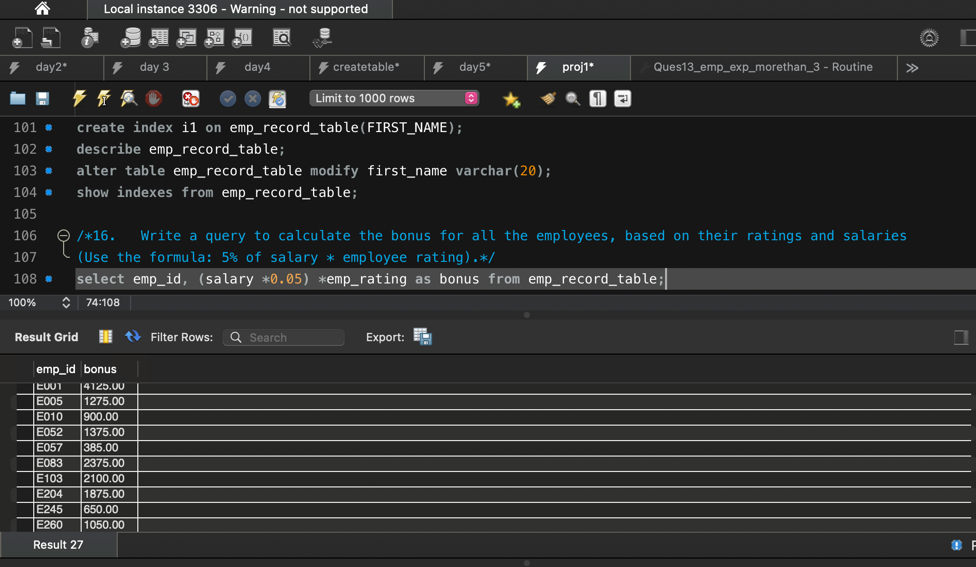
Show indexes from emp\_record\_table;



Ans to Q.15

Q.16. Write a query to calculate the bonus for all the employees, based on their ratings and salaries (Use the formula: 5% of salary \* employee rating).

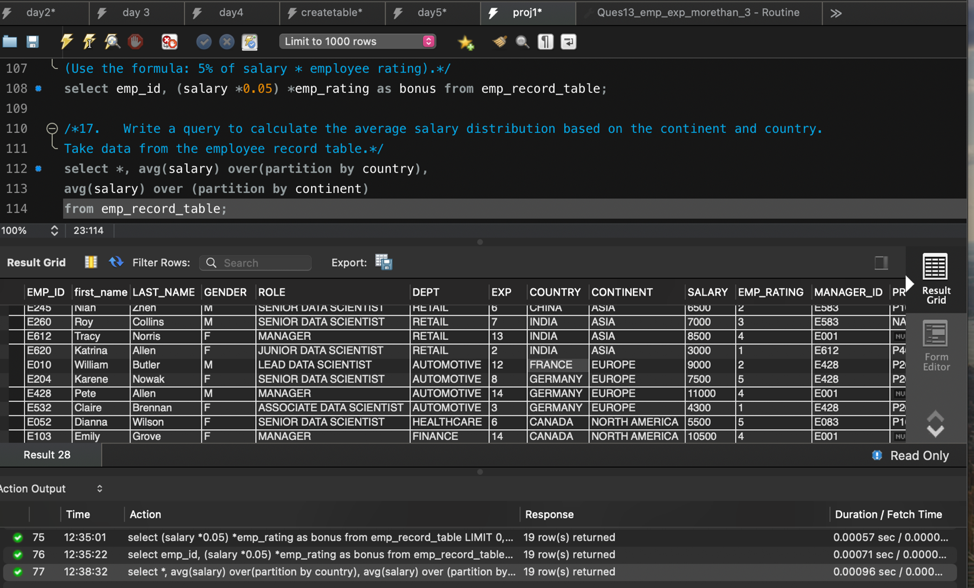
Select emp\_id, (salary \*0.05) \*emp\_rating as bonus from emp\_record\_table;



Ans to Q.16

Q.17. Write a query to calculate the average salary distribution based on the continent and country. Take data from the employee record table.

Select \*, avg(salary) over(partition by country), avg(salary)over(partition by continent) from emp\_record\_table;



Ans to Q.17