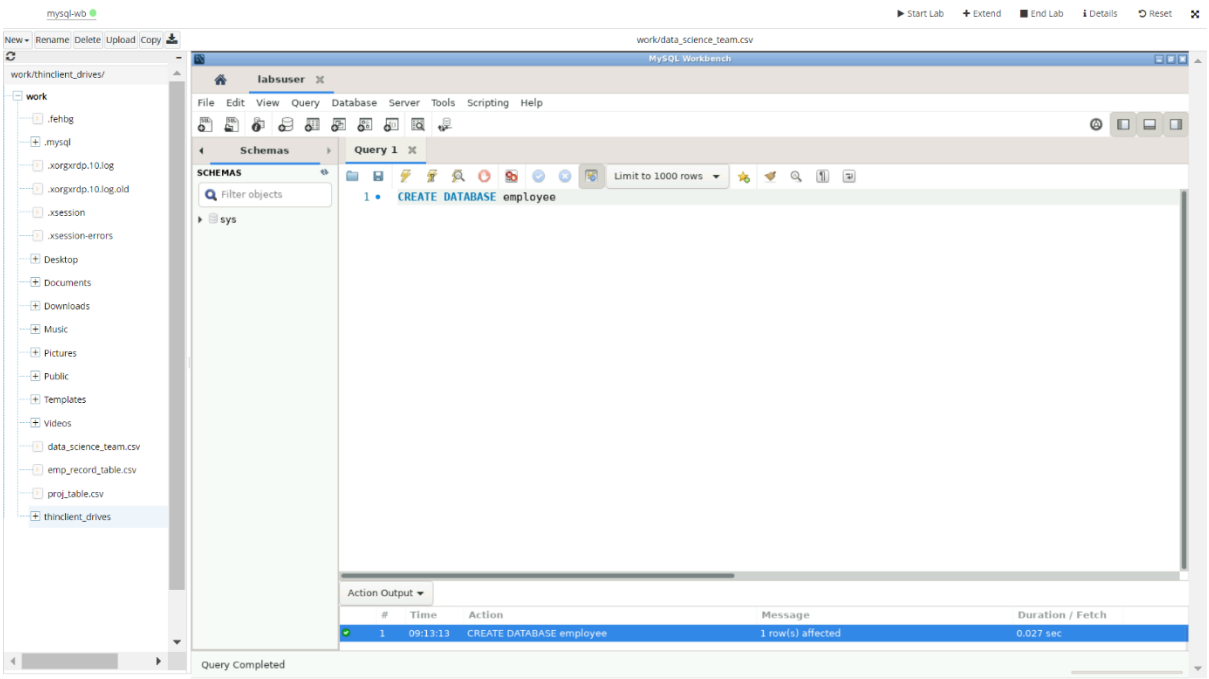
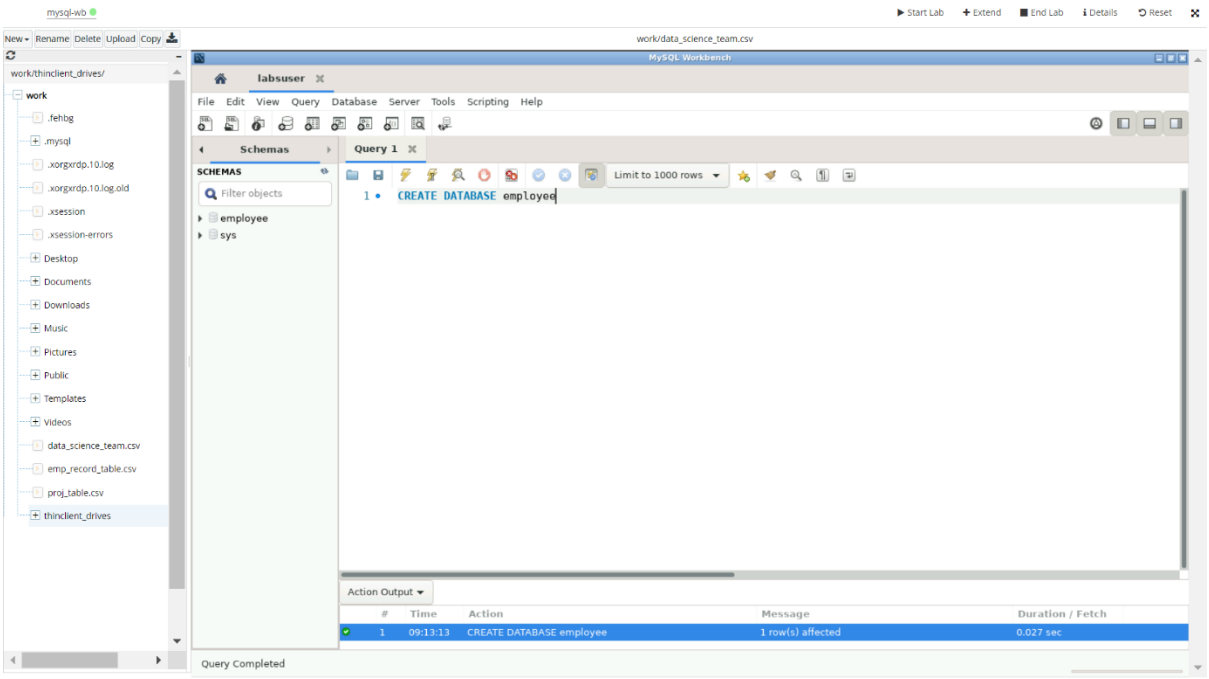
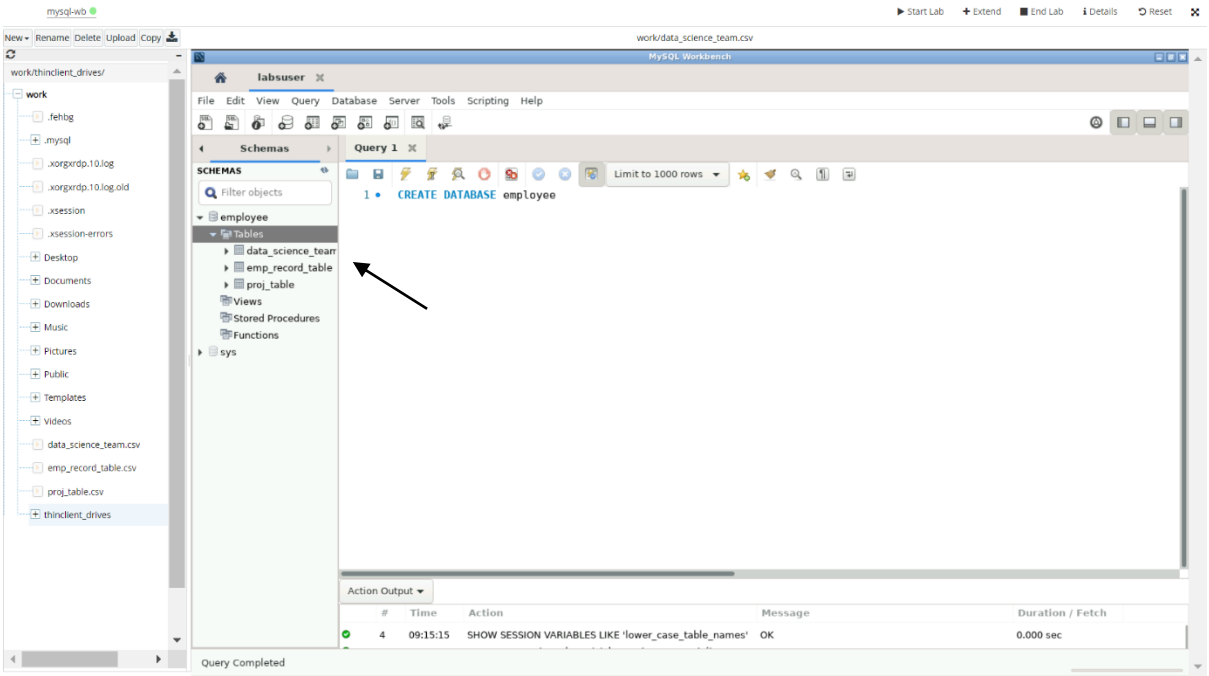
The task to be performed:

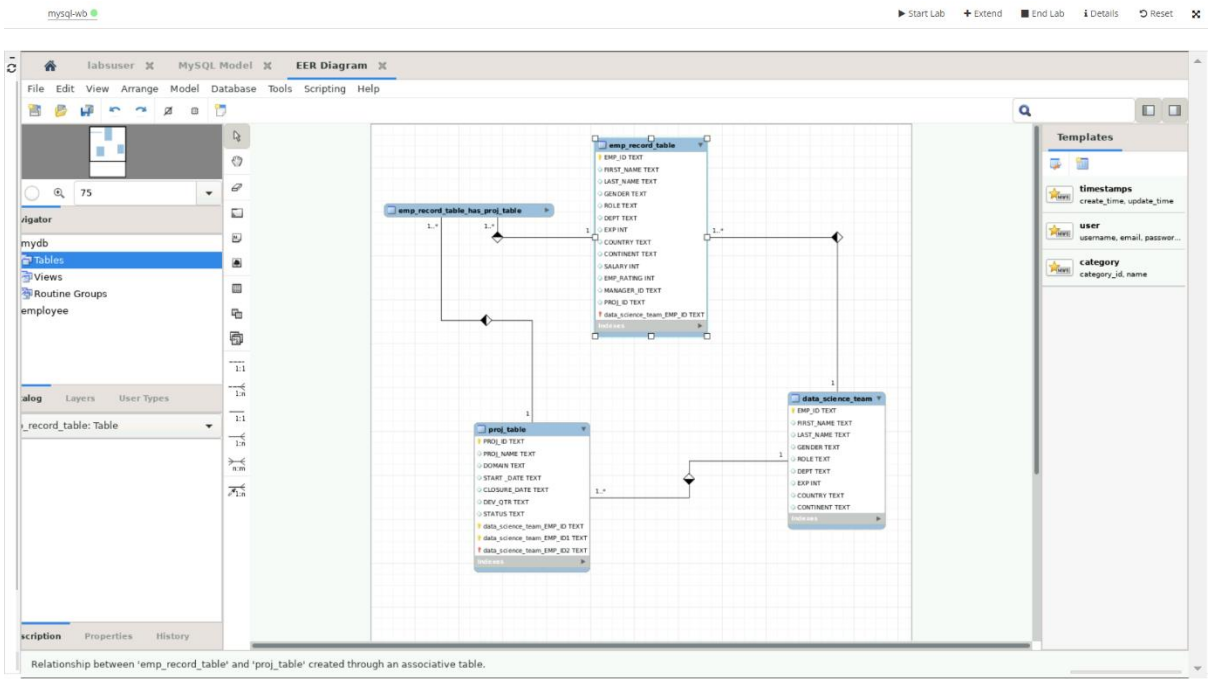
1. **Create a database named employee, then import** data_science_team.csv proj_table.csv **and** emp_record_table.csv **into the** employee **database from the given resources.**







2.Create an ER diagram for the given employee database.



3.Write a query to fetch EMP_ID, FIRST_NAME, LAST_NAME, GENDER, and DEPARTMENT from the employee record table, and make a list of employees and details of their department.

Query to fetch details from employee record table:

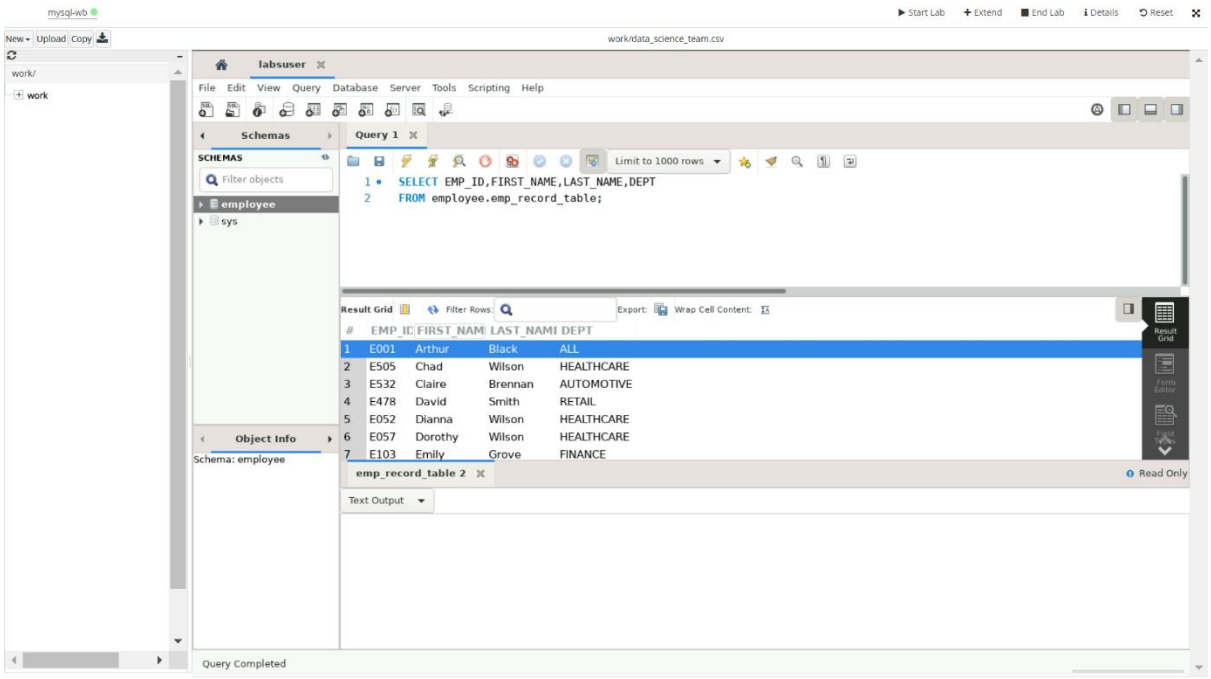
SELECT EMP_ID, FIRST_NAME, LAST_NAME, GENDER, DEPT

FROM employee.emp_record_table;

List of employees and details of their department:

SELECT EMP_ID, FIRST_NAME, LAST_NAME, DEPT

FROM employee.emp_record_table;



4.Write a query to fetch EMP_ID, FIRST_NAME, LAST_NAME, GENDER, DEPARTMENT, and EMP_RATING if the EMP_RATING is:

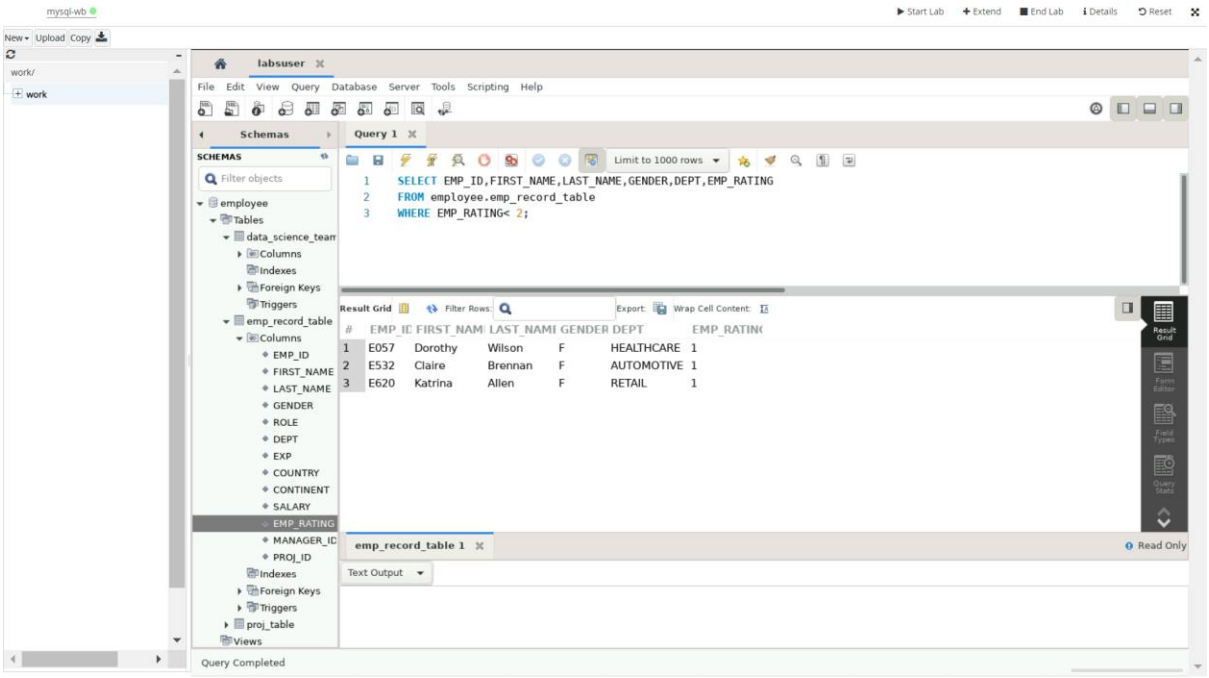
- **less than two**

  Query:

  SELECT EMP_ID, FIRST_NAME, LAST_NAME, GENDER, DEPT, EMP_RATING

  FROM employee.emp_record_table

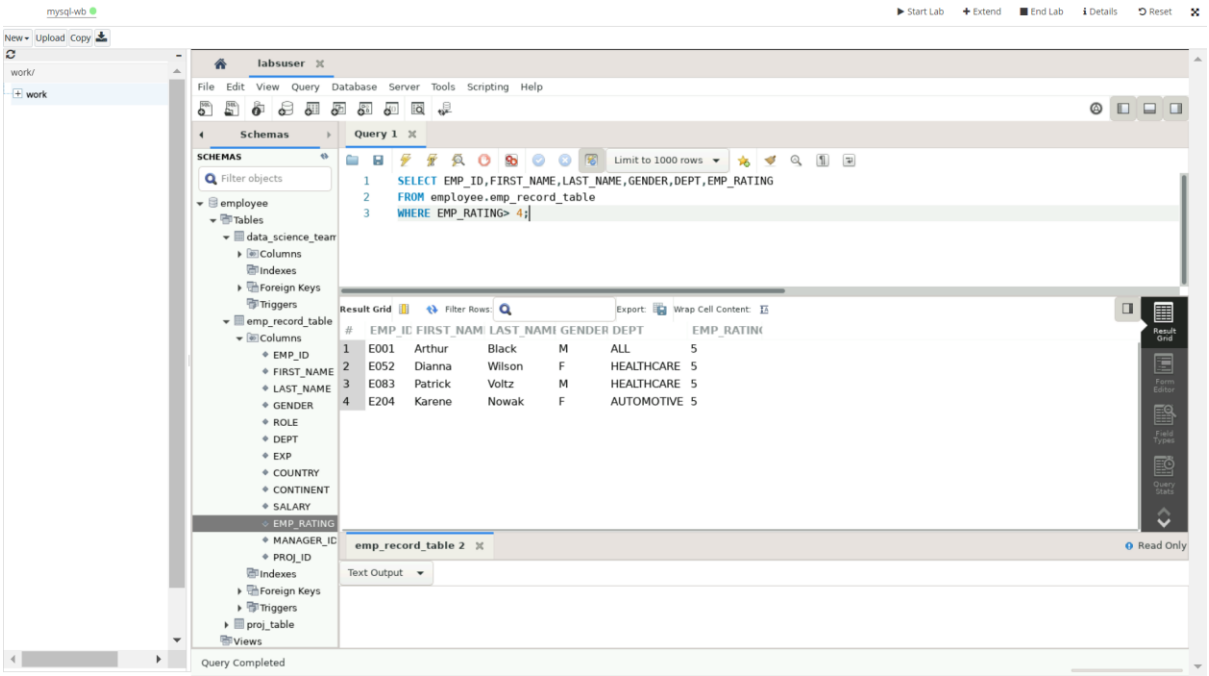
  WHERE EMP_RATING<2;



- **greater than four**

  Query:

  ```
  SELECT EMP_ID, FIRST_NAME, LAST_NAME, GENDER, DEPT, EMP_RATING
  FROM employee.emp_record_table
  WHERE EMP_RATING>4;
  ```



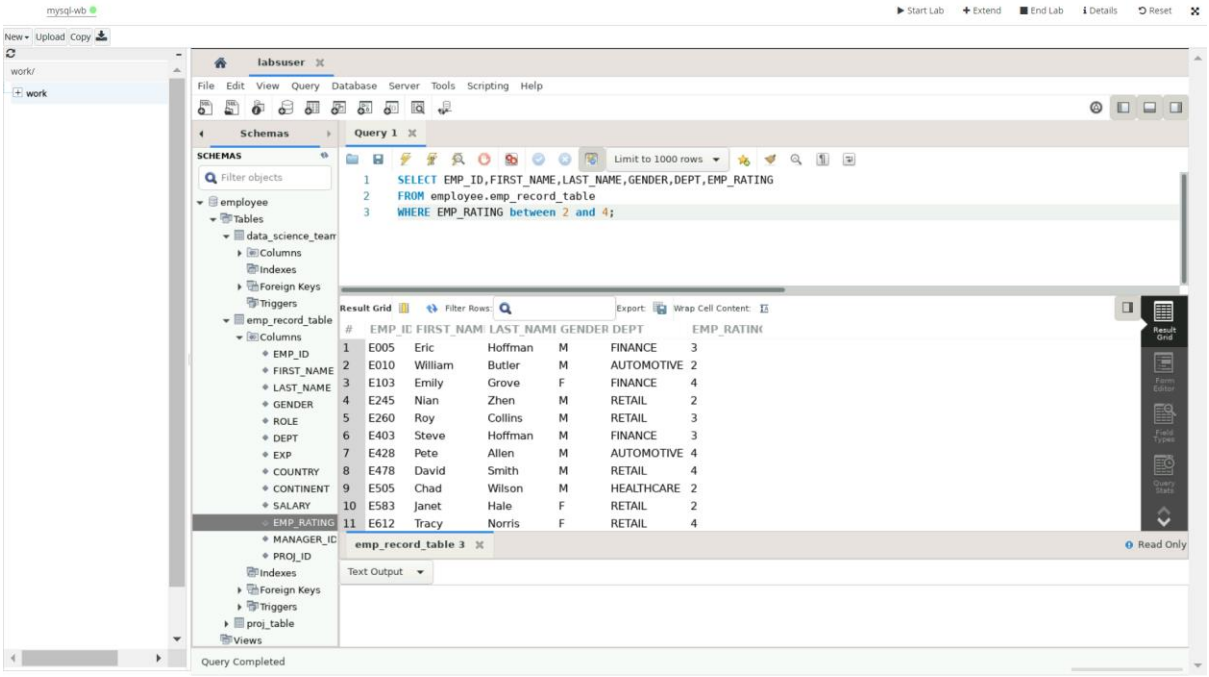
- **between two and four**

  Query:

SELECT EMP_ID, FIRST_NAME, LAST_NAME, GENDER, DEPT, EMP_RATING

FROM employee.emp_record_table

WHERE EMP_RATING BETWEEN 2 AND 4;



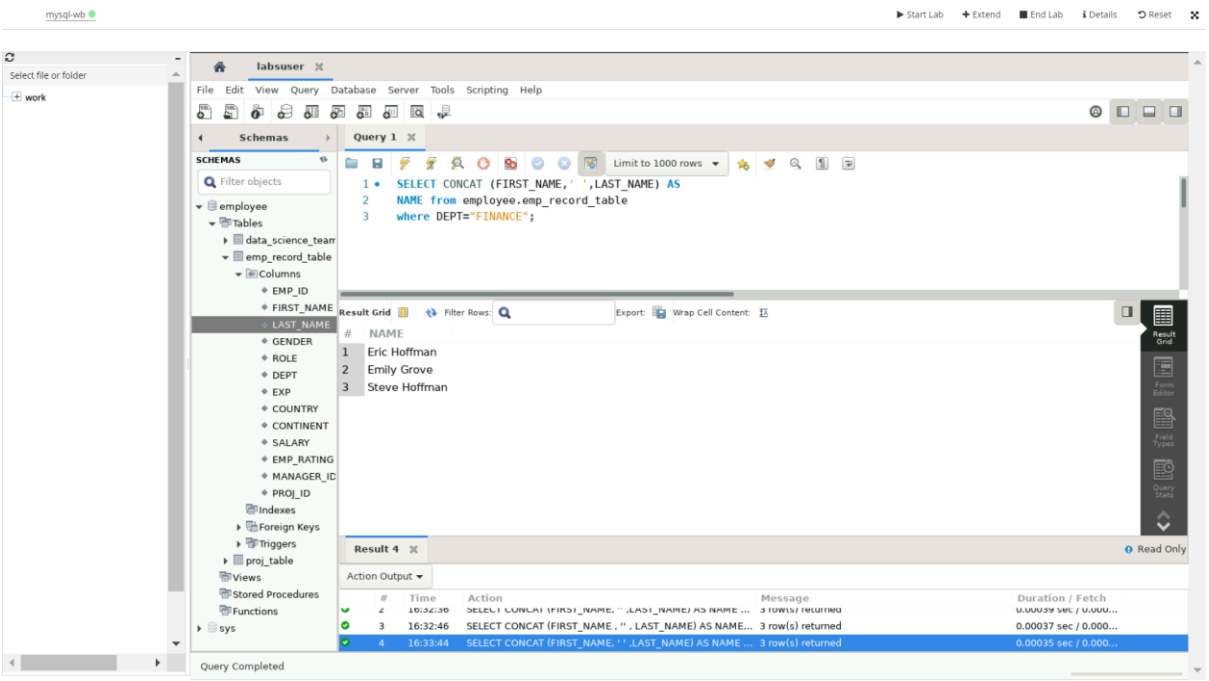
5.Write a query to concatenate the FIRST_NAME and the LAST_NAME of employees in the Finance department from the employee table and then give the resultant column alias as NAME.

QUERY:

SELECT CONCAT (FIRST_NAME,' ', LAST_NAME) AS

NAME FROM employee.emp_record_table

WHERE DEPT=" FINANCE";



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

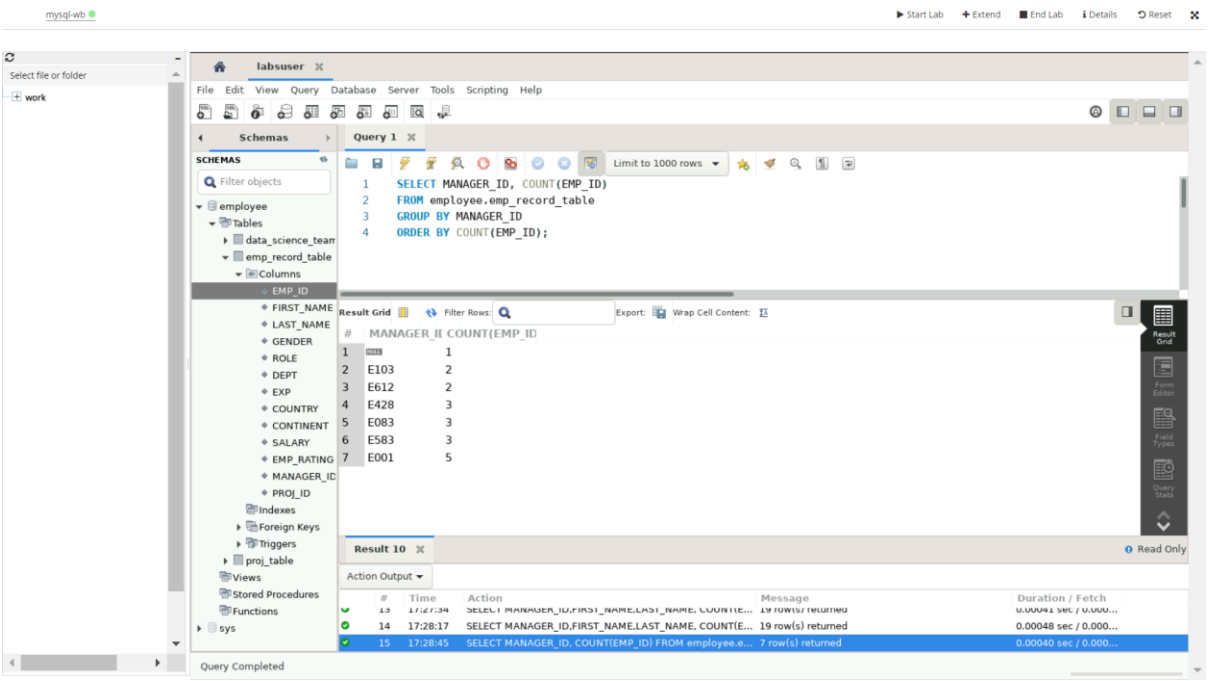
QUERY:

SELECT MANAGER_ID, COUNT(EMP_ID)

FROM employee.emp_record_table

GROUP BY MANAGER_ID

ORDER BY COUNT(EMP_ID);



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

QUERY:

SELECT EMP_ID, FIRST_NAME, LAST_NAME, DEPT

FROM employee.emp_record_table

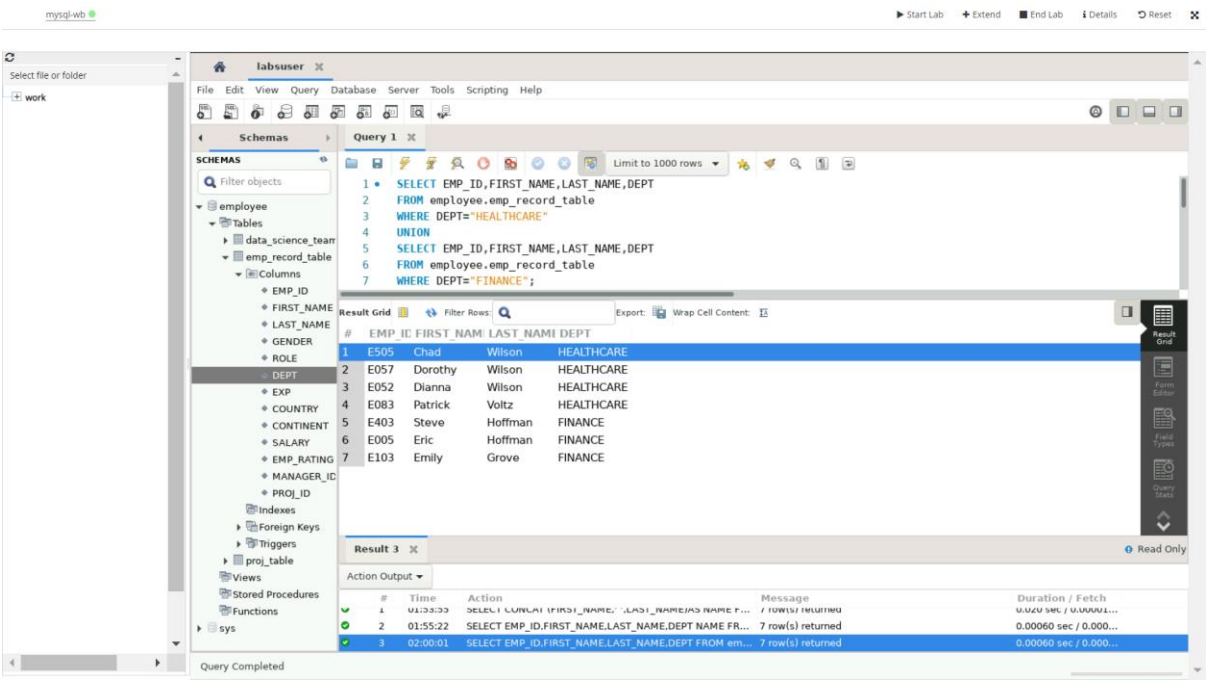
WHERE DEPT=”HEALTHCARE”

UNION

SELECT EMP_ID, FIRST_NAME, LAST_NAME, DEPT

FROM employee.emp_record_table

WHERE DEPT=”FINANCE”;



8.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.

QUERY:

SELECT EMP_ID, FIRST_NAME, LAST_NAME, ROLE, DEPT, EMP_RATING

FROM employee.emp_record_table

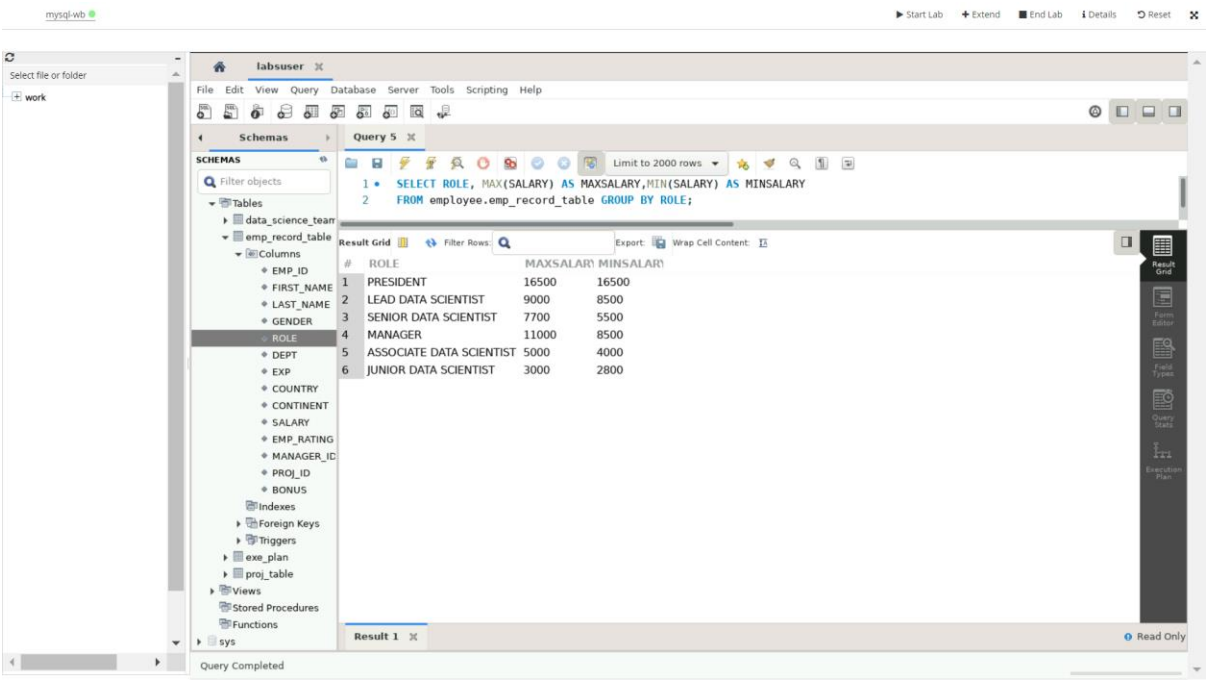
WHERE (EMP_RATING,DEPT) IN (SELECT MAX(EMP_RATING),DEPT FROM employee.emp_record_table GROUP BY DEPT);

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

QUERY:

SELECT ROLE, MAX(SALARY) AS MAXSALARY, MIN(SALARY) AS MINSALARY

FROM employee.emp_record_table GROUP BY ROLE;



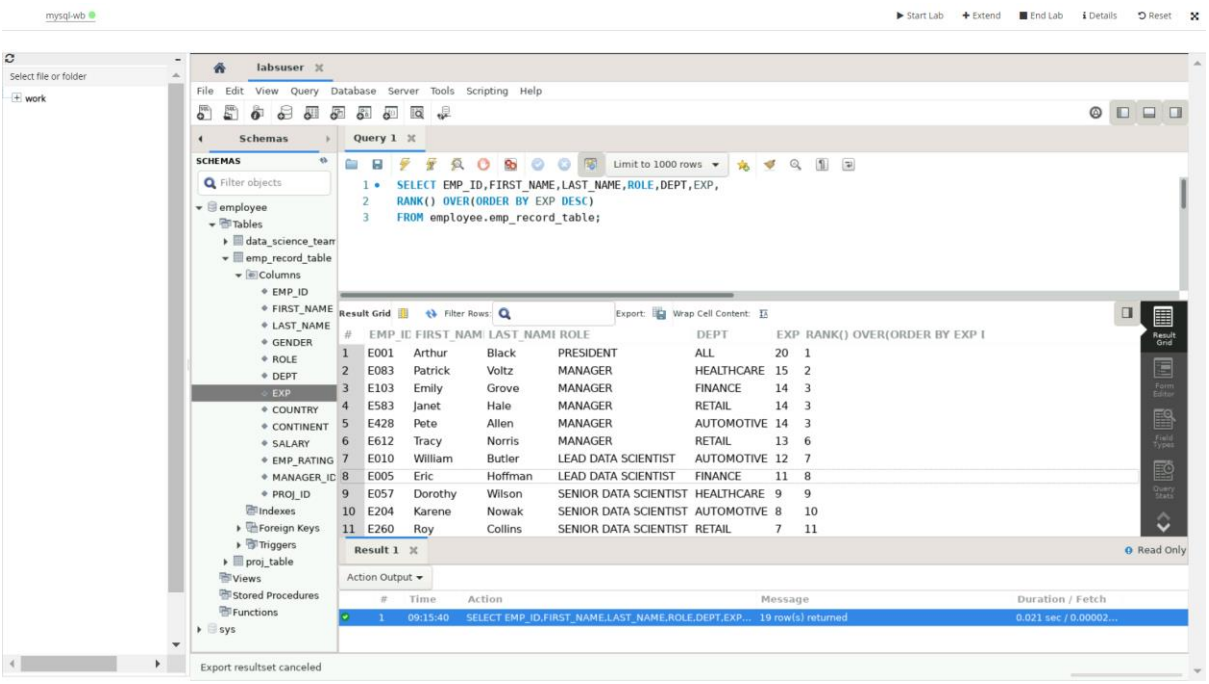
10.Write a query to assign ranks to each employee based on their experience. Take data from the employee record table.

QUERY:

SELECT EMP_ID, FIRST_NAME, LAST_NAME, ROLE, DEPT, EXP,

RANK () OVER (ORDER BY EXP DESC)

FROM employee.emp_record_table;



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.

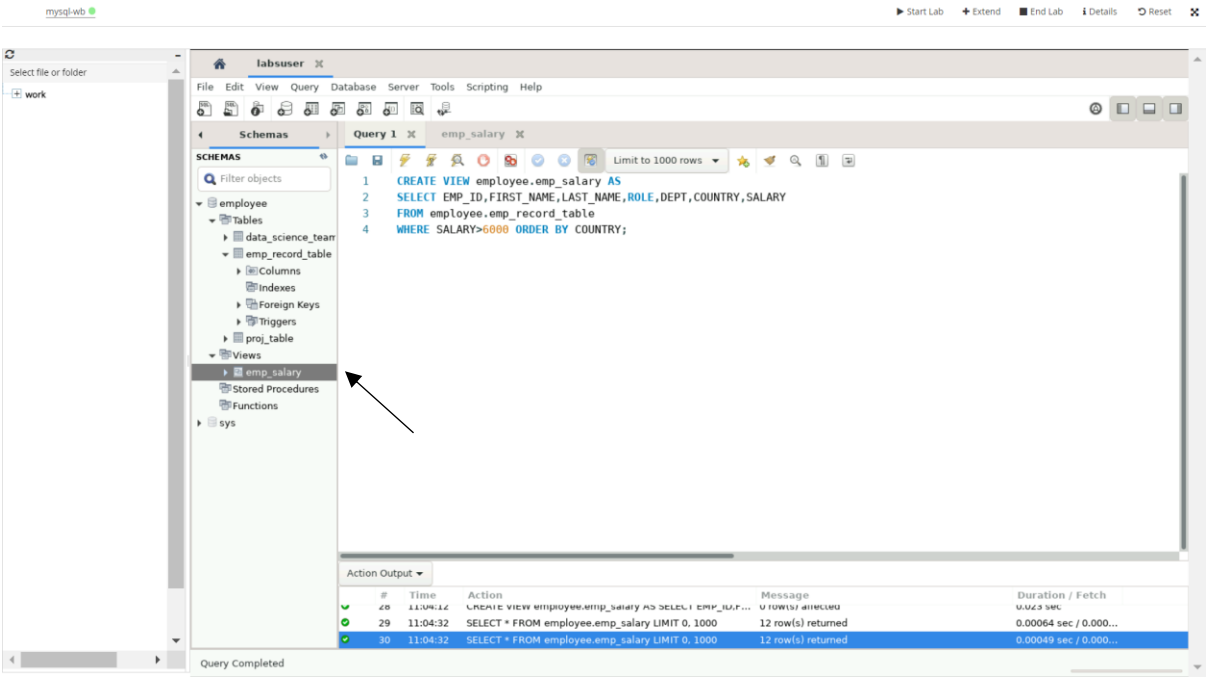
QUERY- To create a view

CREATE VIEW employee.emp_salary AS

SELECT EMP_ID, FIRST_NAME, LAST_NAME, ROLE, DEPT, COUNTRY, SALARY

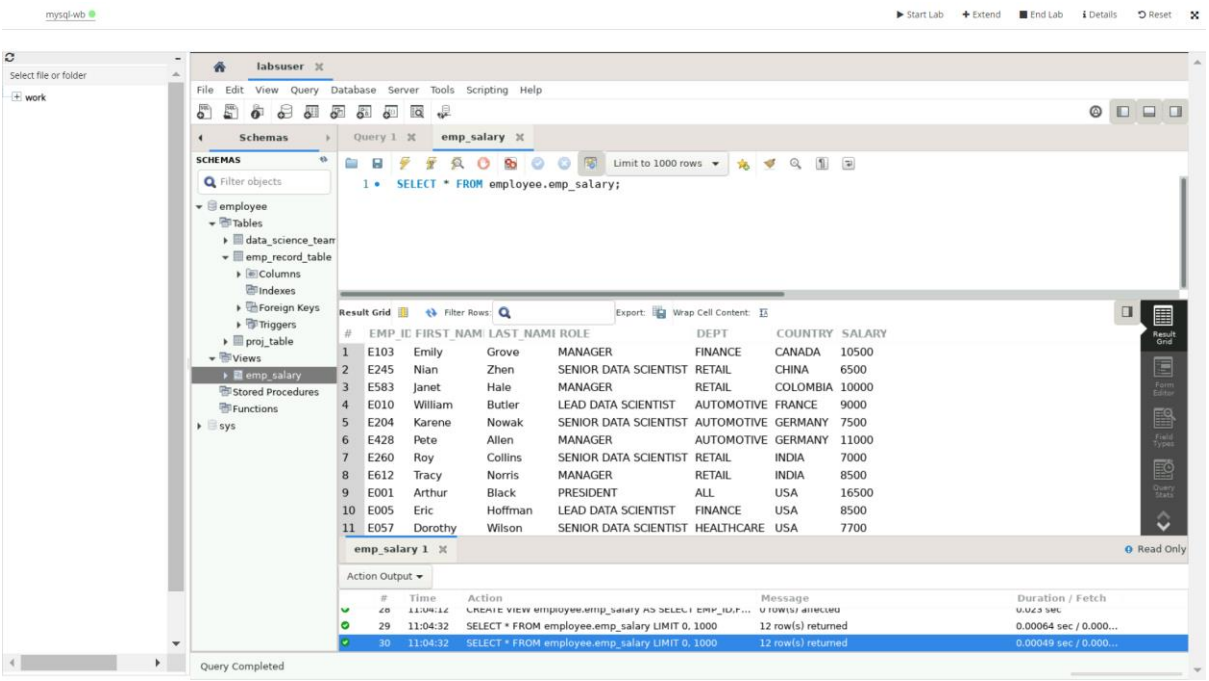
FROM employee.emp_record_table

WHERE SALARY>6000 ORDER BY COUNTRY;



QUERY- To see the view contents:

SELECT * FROM employee.emp_salary;



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

QUERY:

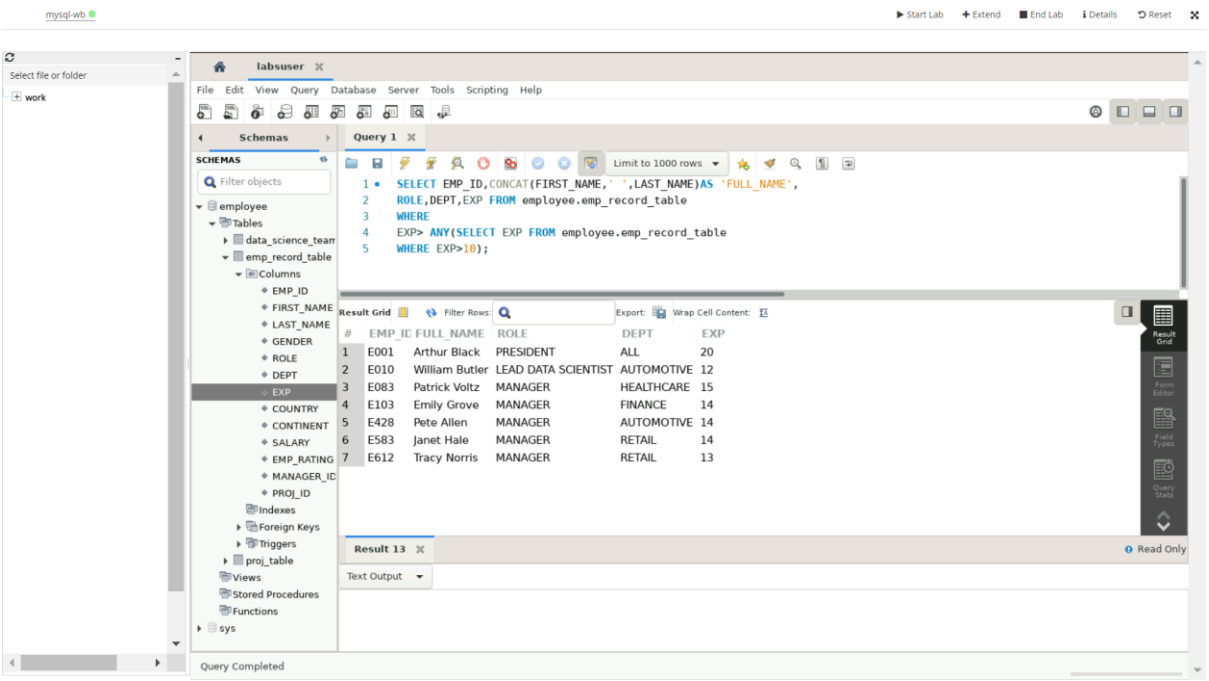
SELECT EMP_ID, CONCAT (FIRST_NAME,' ', LAST_NAME) AS 'FULL_NAME',

ROLE, DEPT, EXP FROM employee.emp_record_table

WHERE

EXP>ANY (SELECT EXP FROM employee.emp_record_table

WHERE EXP>10);



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.

QUERY:

To create a stored procedure-

```
DELIMITER &&
CREATE PROCEDURE get_experience ()
BEGIN
SELECT * FROM employee.emp_record_table
WHERE EXP>3;
END &&
```

To call the for the stored procedure-

```
CALL get_experience();
```

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',

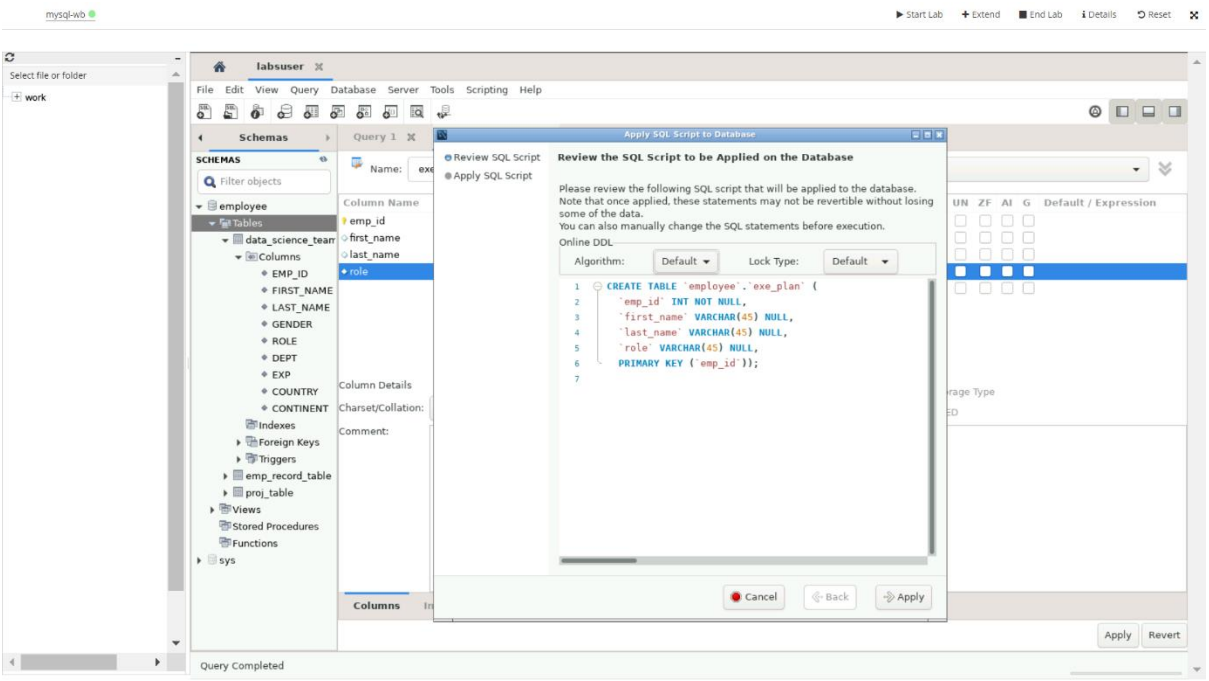
For an employee with the experience of 10 to 12 years assign 'LEAD DATA SCIENTIST',

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

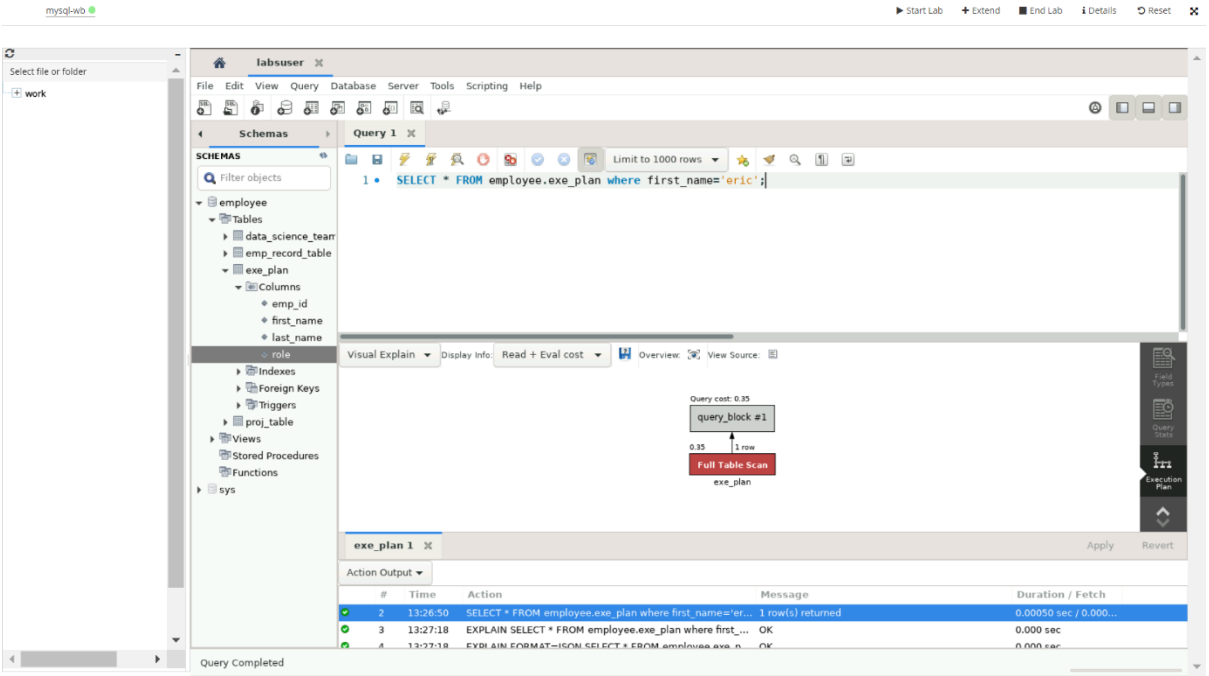
```
DELIMITER $$

drop function employee.role;

CREATE FUNCTION role (exp int)

RETURNS VARCHAR (2255) DETERMINISTIC

BEGIN DECLARE role VARCHAR (2255);

IF experience <= 2 THEN SET role = 'JUNIOR DATA SCIENTIST';

ELSEIF experience <= 5 THEN SET role = 'ASSOCIATE DATA SCIENTIST';

ELSEIF experience <= 10 THEN SET role = 'SENIOR DATA SCIENTIST';

ELSEIF experience <= 12 THEN SET role = 'LEAD DATA SCIENTIST';

ELSEIF experience > 12 THEN SET role = 'MANAGER'

END IF; RETURN (role); END$$ DELIMITER $$;

SELECT first_name, last_name, dept, Role(exp) as designation FROM employee.data_science_team
ORDER BY exp;
```

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.

CREATION OF TABLE-



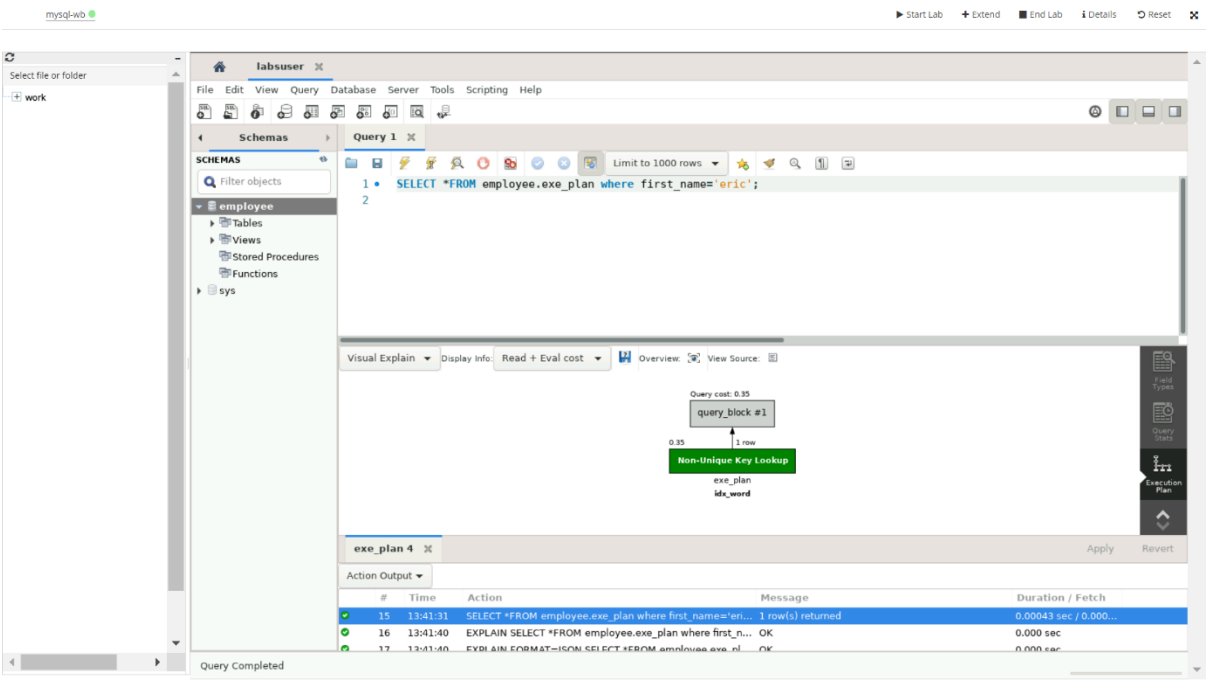
Query cost and performance before creating index-



Query cost and performance after creating index-

Index created by-

CREATE INDEX index_word on employee.exe_plan (FIRST_NAME);



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).

QUERY:

ALTER TABLE employee.emp_record_table

ADD COLUMN BONUS DOUBLE

GENERATED ALWAYS AS (5%(SALARY)*EMP_RATING) STORED;

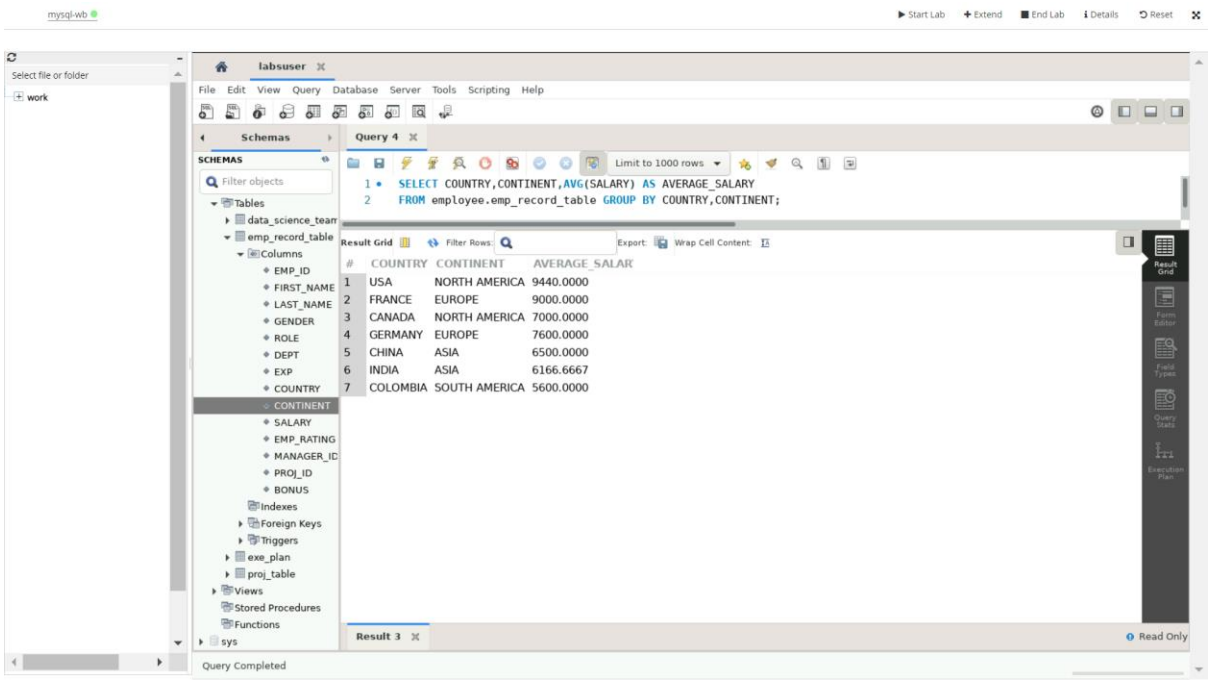
SELECT * FROM employee.emp_record_table;

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

QUERY-

SELECT COUNTRY, CONTINENT, AVG(SALARY) AS AVERAGE_SALARY

FROM employee.emp_record_table GROUP BY COUNTRY, CONTINENT;


mysql-wb
Start Lab
Extend
End Lab
Details
Reset
Select file or folder
work
labsuser
File Edit View Query Database Server Tools Scripting Help
Schemas
SCHEMAS
Filter objects
Tables
data_science_team
emp_record_table
Columns
EMP_ID
FIRST_NAME
LAST_NAME
GENDER
ROLE
DEPT
EXP
COUNTRY
CONTINENT
SALARY
EMP_RATING
MANAGER_ID
PROJ_ID
BONUS
Indexes
Foreign Keys
Triggers
exe_plan
proj_table
Views
Stored Procedures
Functions
sys
Query 4
Limit to 1000 rows
1 • SELECT COUNTRY,CONTINENT,AVG(SALARY) AS AVERAGE_SALARY
2 FROM employee.emp_record_table GROUP BY COUNTRY,CONTINENT;
Result Grid
Filter Rows:
Export:
Wrap Cell Content:
COUNTRY CONTINENT AVERAGE_SALAR
1 USA NORTH AMERICA 9440.0000
2 FRANCE EUROPE 9000.0000
3 CANADA NORTH AMERICA 7000.0000
4 GERMANY EUROPE 7600.0000
5 CHINA ASIA 6500.0000
6 INDIA ASIA 6166.6667
7 COLOMBIA SOUTH AMERICA 5600.0000
Result Grid
Form Editor
Field Types
Query Stats
Execution Plan
Result 3
Read Only
Query Completed