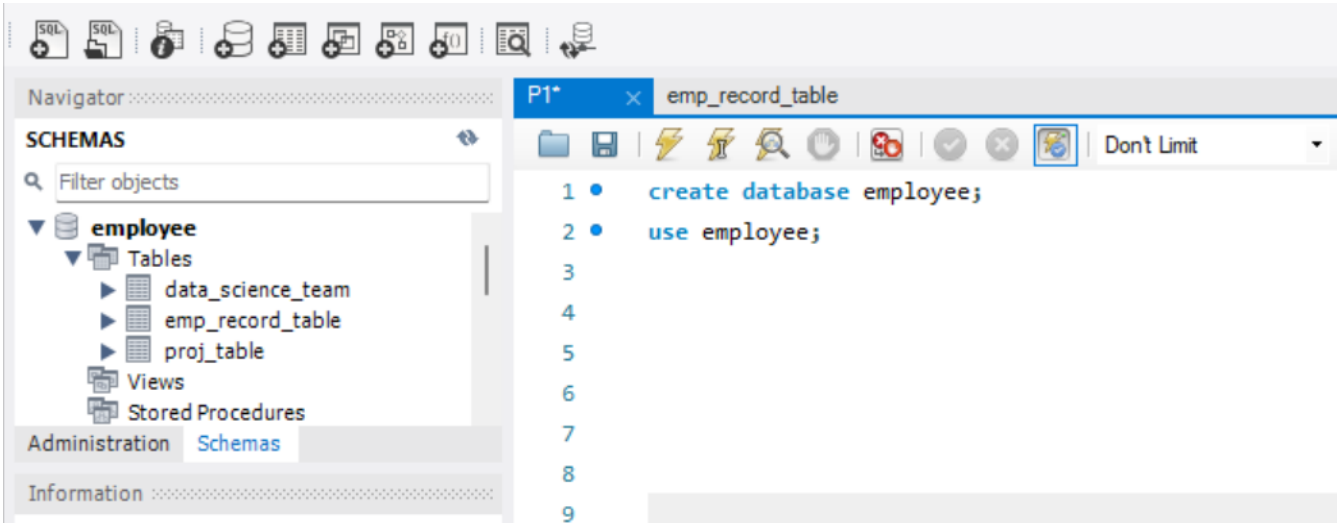
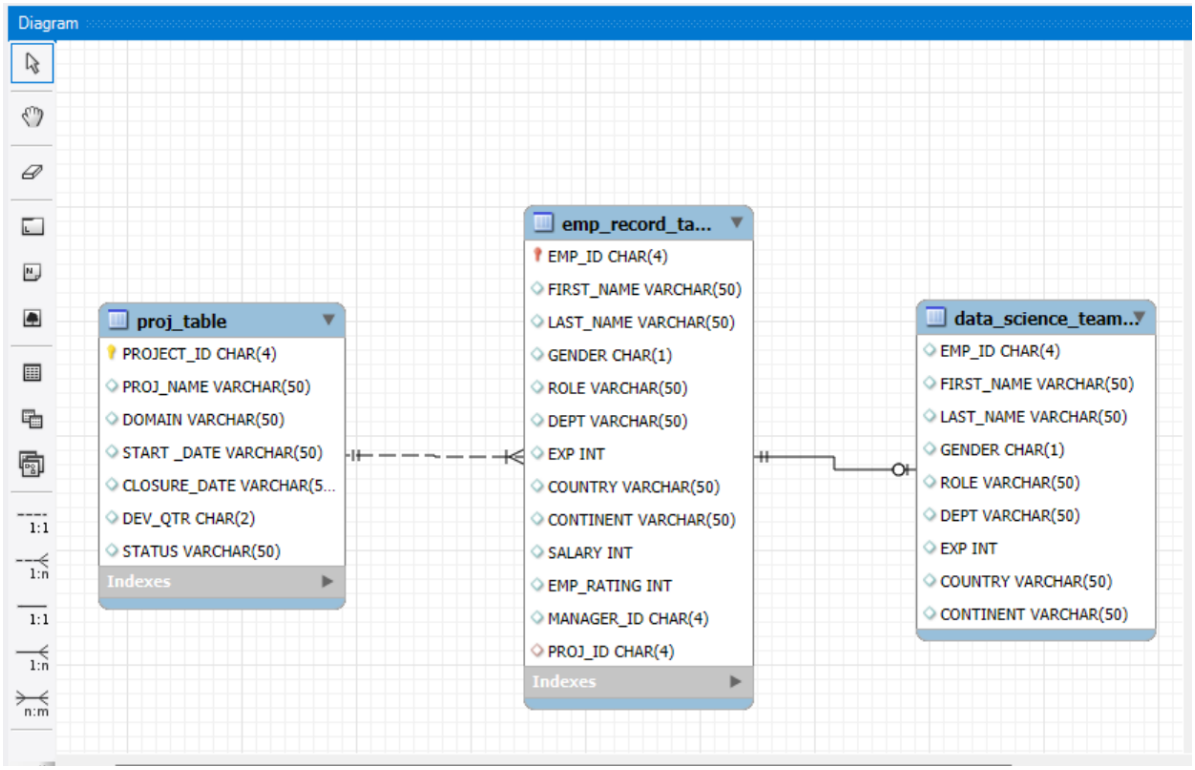
Employee Performance Mapping

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.



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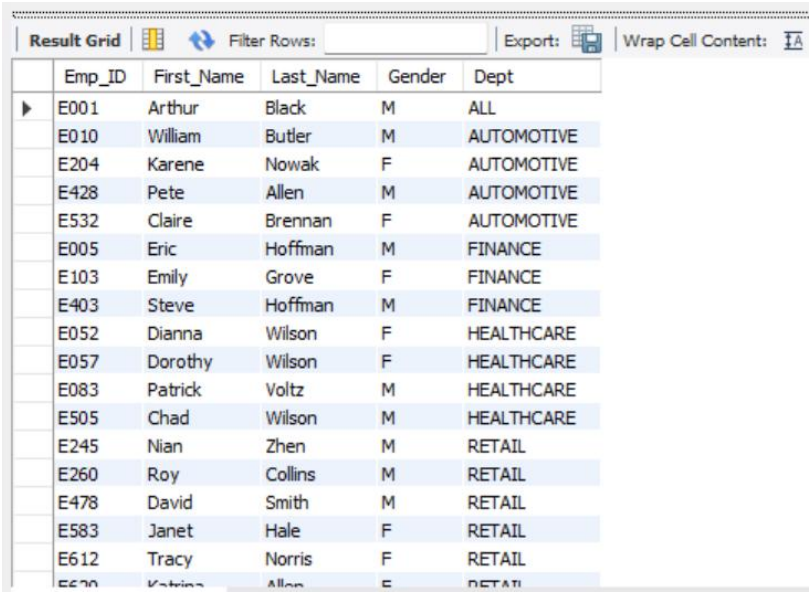
3. Write a query to fetch EMP_ID, FIRST_NAME, LAST_NAME, GENDER, and DEPARTMENT from the employee record table, and make a list of employees and details of their department.

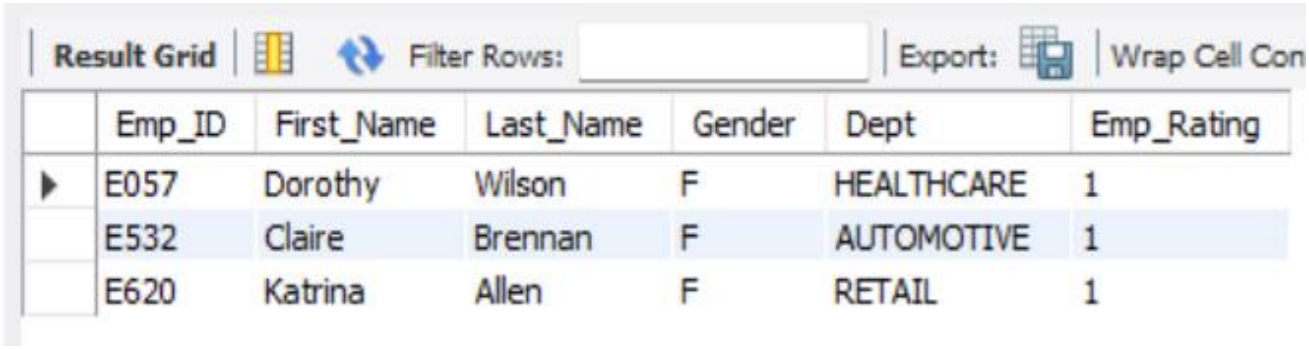


Result Grid | Filter Rows: | Export: | Wrap Cell Content:

Emp_ID	First_Name	Last_Name	Gender	Dept
E001	Arthur	Black	M	ALL
E010	William	Butler	M	AUTOMOTIVE
E204	Karene	Nowak	F	AUTOMOTIVE
E428	Pete	Allen	M	AUTOMOTIVE
E532	Claire	Brennan	F	AUTOMOTIVE
E005	Eric	Hoffman	M	FINANCE
E103	Emily	Grove	F	FINANCE
E403	Steve	Hoffman	M	FINANCE
E052	Dianna	Wilson	F	HEALTHCARE
E057	Dorothy	Wilson	F	HEALTHCARE
E083	Patrick	Voltz	M	HEALTHCARE
E505	Chad	Wilson	M	HEALTHCARE
E245	Nian	Zhen	M	RETAIL
E260	Roy	Collins	M	RETAIL
E478	David	Smith	M	RETAIL
E583	Janet	Hale	F	RETAIL
E612	Tracy	Norris	F	RETAIL

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

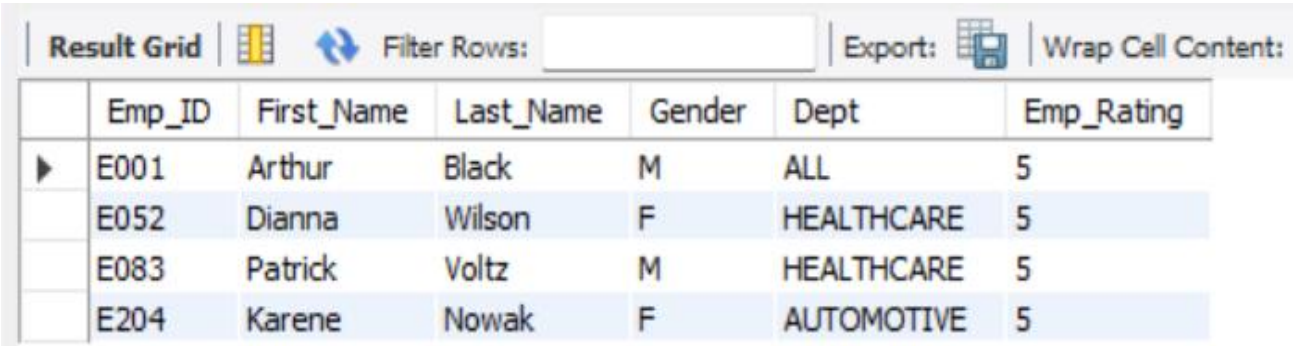
less than two



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

Emp_ID	First_Name	Last_Name	Gender	Dept	Emp_Rating
E057	Dorothy	Wilson	F	HEALTHCARE	1
E532	Claire	Brennan	F	AUTOMOTIVE	1
E620	Katrina	Allen	F	RETAIL	1

greater than four



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

Emp_ID	First_Name	Last_Name	Gender	Dept	Emp_Rating
E001	Arthur	Black	M	ALL	5
E052	Dianna	Wilson	F	HEALTHCARE	5
E083	Patrick	Voltz	M	HEALTHCARE	5
E204	Karene	Nowak	F	AUTOMOTIVE	5

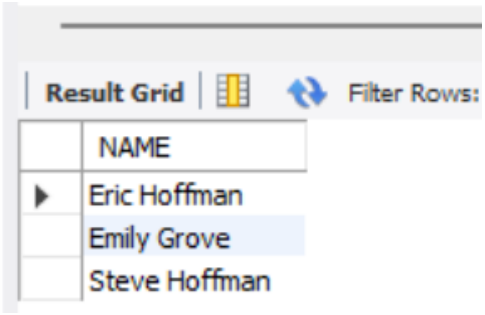
`

between two and four

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

Emp_ID	First_Name	Last_Name	Gender	Dept	Emp_Rating
E005	Eric	Hoffman	M	FINANCE	3
E010	William	Butler	M	AUTOMOTIVE	2
E103	Emily	Grove	F	FINANCE	4
E245	Nian	Zhen	M	RETAIL	2
E260	Roy	Collins	M	RETAIL	3
E403	Steve	Hoffman	M	FINANCE	3
E428	Pete	Allen	M	AUTOMOTIVE	4
E478	David	Smith	M	RETAIL	4
E505	Chad	Wilson	M	HEALTHCARE	2
E583	Janet	Hale	F	RETAIL	2
E612	Tracy	Norris	F	RETAIL	4
E640	Jenifer	Jhones	F	RETAIL	4

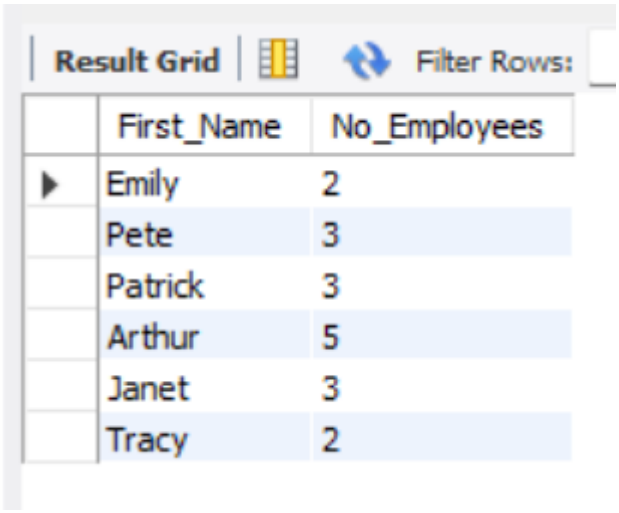
5. Write a query to concatenate the FIRST_NAME and the LAST_NAME of employees in the Finance department from the employee table and then give the resultant column alias as NAME.



Result Grid | Filter Rows:

NAME
Eric Hoffman
Emily Grove
Steve Hoffman

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



Result Grid | Filter Rows:

First_Name	No_Employees
Emily	2
Pete	3
Patrick	3
Arthur	5
Janet	3
Tracy	2

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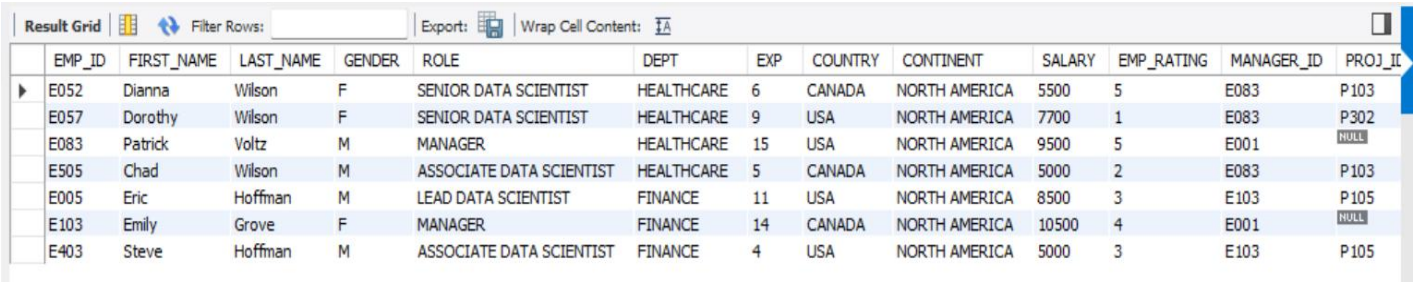
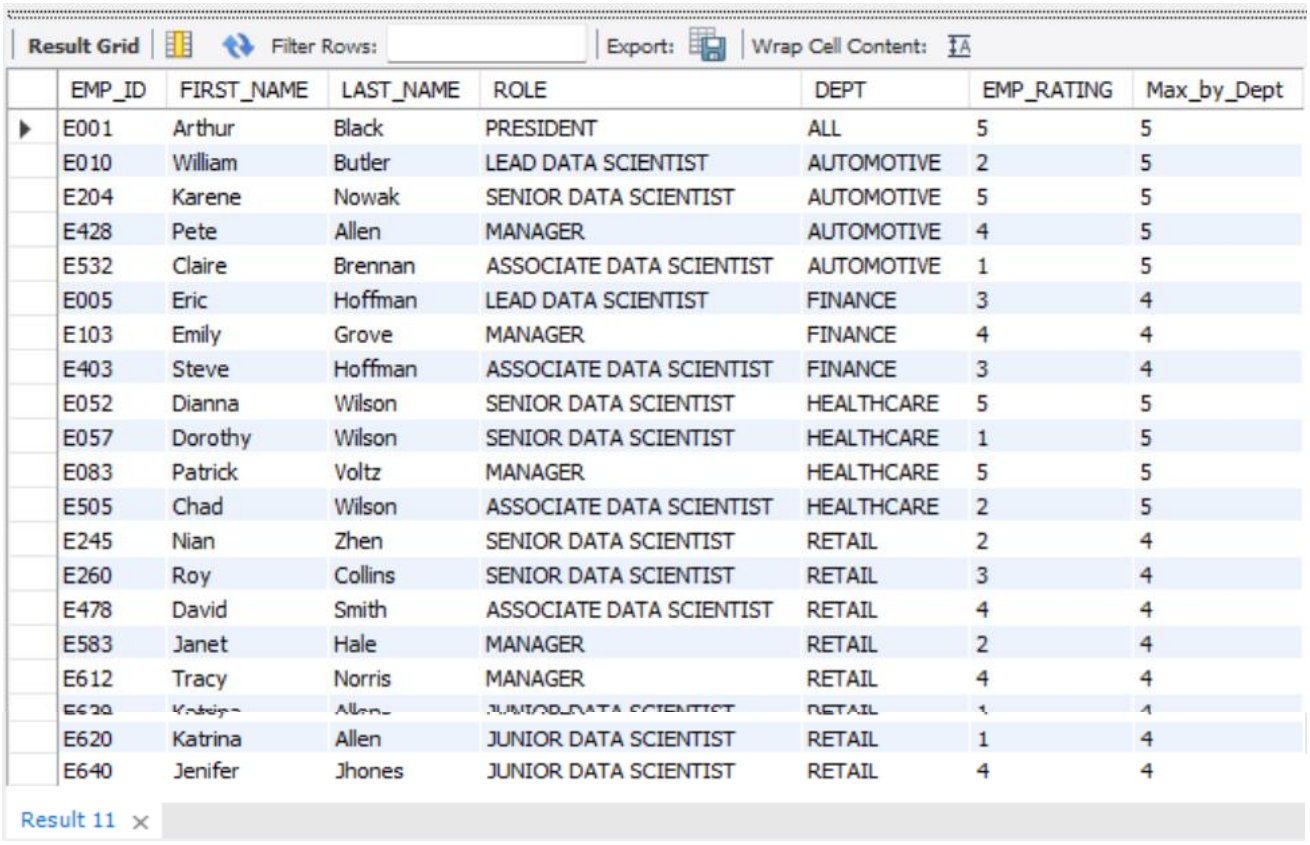
7. Write a query to list down all the employees from the healthcare and finance departments using union. Take data from the employee record table.



EMP_ID	FIRST_NAME	LAST_NAME	GENDER	ROLE	DEPT	EXP	COUNTRY	CONTINENT	SALARY	EMP_RATING	MANAGER_ID	PROJ_ID
E052	Dianna	Wilson	F	SENIOR DATA SCIENTIST	HEALTHCARE	6	CANADA	NORTH AMERICA	5500	5	E083	P103
E057	Dorothy	Wilson	F	SENIOR DATA SCIENTIST	HEALTHCARE	9	USA	NORTH AMERICA	7700	1	E083	P302
E083	Patrick	Voltz	M	MANAGER	HEALTHCARE	15	USA	NORTH AMERICA	9500	5	E001	NULL
E505	Chad	Wilson	M	ASSOCIATE DATA SCIENTIST	HEALTHCARE	5	CANADA	NORTH AMERICA	5000	2	E083	P103
E005	Eric	Hoffman	M	LEAD DATA SCIENTIST	FINANCE	11	USA	NORTH AMERICA	8500	3	E103	P105
E103	Emily	Grove	F	MANAGER	FINANCE	14	CANADA	NORTH AMERICA	10500	4	E001	NULL
E403	Steve	Hoffman	M	ASSOCIATE DATA SCIENTIST	FINANCE	4	USA	NORTH AMERICA	5000	3	E103	P105

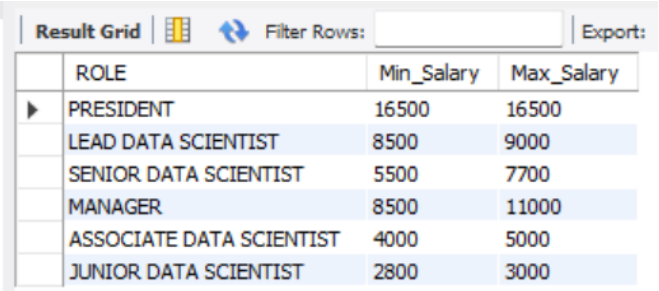
8. Write a query to list down employee details such as EMP_ID, FIRST_NAME, LAST_NAME, ROLE, DEPARTMENT, and EMP_RATING grouped by dept. Also include the respective employee rating along with the max emp rating for the department.



EMP_ID	FIRST_NAME	LAST_NAME	ROLE	DEPT	EMP_RATING	Max_by_Dept
E001	Arthur	Black	PRESIDENT	ALL	5	5
E010	William	Butler	LEAD DATA SCIENTIST	AUTOMOTIVE	2	5
E204	Karene	Nowak	SENIOR DATA SCIENTIST	AUTOMOTIVE	5	5
E428	Pete	Allen	MANAGER	AUTOMOTIVE	4	5
E532	Claire	Brennan	ASSOCIATE DATA SCIENTIST	AUTOMOTIVE	1	5
E005	Eric	Hoffman	LEAD DATA SCIENTIST	FINANCE	3	4
E103	Emily	Grove	MANAGER	FINANCE	4	4
E403	Steve	Hoffman	ASSOCIATE DATA SCIENTIST	FINANCE	3	4
E052	Dianna	Wilson	SENIOR DATA SCIENTIST	HEALTHCARE	5	5
E057	Dorothy	Wilson	SENIOR DATA SCIENTIST	HEALTHCARE	1	5
E083	Patrick	Voltz	MANAGER	HEALTHCARE	5	5
E505	Chad	Wilson	ASSOCIATE DATA SCIENTIST	HEALTHCARE	2	5
E245	Nian	Zhen	SENIOR DATA SCIENTIST	RETAIL	2	4
E260	Roy	Collins	SENIOR DATA SCIENTIST	RETAIL	3	4
E478	David	Smith	ASSOCIATE DATA SCIENTIST	RETAIL	4	4
E583	Janet	Hale	MANAGER	RETAIL	2	4
E612	Tracy	Norris	MANAGER	RETAIL	4	4
E620	Katrina	Allen	JUNIOR DATA SCIENTIST	RETAIL	1	4
E640	Jenifer	Jhones	JUNIOR DATA SCIENTIST	RETAIL	4	4

Result 11

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.



ROLE	Min_Salary	Max_Salary
PRESIDENT	16500	16500
LEAD DATA SCIENTIST	8500	9000
SENIOR DATA SCIENTIST	5500	7700
MANAGER	8500	11000
ASSOCIATE DATA SCIENTIST	4000	5000
JUNIOR DATA SCIENTIST	2800	3000

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

Result Grid | Filter Rows: | Export:

EMP_ID	FIRST_NAME	Last_Name	Exp	Rank_Exp
E103	Emily	Grove	14	3
E428	Pete	Allen	14	3
E583	Janet	Hale	14	3
E612	Tracy	Norris	13	6
E010	William	Butler	12	7
E005	Eric	Hoffman	11	8
E057	Dorothy	Wilson	9	9
E204	Karene	Nowak	8	10
E260	Roy	Collins	7	11
E052	Dianna	Wilson	6	12
E245	Nian	Zhen	6	12
E505	Chad	Wilson	5	14
E403	Steve	Hoffman	4	15
E478	David	Smith	3	16
E532	Claire	Brennan	3	16
E620	Katrina	Allen	2	18
E640	Jenifer	Jhones	1	19

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.

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

EMP_ID	FIRST_NAME	Last_Name	Role	Dept	Salary	Country
E103	Emily	Grove	MANAGER	FINANCE	10500	CANADA
E245	Nian	Zhen	SENIOR DATA SCIENTIST	RETAIL	6500	CHINA
E583	Janet	Hale	MANAGER	RETAIL	10000	COLOMBIA
E010	William	Butler	LEAD DATA SCIENTIST	AUTOMOTIVE	9000	FRANCE
E204	Karene	Nowak	SENIOR DATA SCIENTIST	AUTOMOTIVE	7500	GERMANY
E428	Pete	Allen	MANAGER	AUTOMOTIVE	11000	GERMANY
E260	Roy	Collins	SENIOR DATA SCIENTIST	RETAIL	7000	INDIA
E612	Tracy	Norris	MANAGER	RETAIL	8500	INDIA
E001	Arthur	Black	PRESIDENT	ALL	16500	USA
E005	Eric	Hoffman	LEAD DATA SCIENTIST	FINANCE	8500	USA
E057	Dorothy	Wilson	SENIOR DATA SCIENTIST	HEALTHCARE	7700	USA
E083	Patrick	Voltz	MANAGER	HEALTHCARE	9500	USA

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

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Content:

EMP_ID	FIRST_NAME	LAST_NAME	GENDER	ROLE	DEPT	EXP	COUNTRY	CONTINENT	SALARY	EMP_RATING	MANAGER_ID	PROJ_ID
E001	Arthur	Black	M	PRESIDENT	ALL	20	USA	NORTH AMERICA	16500	5	NULL	NULL
E005	Eric	Hoffman	M	LEAD DATA SCIENTIST	FINANCE	11	USA	NORTH AMERICA	8500	3	E103	P105
E010	William	Butler	M	LEAD DATA SCIENTIST	AUTOMOTIVE	12	FRANCE	EUROPE	9000	2	E428	P204
E083	Patrick	Voltz	M	MANAGER	HEALTHCARE	15	USA	NORTH AMERICA	9500	5	E001	NULL
E103	Emily	Grove	F	MANAGER	FINANCE	14	CANADA	NORTH AMERICA	10500	4	E001	NULL
E428	Pete	Allen	M	MANAGER	AUTOMOTIVE	14	GERMANY	EUROPE	11000	4	E001	NULL
E583	Janet	Hale	F	MANAGER	RETAIL	14	COLOMBIA	SOUTH AMERICA	10000	2	E001	NULL
E612	Tracy	Norris	F	MANAGER	RETAIL	13	INDIA	ASIA	8500	4	E001	NULL
NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL

`

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.

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

EMP_ID	FIRST_NAME	LAST_NAME	GENDER	ROLE	DEPT	EXP	COUNTRY	CONTINENT	SALARY	EMP_RATING	MANAGER_ID	PROJ_ID
E001	Arthur	Black	M	PRESIDENT	ALL	20	USA	NORTH AMERICA	16500	5	NULL	NULL
E005	Eric	Hoffman	M	LEAD DATA SCIENTIST	FINANCE	11	USA	NORTH AMERICA	8500	3	E103	P105
E010	William	Butler	M	LEAD DATA SCIENTIST	AUTOMOTIVE	12	FRANCE	EUROPE	9000	2	E428	P204
E052	Dianna	Wilson	F	SENIOR DATA SCIENTIST	HEALTHCARE	6	CANADA	NORTH AMERICA	5500	5	E083	P103
E057	Dorothy	Wilson	F	SENIOR DATA SCIENTIST	HEALTHCARE	9	USA	NORTH AMERICA	7700	1	E083	P302
E083	Patrick	Voltz	M	MANAGER	HEALTHCARE	15	USA	NORTH AMERICA	9500	5	E001	NULL
E103	Emily	Grove	F	MANAGER	FINANCE	14	CANADA	NORTH AMERICA	10500	4	E001	NULL
E204	Karene	Nowak	F	SENIOR DATA SCIENTIST	AUTOMOTIVE	8	GERMANY	EUROPE	7500	5	E428	P204
E245	Nian	Zhen	M	SENIOR DATA SCIENTIST	RETAIL	6	CHINA	ASIA	6500	2	E583	P109
E260	Roy	Collins	M	SENIOR DATA SCIENTIST	RETAIL	7	INDIA	ASIA	7000	3	E583	NA
E403	Steve	Hoffman	M	ASSOCIATE DATA SCIEN...	FINANCE	4	USA	NORTH AMERICA	5000	3	E103	P105
E428	Pete	Allen	M	MANAGER	AUTOMOTIVE	14	GERMANY	EUROPE	11000	4	E001	NULL
E505	Chad	Wilson	M	ASSOCIATE DATA SCIEN...	HEALTHCARE	5	CANADA	NORTH AMERICA	5000	2	E083	P103
E583	Janet	Hale	F	MANAGER	RETAIL	14	COLOMBIA	SOUTH AMERICA	10000	2	E001	NULL
E612	Tracy	Norris	F	MANAGER	RETAIL	13	INDIA	ASIA	8500	4	E001	NULL

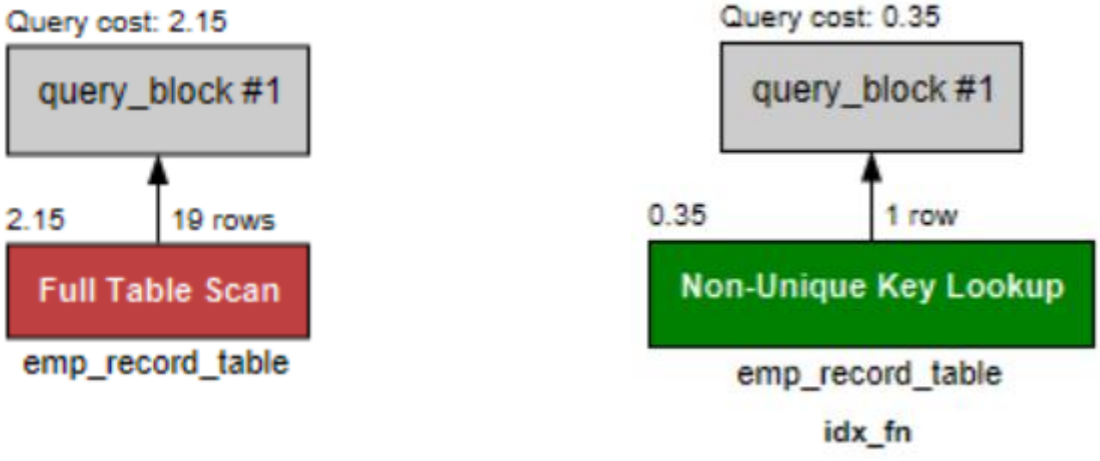
14. Write a query using stored functions in the project table to check whether the job profile assigned to each employee in the data science team matches the organization's set standard.

```
106 •  CALL Check_JobProfiles_Procedure('E1001', @result);
107 •  SELECT @result as Result;
108
```

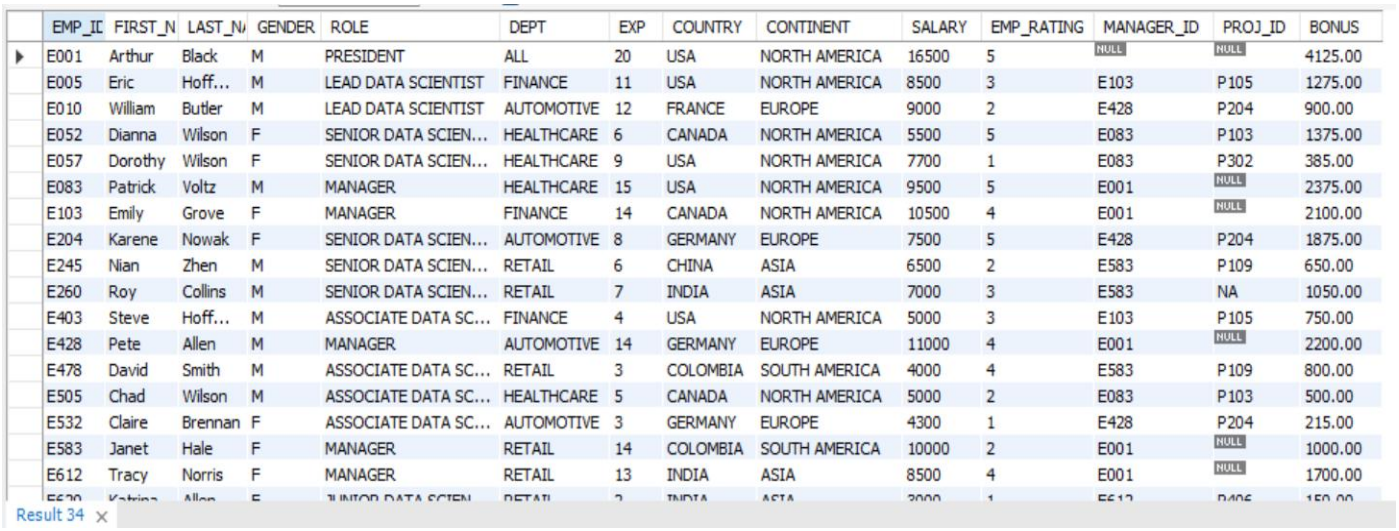
Result Grid | Filter Rows: | Export: | Wrap Cell Cor

Result
MISMATCH

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.



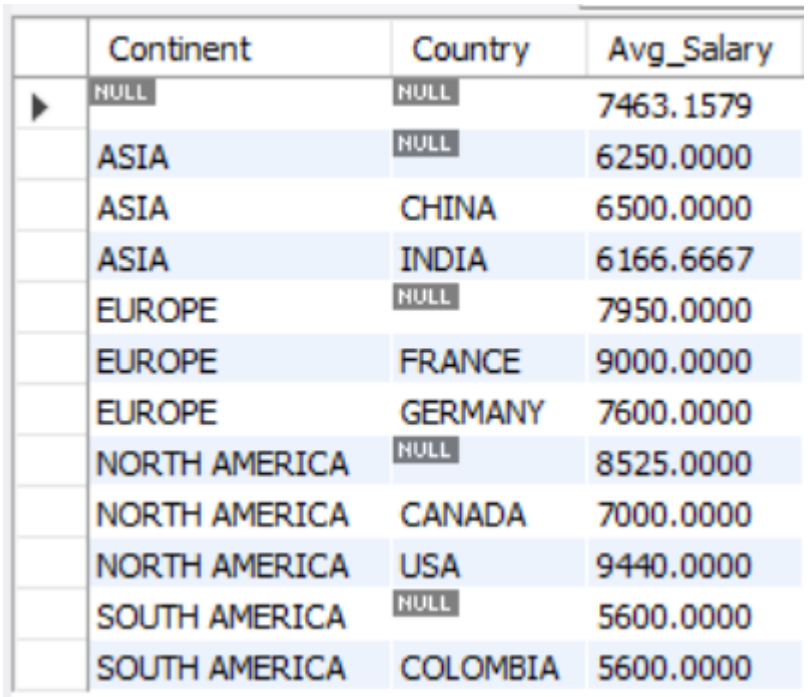
16. Write a query to calculate the bonus for all the employees, based on their ratings and salaries (Use the formula: 5% of salary * employee rating).



EMP_ID	FIRST_N	LAST_N	GENDER	ROLE	DEPT	EXP	COUNTRY	CONTINENT	SALARY	EMP_RATING	MANAGER_ID	PROJ_ID	BONUS
E001	Arthur	Black	M	PRESIDENT	ALL	20	USA	NORTH AMERICA	16500	5	NULL	NULL	4125.00
E005	Eric	Hoff...	M	LEAD DATA SCIENTIST	FINANCE	11	USA	NORTH AMERICA	8500	3	E103	P105	1275.00
E010	William	Butler	M	LEAD DATA SCIENTIST	AUTOMOTIVE	12	FRANCE	EUROPE	9000	2	E428	P204	900.00
E052	Dianna	Wilson	F	SENIOR DATA SCIEN...	HEALTHCARE	6	CANADA	NORTH AMERICA	5500	5	E083	P103	1375.00
E057	Dorothy	Wilson	F	SENIOR DATA SCIEN...	HEALTHCARE	9	USA	NORTH AMERICA	7700	1	E083	P302	385.00
E083	Patrick	Voltz	M	MANAGER	HEALTHCARE	15	USA	NORTH AMERICA	9500	5	E001	NULL	2375.00
E103	Emily	Grove	F	MANAGER	FINANCE	14	CANADA	NORTH AMERICA	10500	4	E001	NULL	2100.00
E204	Karene	Nowak	F	SENIOR DATA SCIEN...	AUTOMOTIVE	8	GERMANY	EUROPE	7500	5	E428	P204	1875.00
E245	Nian	Zhen	M	SENIOR DATA SCIEN...	RETAIL	6	CHINA	ASIA	6500	2	E583	P109	650.00
E260	Roy	Collins	M	SENIOR DATA SCIEN...	RETAIL	7	INDIA	ASIA	7000	3	E583	NA	1050.00
E403	Steve	Hoff...	M	ASSOCIATE DATA SC...	FINANCE	4	USA	NORTH AMERICA	5000	3	E103	P105	750.00
E428	Pete	Allen	M	MANAGER	AUTOMOTIVE	14	GERMANY	EUROPE	11000	4	E001	NULL	2200.00
E478	David	Smith	M	ASSOCIATE DATA SC...	RETAIL	3	COLOMBIA	SOUTH AMERICA	4000	4	E583	P109	800.00
E505	Chad	Wilson	M	ASSOCIATE DATA SC...	HEALTHCARE	5	CANADA	NORTH AMERICA	5000	2	E083	P103	500.00
E532	Claire	Brennan	F	ASSOCIATE DATA SC...	AUTOMOTIVE	3	GERMANY	EUROPE	4300	1	E428	P204	215.00
E583	Janet	Hale	F	MANAGER	RETAIL	14	COLOMBIA	SOUTH AMERICA	10000	2	E001	NULL	1000.00
E612	Tracy	Norris	F	MANAGER	RETAIL	13	INDIA	ASIA	8500	4	E001	NULL	1700.00

Result 34

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



Continent	Country	Avg_Salary
NULL	NULL	7463.1579
ASIA	NULL	6250.0000
ASIA	CHINA	6500.0000
ASIA	INDIA	6166.6667
EUROPE	NULL	7950.0000
EUROPE	FRANCE	9000.0000
EUROPE	GERMANY	7600.0000
NORTH AMERICA	NULL	8525.0000
NORTH AMERICA	CANADA	7000.0000
NORTH AMERICA	USA	9440.0000
SOUTH AMERICA	NULL	5600.0000
SOUTH AMERICA	COLOMBIA	5600.0000

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