

Project 1 ScienceQtech 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.

SQL Code

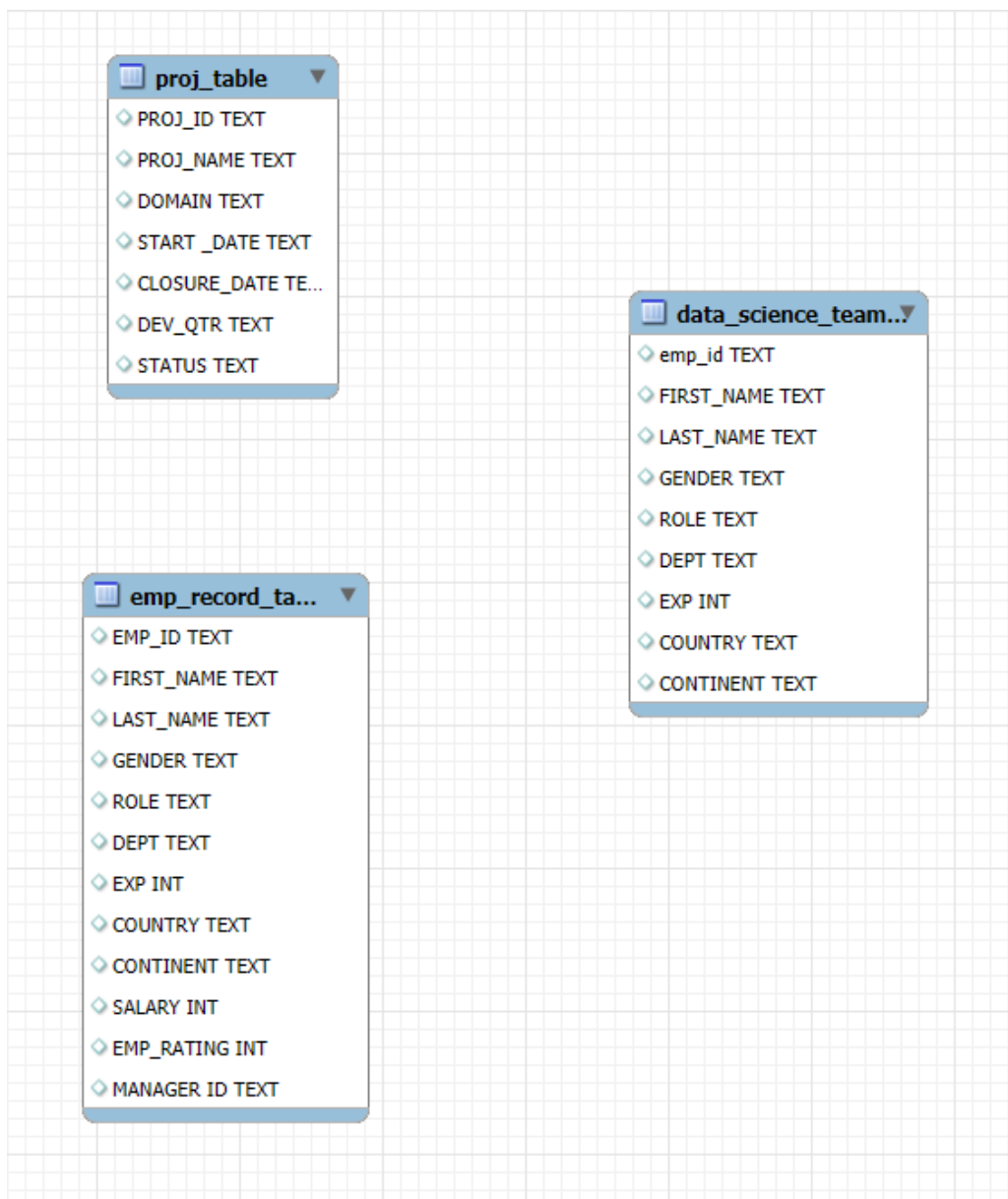
Create database employees;

Use employees;

After right-clicking on the employee in schemas and selecting table data import wizard, the required 3 tables were imported.

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

Using database >> reverse engineer, the below ER diagram was generated



#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.

SQL CODE

```
Select emp_id, FIRST_NAME, LAST_NAME,
GENDER, DEPT
From emp_record_table
Order by DEPT;
```

	emp_id	FIRST_NAME	LAST_NAME	GENDER	DEPT
▶	E001	Arthur	Black	M	ALL
	E204	Karene	Nowak	F	AUTOMOTIVE
	E010	William	Butler	M	AUTOMOTIVE
	E532	Claire	Brennan	F	AUTOMOTIVE
	E428	Pete	Allen	M	AUTOMOTIVE
	E403	Steve	Hoffman	M	FINANCE
	E005	Eric	Hoffman	M	FINANCE
	E103	Emily	Grove	F	FINANCE
	E057	Dorothy	Wilson	F	HEALTHCARE
	E052	Dianna	Wilson	F	HEALTHCARE
	E505	Chad	Wilson	M	HEALTHCARE
	E083	Patrick	Voltz	M	HEALTHCARE
	E260	Roy	Collins	M	RETAIL
	E245	Nian	Zhen	M	RETAIL
	E620	Katrina	Allen	F	RETAIL
	E640	Jenifer	Jhones	F	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:

- a. less than two b. greater than four c. between two and four

SQL CODE

- a. Emp_Rating is less than 2

```
SELECT EMP_ID, FIRST_NAME, LAST_NAME, GENDER, DEPT,EMP_RATING
FROM emp_record_table
WHERE EMP_RATING <2
ORDER BY DEPT, EMP_RATING DESC;
```

EMP_ID	FIRST_NAME	LAST_NAME	GENDER	DEPT	EMP_RATING
E532	Claire	Brennan	F	AUTOMOTIVE	1
E057	Dorothy	Wilson	F	HEALTHCARE	1
E620	Katrina	Allen	F	RETAIL	1

- b. Emp_Rating is greater than 4

```
SELECT EMP_ID, FIRST_NAME, LAST_NAME, GENDER, DEPT, EMP_RATING
FROM emp_record_table
WHERE EMP_RATING >4
ORDER BY DEPT, EMP_RATING DESC;
```

EMP_ID	FIRST_NAME	LAST_NAME	GENDER	DEPT	EMP_RATING
E001	Arthur	Black	M	ALL	5
E204	Karene	Nowak	F	AUTOMOTIVE	5
E052	Dianna	Wilson	F	HEALTHCARE	5
E083	Patrick	Voltz	M	HEALTHCARE	5

- c. Emp_Rating is between 2 and 4

```
SELECT EMP_ID, FIRST_NAME, LAST_NAME,
GENDER, DEPT,EMP_RATING
FROM emp_record_table
WHERE EMP_RATING BETWEEN 2 AND 4
ORDER BY DEPT, EMP_RATING DESC;
```

EMP_ID	FIRST_NAME	LAST_NAME	GENDER	DEPT	EMP_RATING
E428	Pete	Allen	M	AUTOMOTIVE	4
E010	William	Butler	M	AUTOMOTIVE	2
E103	Emily	Grove	F	FINANCE	4
E403	Steve	Hoffman	M	FINANCE	3
E005	Eric	Hoffman	M	FINANCE	3
E505	Chad	Wilson	M	HEALTHCARE	2
E640	Jenifer	Jhones	F	RETAIL	4
E478	David	Smith	M	RETAIL	4
E612	Tracy	Norris	F	RETAIL	4
E260	Roy	Collins	M	RETAIL	3
E245	Nian	Zhen	M	RETAIL	2
E583	Janet	Hale	F	RETAIL	2

#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.

SQL CODE

```
SELECT concat(FIRST_NAME, " ", LAST_NAME) AS NAME
FROM emp_record_table
WHERE DEPT = 'FINANCE';
```

NAME
Steve Hoffman
Eric Hoffman
Emily Grove

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

```
SELECT mgr.emp_id, mgr.first_name, mgr.last_name, mgr.role, rep.emp_count
FROM emp_record_table mgr,
( SELECT manager_id, COUNT(*) emp_count
  FROM
    emp_record_table
 GROUP BY manager_id
) rep
WHERE
  mgr.emp_id = rep.manager_id
ORDER BY emp_count desc;
```

emp_id	first_name	last_name	role	emp_count
E001	Arthur	Black	PRESIDENT	6
E583	Janet	Hale	MANAGER	3
E428	Pete	Allen	MANAGER	3
E083	Patrick	Voltz	MANAGER	3
E612	Tracy	Norris	MANAGER	2
E103	Emily	Grove	MANAGER	2

#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.

SQL CODE

```
SELECT *
FROM emp_record_table
WHERE dept = 'healthcare'
UNION
SELECT *
FROM emp_record_table
WHERE dept = 'finance';
```

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

#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.

SQL CODE

Select EMP_ID, FIRST_NAME, LAST_NAME, ROLE, DEPT, EMP_RATING, max(emp_rating) over (partition by dept) AS max_salary_by_dept
FROM emp_record_table;

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

#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.

SQL CODE

SELECT emp_id, first_name, last_name, role, salary, min(salary) over (partition by role) AS min_salary_by_role, max(salary) over (partition by role) AS max_salary_by_role
FROM emp_record_table;

emp_id	first_name	last_name	role	salary	min_salary_by_role	max_salary_by_role
E403	Steve	Hoffman	ASSOCIATE DATA SCIENTIST	5000	4000	5000
E478	David	Smith	ASSOCIATE DATA SCIENTIST	4000	4000	5000
E505	Chad	Wilson	ASSOCIATE DATA SCIENTIST	5000	4000	5000
E532	Claire	Brennan	ASSOCIATE DATA SCIENTIST	4300	4000	5000
E620	Katrina	Allen	JUNIOR DATA SCIENTIST	3000	2800	3000
E640	Jenifer	Jhones	JUNIOR DATA SCIENTIST	2800	2800	3000
E010	William	Butler	LEAD DATA SCIENTIST	9000	8500	9000
E005	Eric	Hoffman	LEAD DATA SCIENTIST	8500	8500	9000
E083	Patrick	Voltz	MANAGER	9500	8500	11000
E583	Janet	Hale	MANAGER	10000	8500	11000
E103	Emily	Grove	MANAGER	10500	8500	11000
E612	Tracy	Norris	MANAGER	8500	8500	11000
E428	Pete	Allen	MANAGER	11000	8500	11000
E001	Arthur	Black	PRESIDENT	16500	16500	16500
E260	Roy	Collins	SENIOR DATA SCIENTIST	7000	5500	7700
E245	Nian	Zhen	SENIOR DATA SCIENTIST	6500	5500	7700
E204	Karene	Nowak	SENIOR DATA SCIENTIST	7500	5500	7700
E057	Dorothy	Wilson	SENIOR DATA SCIENTIST	7700	5500	7700
E052	Dianna	Wilson	SENIOR DATA SCIENTIST	5500	5500	7700

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

SQL CODE

```
SELECT *, rank() over (order by exp DESC) AS EMP_RANK
FROM emp_record_table;
```

	EMP_ID	FIRST_NAME	LAST_NAME	GENDER	ROLE	DEPT	EXP	COUNTRY	CONTINENT	SALARY	EMP_RATING	MANAGER_ID	EMP_RANK
▶	E001	Arthur	Black	M	PRESIDENT	ALL	20	USA	NORTH AMERICA	16500	5	E001	1
	E083	Patrick	Voltz	M	MANAGER	HEALTHCARE	15	USA	NORTH AMERICA	9500	5	E001	2
	E583	Janet	Hale	F	MANAGER	RETAIL	14	COLOMBIA	SOUTH AMERICA	10000	2	E001	3
	E103	Emily	Grove	F	MANAGER	FINANCE	14	CANADA	NORTH AMERICA	10500	4	E001	3
	E428	Pete	Allen	M	MANAGER	AUTOMOTIVE	14	GERMANY	EUROPE	11000	4	E001	3
	E612	Tracy	Norris	F	MANAGER	RETAIL	13	INDIA	ASIA	8500	4	E001	6
	E010	William	Butler	M	LEAD DATA SCIENTIST	AUTOMOTIVE	12	FRANCE	EUROPE	9000	2	E428	7
	E005	Eric	Hoffman	M	LEAD DATA SCIENTIST	FINANCE	11	USA	NORTH AMERICA	8500	3	E103	8
	E057	Dorothy	Wilson	F	SENIOR DATA SCIENTIST	HEALTHCARE	9	USA	NORTH AMERICA	7700	1	E083	9
	E204	Karene	Nowak	F	SENIOR DATA SCIENTIST	AUTOMOTIVE	8	GERMANY	EUROPE	7500	5	E428	10
	E260	Roy	Collins	M	SENIOR DATA SCIENTIST	RETAIL	7	INDIA	ASIA	7000	3	E583	11
	E245	Nian	Zhen	M	SENIOR DATA SCIENTIST	RETAIL	6	CHINA	ASIA	6500	2	E583	12
	E052	Dianna	Wilson	F	SENIOR DATA SCIENTIST	HEALTHCARE	6	CANADA	NORTH AMERICA	5500	5	E083	12
	E505	Chad	Wilson	M	ASSOCIATE DATA SCIENTIST	HEALTHCARE	5	CANADA	NORTH AMERICA	5000	2	E083	14
	E403	Steve	Hoffman	M	ASSOCIATE DATA SCIENTIST	FINANCE	4	USA	NORTH AMERICA	5000	3	E103	15
	E478	David	Smith	M	ASSOCIATE DATA SCIENTIST	RETAIL	3	COLOMBIA	SOUTH AMERICA	4000	4	E583	16
	E532	Claire	Brennan	F	ASSOCIATE DATA SCIENTIST	AUTOMOTIVE	3	GERMANY	EUROPE	4300	1	E428	16
	E620	Katrina	Allen	F	JUNIOR DATA SCIENTIST	RETAIL	2	INDIA	ASIA	3000	1	E612	18
	E640	Jenifer	Jhones	F	JUNIOR DATA SCIENTIST	RETAIL	1	COLOMBIA	SOUTH AMERICA	2800	4	E612	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.

SQL CODE

```
CREATE VIEW emp_countries AS
SELECT emp_id, first_name, LAST_NAME, Country
FROM emp_record_table
WHERE salary > 6000
ORDER BY COUNTRY ASC;

SELECT *
FROM emp_countries;
```

emp_id	first_name	LAST_NAME	Country
E103	Emily	Grove	CANADA
E245	Nian	Zhen	CHINA
E583	Janet	Hale	COLOMBIA
E010	William	Butler	FRANCE
E204	Karene	Nowak	GERMANY
E428	Pete	Allen	GERMANY
E260	Roy	Collins	INDIA
E612	Tracy	Norris	INDIA
E057	Dorothy	Wilson	USA
E005	Eric	Hoffman	USA
E083	Patrick	Voltz	USA
E001	Arthur	Black	USA

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

SQL CODE

```
SELECT emp_id, first_name, last_name, exp, role, dept, country
FROM (SELECT * FROM emp_record_table WHERE exp > 10 ORDER BY exp desc) as
exp_more_than_10;
```

EMP_ID	FIRST_NAME	LAST_NAME	EXP	ROLE	DEPT	COUNTRY
E001	Arthur	Black	20	PRESIDENT	ALL	USA
E083	Patrick	Voltz	15	MANAGER	HEALTHCARE	USA
E583	Janet	Hale	14	MANAGER	RETAIL	COLOMBIA
E103	Emily	Grove	14	MANAGER	FINANCE	CANADA
E428	Pete	Allen	14	MANAGER	AUTOMOTIVE	GERMANY
E612	Tracy	Norris	13	MANAGER	RETAIL	INDIA
E010	William	Butler	12	LEAD DATA SCIENTIST	AUTOMOTIVE	FRANCE
E005	Eric	Hoffman	11	LEAD DATA SCIENTIST	FINANCE	USA

#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.

SQL CODE

DELIMITER &&

Create Procedure emp_exp_over_3yrs()

BEGIN

SELECT *

FROM emp_record_table

WHERE EXP > 3;

END &&

CALL emp_exp_over_3yrs();

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

#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'.

SQL CODE

```
DELIMITER $$
Create Function emp_job_profile(experience INT)
Returns VARCHAR(40) DETERMINISTIC
BEGIN
    Declare job_profile VARCHAR(40);
    IF experience <= 2 THEN
        SET job_profile = 'JUNIOR DATA SCIENTIST';
    ELSEIF experience > 2 AND experience <= 5 THEN
        SET job_profile = 'ASSOCIATE DATA SCIENTIST';
    ELSEIF experience > 5 AND experience <= 10 THEN
        SET job_profile = 'SENIOR DATA SCIENTIST';
    ELSEIF experience > 10 AND experience <= 12 THEN
        SET job_profile = 'LEAD DATA SCIENTIST';
    ELSEIF experience > 12 AND experience <= 16 THEN
        SET job_profile = 'MANAGER';
    ELSE
        SET job_profile = 'UNKNOWN';
    End IF;
    Return job_profile;
END $$
DELIMITER;
```

```
Select exp, role, emp_job_profile(exp)
from data_science_team
order by exp;
```

exp	role	emp_job_profile(exp)
1	JUNIOR DATA SCIENTIST	JUNIOR DATA SCIENTIST
2	JUNIOR DATA SCIENTIST	JUNIOR DATA SCIENTIST
3	ASSOCIATE DATA SCIENTIST	ASSOCIATE DATA SCIENTIST
3	ASSOCIATE DATA SCIENTIST	ASSOCIATE DATA SCIENTIST
4	ASSOCIATE DATA SCIENTIST	ASSOCIATE DATA SCIENTIST
5	ASSOCIATE DATA SCIENTIST	ASSOCIATE DATA SCIENTIST
6	SENIOR DATA SCIENTIST	SENIOR DATA SCIENTIST
6	SENIOR DATA SCIENTIST	SENIOR DATA SCIENTIST
7	SENIOR DATA SCIENTIST	SENIOR DATA SCIENTIST
8	SENIOR DATA SCIENTIST	SENIOR DATA SCIENTIST
9	SENIOR DATA SCIENTIST	SENIOR DATA SCIENTIST
11	LEAD DATA SCIENTIST	LEAD DATA SCIENTIST
12	LEAD DATA SCIENTIST	LEAD DATA SCIENTIST

#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.

SQL CODE

```
Create Index first_name_idx
ON emp_record_table(FIRST_NAME(100));
```

```
SELECT *
FROM emp_record_table
WHERE first_name = 'Eric';
```

EMP_ID	FIRST_NAME	LAST_NAME	GENDER	ROLE	DEPT	EXP	COUNTRY	CONTINENT	SALARY	EMP_RATING	MANAGER_ID
E005	Eric	Hoffman	M	LEAD DATA SCIENTIST	FINANCE	11	USA	NORTH AMERICA	8500	3	E103

#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).

SQL CODE

```
SELECT *, (0.05*salary)*emp_rating AS Bonus
FROM emp_record_table
ORDER BY Bonus DESC;
```

EMP_ID	FIRST_NAME	LAST_NAME	GENDER	ROLE	DEPT	EXP	COUNTRY	CONTINENT	SALARY	EMP_RATING	MANAGER_ID	Bonus
E001	Arthur	Black	M	PRESIDENT	ALL	20	USA	NORTH AMERICA	16500	5	E001	4125.00
E083	Patrick	Voltz	M	MANAGER	HEALTHCARE	15	USA	NORTH AMERICA	9500	5	E001	2375.00
E428	Pete	Allen	M	MANAGER	AUTOMOTIVE	14	GERMANY	EUROPE	11000	4	E001	2200.00
E103	Emily	Grove	F	MANAGER	FINANCE	14	CANADA	NORTH AMERICA	10500	4	E001	2100.00
E204	Karene	Nowak	F	SENIOR DATA SCIENTIST	AUTOMOTIVE	8	GERMANY	EUROPE	7500	5	E428	1875.00
E612	Tracy	Norris	F	MANAGER	RETAIL	13	INDIA	ASIA	8500	4	E001	1700.00
E052	Dianna	Wilson	F	SENIOR DATA SCIENTIST	HEALTHCARE	6	CANADA	NORTH AMERICA	5500	5	E083	1375.00
E005	Eric	Hoffman	M	LEAD DATA SCIENTIST	FINANCE	11	USA	NORTH AMERICA	8500	3	E103	1275.00
E260	Roy	Collins	M	SENIOR DATA SCIENTIST	RETAIL	7	INDIA	ASIA	7000	3	E583	1050.00
E583	Janet	Hale	F	MANAGER	RETAIL	14	COLOMBIA	SOUTH AMERICA	10000	2	E001	1000.00
E010	William	Butler	M	LEAD DATA SCIENTIST	AUTOMOTIVE	12	FRANCE	EUROPE	9000	2	E428	900.00
E478	David	Smith	M	ASSOCIATE DATA SCIENTIST	RETAIL	3	COLOMBIA	SOUTH AMERICA	4000	4	E583	800.00
E403	Steve	Hoffman	M	ASSOCIATE DATA SCIENTIST	FINANCE	4	USA	NORTH AMERICA	5000	3	E103	750.00
E245	Nian	Zhen	M	SENIOR DATA SCIENTIST	RETAIL	6	CHINA	ASIA	6500	2	E583	650.00
E640	Jenifer	Jhones	F	JUNIOR DATA SCIENTIST	RETAIL	1	COLOMBIA	SOUTH AMERICA	2800	4	E612	560.00
E505	Chad	Wilson	M	ASSOCIATE DATA SCIENTIST	HEALTHCARE	5	CANADA	NORTH AMERICA	5000	2	E083	500.00
E057	Dorothy	Wilson	F	SENIOR DATA SCIENTIST	HEALTHCARE	9	USA	NORTH AMERICA	7700	1	E083	385.00
E532	Claire	Brennan	F	ASSOCIATE DATA SCIENTIST	AUTOMOTIVE	3	GERMANY	EUROPE	4300	1	E428	215.00
E620	Katrina	Allen	F	JUNIOR DATA SCIENTIST	RETAIL	2	INDIA	ASIA	3000	1	E612	150.00

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

SQL CODE

```
SELECT *, avg(salary) over (partition by continent, country) AS Avg_salary_by_continent_country
FROM emp_record_table
ORDER BY continent, country;
```

EMP_ID	FIRST_NAME	LAST_NAME	GENDER	ROLE	DEPT	EXP	COUNTRY	CONTINENT	SALARY	EMP_RATING	MANAGER_ID	Avg_salary_by_continent_country
E245	Nian	Zhen	M	SENIOR DATA SCIENTIST	RETAIL	6	CHINA	ASIA	6500	2	E583	6500.0000
E260	Roy	Collins	M	SENIOR DATA SCIENTIST	RETAIL	7	INDIA	ASIA	7000	3	E583	6166.6667
E620	Katrina	Allen	F	JUNIOR DATA SCIENTIST	RETAIL	2	INDIA	ASIA	3000	1	E612	6166.6667
E612	Tracy	Norris	F	MANAGER	RETAIL	13	INDIA	ASIA	8500	4	E001	6166.6667
E010	William	Butler	M	LEAD DATA SCIENTIST	AUTOMOTIVE	12	FRANCE	EUROPE	9000	2	E428	9000.0000
E204	Karene	Nowak	F	SENIOR DATA SCIENTIST	AUTOMOTIVE	8	GERMANY	EUROPE	7500	5	E428	7600.0000
E532	Claire	Brennan	F	ASSOCIATE DATA SCIENTIST	AUTOMOTIVE	3	GERMANY	EUROPE	4300	1	E428	7600.0000
E428	Pete	Allen	M	MANAGER	AUTOMOTIVE	14	GERMANY	EUROPE	11000	4	E001	7600.0000
E052	Dianna	Wilson	F	SENIOR DATA SCIENTIST	HEALTHCARE	6	CANADA	NORTH AMERICA	5500	5	E083	7000.0000
E505	Chad	Wilson	M	ASSOCIATE DATA SCIENTIST	HEALTHCARE	5	CANADA	NORTH AMERICA	5000	2	E083	7000.0000
E103	Emily	Grove	F	MANAGER	FINANCE	14	CANADA	NORTH AMERICA	10500	4	E001	7000.0000
E403	Steve	Hoffman	M	ASSOCIATE DATA SCIENTIST	FINANCE	4	USA	NORTH AMERICA	5000	3	E103	9440.0000
E057	Dorothy	Wilson	F	SENIOR DATA SCIENTIST	HEALTHCARE	9	USA	NORTH AMERICA	7700	1	E083	9440.0000
E005	Eric	Hoffman	M	LEAD DATA SCIENTIST	FINANCE	11	USA	NORTH AMERICA	8500	3	E103	9440.0000
E083	Patrick	Voltz	M	MANAGER	HEALTHCARE	15	USA	NORTH AMERICA	9500	5	E001	9440.0000
E001	Arthur	Black	M	PRESIDENT	ALL	20	USA	NORTH AMERICA	16500	5	E001	9440.0000
E640	Jenifer	Jhones	F	JUNIOR DATA SCIENTIST	RETAIL	1	COLOMBIA	SOUTH AMERICA	2800	4	E612	5600.0000
E478	David	Smith	M	ASSOCIATE DATA SCIENTIST	RETAIL	3	COLOMBIA	SOUTH AMERICA	4000	4	E583	5600.0000
E583	Janet	Hale	F	MANAGER	RETAIL	14	COLOMBIA	SOUTH AMERICA	10000	2	E001	5600.0000