

Submitted by Iti Aggarwal

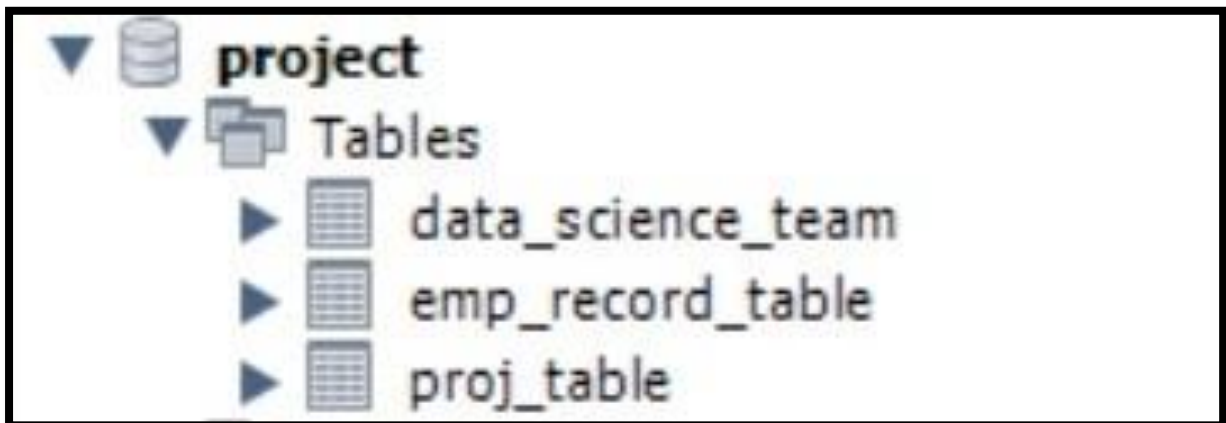
Title :ScienceQtech Employee Performance Mapping

Submitted By: Iti Aggarwal

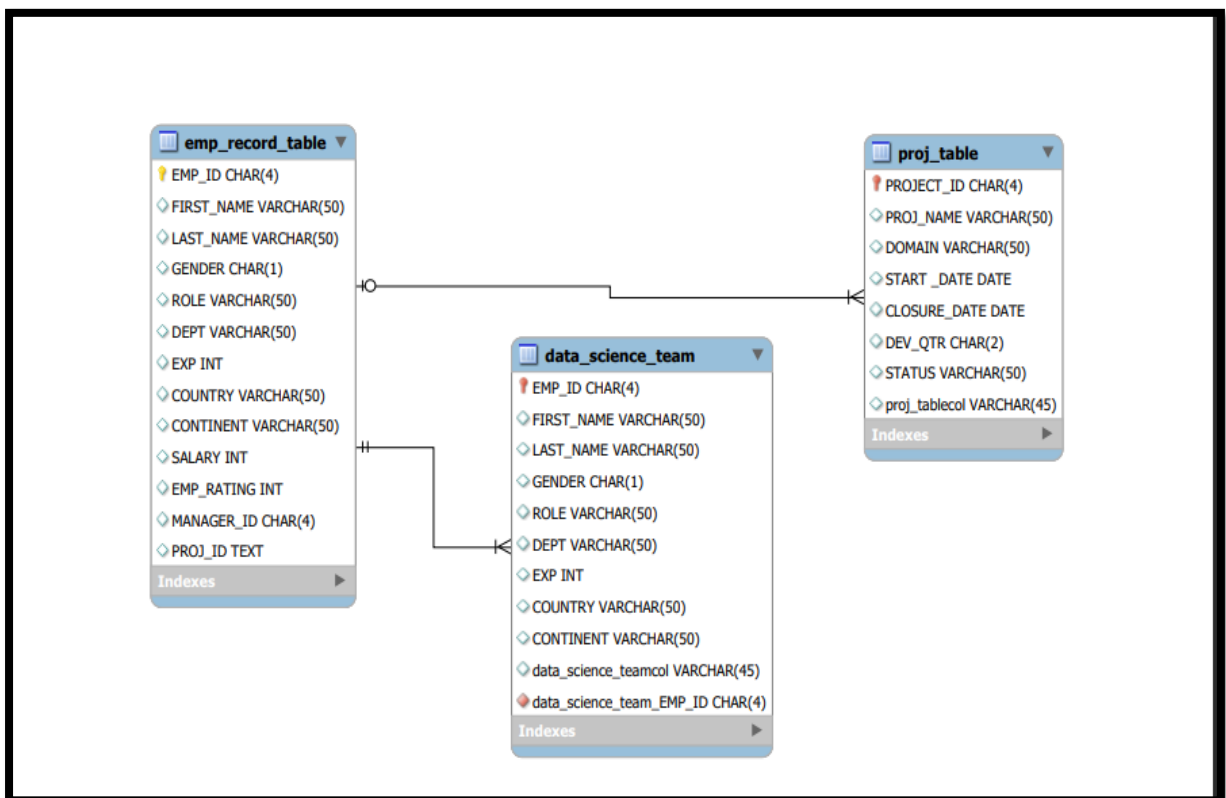
Submitted to : Simplilearn Data Analytics IIT Kanpur

## Screenshots

Ans 1.




Ans 2.



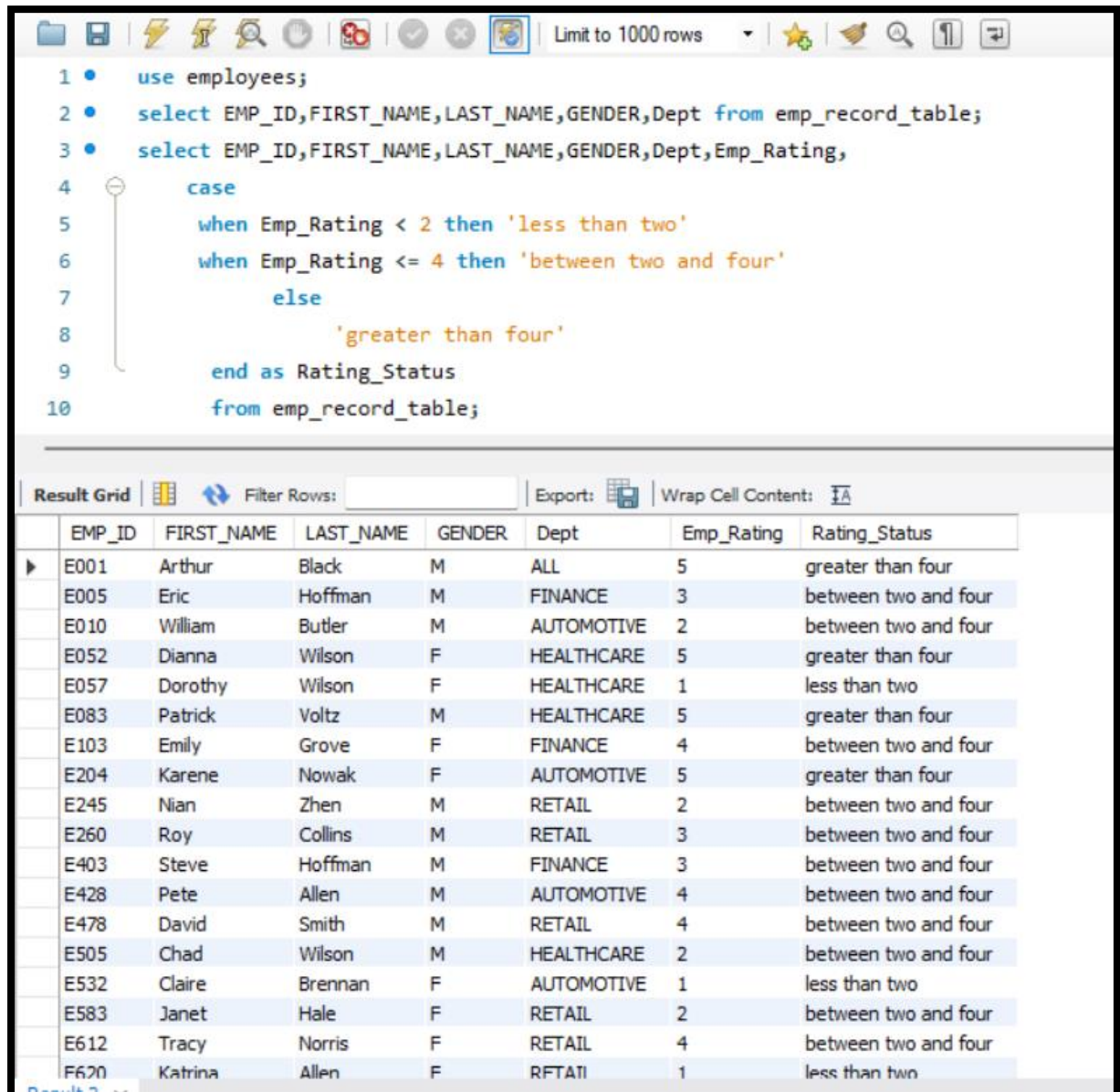
Ans 3.

```
1 • use employees;  
2 • select EMP_ID,FIRST_NAME,LAST_NAME,GENDER,Dept from emp_record_table;  
3
```

Result Grid   Filter Rows:  Export:  Wrap Cell Content: 

	EMP_ID	FIRST_NAME	LAST_NAME	GENDER	Dept
	E001	Arthur	Black	M	ALL
	E005	Eric	Hoffman	M	FINANCE
	E010	William	Butler	M	AUTOMOTIVE
	E052	Dianna	Wilson	F	HEALTHCARE
	E057	Dorothy	Wilson	F	HEALTHCARE
	E083	Patrick	Voltz	M	HEALTHCARE
	E103	Emily	Grove	F	FINANCE
	E204	Karene	Nowak	F	AUTOMOTIVE
	E245	Nian	Zhen	M	RETAIL
	E260	Roy	Collins	M	RETAIL
	E403	Steve	Hoffman	M	FINANCE
	E428	Pete	Allen	M	AUTOMOTIVE
	E478	David	Smith	M	RETAIL
	E505	Chad	Wilson	M	HEALTHCARE
	E532	Claire	Brennan	F	AUTOMOTIVE
	E583	Janet	Hale	F	RETAIL
	E612	Tracy	Norris	F	RETAIL
	E620	Katrina	Allen	F	RETAIL
	E640	Jenifer	Jhones	F	RETAIL

Ans 4.



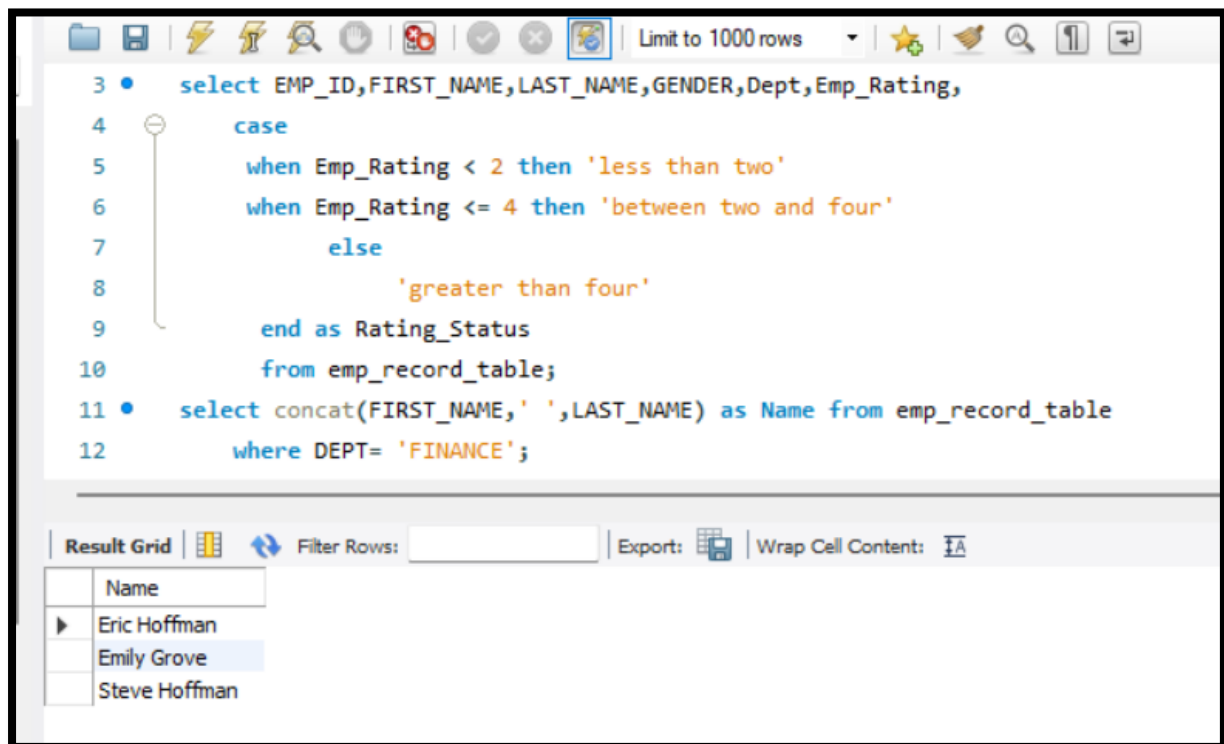
```

1 • use employees;
2 • select EMP_ID, FIRST_NAME, LAST_NAME, GENDER, Dept from emp_record_table;
3 • select EMP_ID, FIRST_NAME, LAST_NAME, GENDER, Dept, Emp_Rating,
4     case
5         when Emp_Rating < 2 then 'less than two'
6         when Emp_Rating <= 4 then 'between two and four'
7         else
8             'greater than four'
9         end as Rating_Status
10    from emp_record_table;

```

EMP_ID	FIRST_NAME	LAST_NAME	GENDER	Dept	Emp_Rating	Rating_Status
E001	Arthur	Black	M	ALL	5	greater than four
E005	Eric	Hoffman	M	FINANCE	3	between two and four
E010	William	Butler	M	AUTOMOTIVE	2	between two and four
E052	Dianna	Wilson	F	HEALTHCARE	5	greater than four
E057	Dorothy	Wilson	F	HEALTHCARE	1	less than two
E083	Patrick	Voltz	M	HEALTHCARE	5	greater than four
E103	Emily	Grove	F	FINANCE	4	between two and four
E204	Karene	Nowak	F	AUTOMOTIVE	5	greater than four
E245	Nian	Zhen	M	RETAIL	2	between two and four
E260	Roy	Collins	M	RETAIL	3	between two and four
E403	Steve	Hoffman	M	FINANCE	3	between two and four
E428	Pete	Allen	M	AUTOMOTIVE	4	between two and four
E478	David	Smith	M	RETAIL	4	between two and four
E505	Chad	Wilson	M	HEALTHCARE	2	between two and four
E532	Claire	Brennan	F	AUTOMOTIVE	1	less than two
E583	Janet	Hale	F	RETAIL	2	between two and four
E612	Tracy	Norris	F	RETAIL	4	between two and four
F620	Katrina	Allen	F	RFTAI	1	less than two

Ans 5.



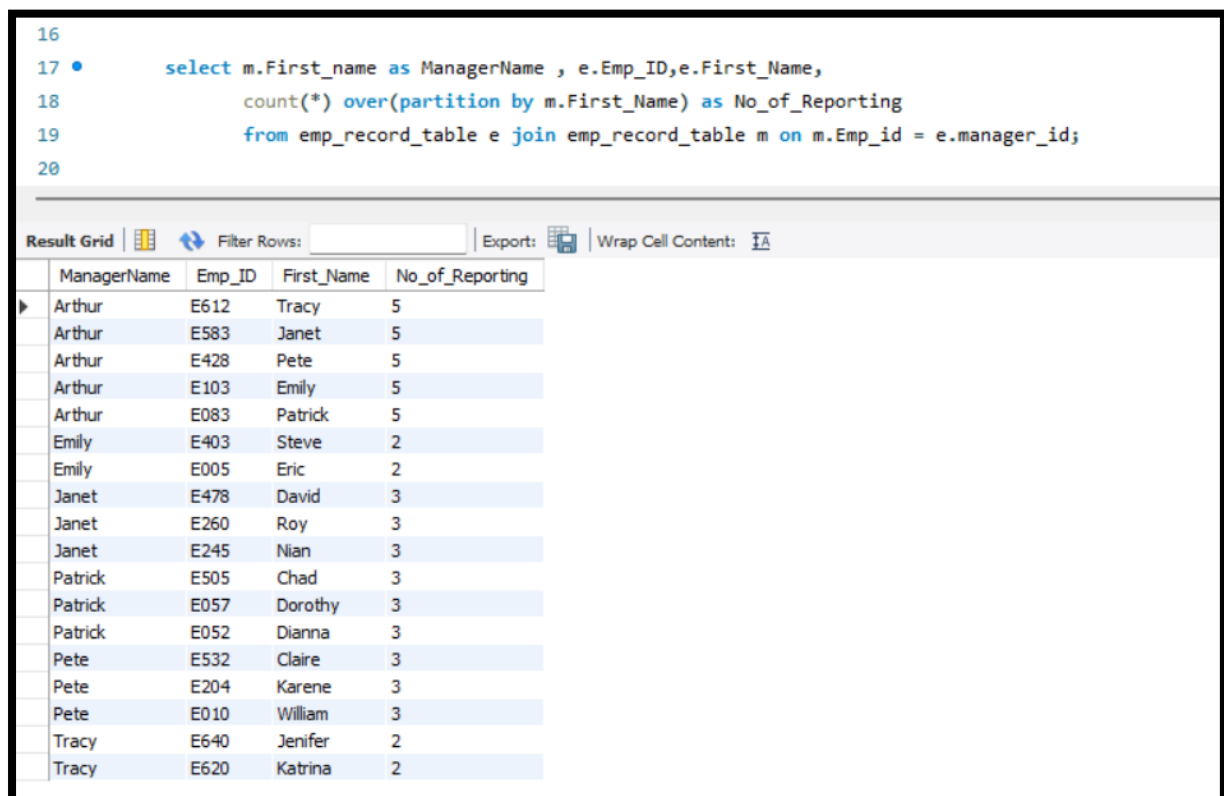
```

3 • select EMP_ID, FIRST_NAME, LAST_NAME, GENDER, Dept, Emp_Rating,
4     case
5         when Emp_Rating < 2 then 'less than two'
6         when Emp_Rating <= 4 then 'between two and four'
7         else
8             'greater than four'
9     end as Rating_Status
10    from emp_record_table;
11 • select concat(FIRST_NAME, ' ', LAST_NAME) as Name from emp_record_table
12    where DEPT= 'FINANCE';
  
```

Result Grid

Name
Eric Hoffman
Emily Grove
Steve Hoffman

Ans 6.



```

16
17 • select m.First_name as ManagerName , e.Emp_ID, e.First_Name,
18         count(*) over(partition by m.First_Name) as No_of_Reporting
19         from emp_record_table e join emp_record_table m on m.Emp_id = e.manager_id;
20
  
```

Result Grid

ManagerName	Emp_ID	First_Name	No_of_Reporting
Arthur	E612	Tracy	5
Arthur	E583	Janet	5
Arthur	E428	Pete	5
Arthur	E103	Emily	5
Arthur	E083	Patrick	5
Emily	E403	Steve	2
Emily	E005	Eric	2
Janet	E478	David	3
Janet	E260	Roy	3
Janet	E245	Nian	3
Patrick	E505	Chad	3
Patrick	E057	Dorothy	3
Patrick	E052	Dianna	3
Pete	E532	Claire	3
Pete	E204	Karene	3
Pete	E010	William	3
Tracy	E640	Jenifer	2
Tracy	E620	Katrina	2

Ans 7.

```

17
18 • select * from emp_record_table where dept='healthcare'
19 union
20 select * from emp_record_table where dept='finance';
21
22

```

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
▶	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

Ans 8.

```

24
25 • select Emp_ID,First_Name,Last_Name,Gender,DEPT,Emp_Rating,
26         max(Emp_Rating) over(partition by DEPT) as Max_Rating
27         from emp_record_table;
28
29

```

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

	Emp_ID	First_Name	Last_Name	Gender	DEPT	Emp_Rating	Max_Rating
▶	E001	Arthur	Black	M	ALL	5	5
	E010	William	Butler	M	AUTOMOTIVE	2	5
	E204	Karene	Nowak	F	AUTOMOTIVE	5	5
	E428	Pete	Allen	M	AUTOMOTIVE	4	5
	E532	Claire	Brennan	F	AUTOMOTIVE	1	5
	E005	Eric	Hoffman	M	FINANCE	3	4
	E103	Emily	Grove	F	FINANCE	4	4
	E403	Steve	Hoffman	M	FINANCE	3	4
	E052	Dianna	Wilson	F	HEALTHCARE	5	5
	E057	Dorothy	Wilson	F	HEALTHCARE	1	5
	E083	Patrick	Voltz	M	HEALTHCARE	5	5
	E505	Chad	Wilson	M	HEALTHCARE	2	5
	E245	Nian	Zhen	M	RETAIL	2	4
	E260	Roy	Collins	M	RETAIL	3	4
	E478	David	Smith	M	RETAIL	4	4
	E583	Janet	Hale	F	RETAIL	2	4
	E612	Tracy	Norris	F	RETAIL	4	4

Ans 9.

```

27
28 • select role,min(salary) as Min_salary , max(salary) as Max_salary from emp_record_table
29 group by role;
30

```

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

Ans 10.

```

33 • select *, dense_rank() over (order by exp desc) as Ranking from emp_record_table;

```

EMP_ID	FIRST_NAME	LAST_NAME	GENDER	ROLE	DEPT	EXP	COUNTRY	CONTINENT	SALARY	EMP_RATING	MANAGER_ID	PROJ_ID	Ranking
E001	Arthur	Black	M	PRESIDENT	ALL	20	USA	NORTH AMERICA	16500	5	NULL	NULL	1
E083	Patrick	Voltz	M	MANAGER	HEALTHCARE	15	USA	NORTH AMERICA	9500	5	E001	NULL	2
E103	Emily	Grove	F	MANAGER	FINANCE	14	CANADA	NORTH AMERICA	10500	4	E001	NULL	3
E428	Pete	Allen	M	MANAGER	AUTOMOTIVE	14	GERMANY	EUROPE	11000	4	E001	NULL	3
E583	Janet	Hale	F	MANAGER	RETAIL	14	COLOMBIA	SOUTH AMERICA	10000	2	E001	NULL	3
E612	Tracy	Norris	F	MANAGER	RETAIL	13	INDIA	ASIA	8500	4	E001	NULL	4
E010	William	Butler	M	LEAD DATA SCIENTIST	AUTOMOTIVE	12	FRANCE	EUROPE	9000	2	E428	P204	5
E005	Eric	Hoffman	M	LEAD DATA SCIENTIST	FINANCE	11	USA	NORTH AMERICA	8500	3	E103	P105	6
E057	Dorothy	Wilson	F	SENIOR DATA SCIENTIST	HEALTHCARE	9	USA	NORTH AMERICA	7700	1	E083	P302	7
E204	Karene	Nowak	F	SENIOR DATA SCIENTIST	AUTOMOTIVE	8	GERMANY	EUROPE	7500	5	E428	P204	8
E260	Roy	Collins	M	SENIOR DATA SCIENTIST	RETAIL	7	INDIA	ASIA	7000	3	E583	NA	9
E052	Dianna	Wilson	F	SENIOR DATA SCIENTIST	HEALTHCARE	6	CANADA	NORTH AMERICA	5500	5	E083	P103	10
E245	Nian	Zhen	M	SENIOR DATA SCIENTIST	RETAIL	6	CHINA	ASIA	6500	2	E583	P109	10
E505	Chad	Wilson	M	ASSOCIATE DATA SCIENTIST	HEALTHCARE	5	CANADA	NORTH AMERICA	5000	2	E083	P103	11
E403	Steve	Hoffman	M	ASSOCIATE DATA SCIENTIST	FINANCE	4	USA	NORTH AMERICA	5000	3	E103	P105	12
E478	David	Smith	M	ASSOCIATE DATA SCIENTIST	RETAIL	3	COLOMBIA	SOUTH AMERICA	4000	4	E583	P109	13
E532	Claire	Brennan	F	ASSOCIATE DATA SCIENTIST	AUTOMOTIVE	3	GERMANY	EUROPE	4300	1	E428	P204	13
E620	Katrina	Allen	F	JUNIOR DATA SCIENTIST	RETAIL	2	INDIA	ASIA	3000	1	E612	P406	14



Ans 11.

```

34 • create view SALARY_Emp
35 as
36 select First_name,Last_name,country,salary from emp_record_table where salary>6000;
37
38 • select First_Name,salary,country from SALARY_Emp;

```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: [FA](#)

	First_name	salary	country
▶	Arthur	16500	USA
	Eric	8500	USA
	William	9000	FRANCE
	Dorothy	7700	USA
	Patrick	9500	USA
	Emily	10500	CANADA
	Karene	7500	GERMANY
	Nian	6500	CHINA
	Roy	7000	INDIA
	Pete	11000	GERMANY
	Janet	10000	COLOMBIA
	Tracy	8500	INDIA

SALARY\_Emp 19 x

Ans 12.

```

36
37 • select * from emp_record_table where Emp_id in(
38     select Emp_ID from emp_record_table where Exp > 10 );
39
40
41

```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: [FA](#)

	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

Ans 13(a)

42 • `call emp_exp(3);`  
 43  
 44

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

Ans 13(b)

Name: `emp_exp`

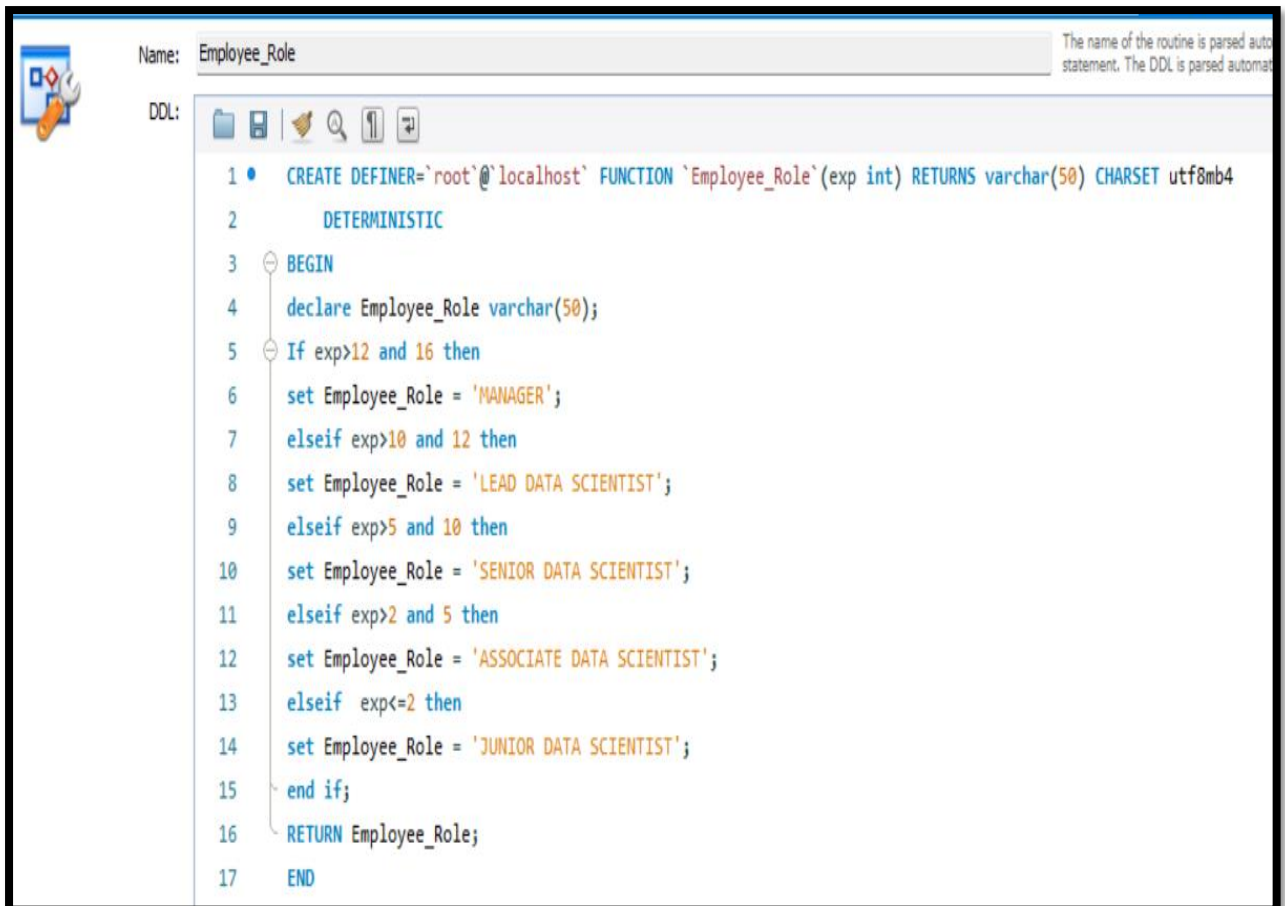
DDL:

```

1 • CREATE DEFINER='root'@'localhost' PROCEDURE `emp_exp`(e int)
2 BEGIN
3   select * from emp_record_table where exp > e;
4 END
  
```

Ans 14(a)





The screenshot shows a MySQL IDE window with the title bar "Name: Employee\_Role". The main text area contains the following SQL code:

```
1 CREATE DEFINER='root'@'localhost' FUNCTION `Employee_Role`(exp int) RETURNS varchar(50) CHARSET utf8mb4
2 DETERMINISTIC
3 BEGIN
4     declare Employee_Role varchar(50);
5     If exp>12 and 16 then
6         set Employee_Role = 'MANAGER';
7     elseif exp>10 and 12 then
8         set Employee_Role = 'LEAD DATA SCIENTIST';
9     elseif exp>5 and 10 then
10        set Employee_Role = 'SENIOR DATA SCIENTIST';
11    elseif exp>2 and 5 then
12        set Employee_Role = 'ASSOCIATE DATA SCIENTIST';
13    elseif exp<=2 then
14        set Employee_Role = 'JUNIOR DATA SCIENTIST';
15    end if;
16    RETURN Employee_Role;
17 END
```

The code defines a function named `Employee_Role` that takes an integer parameter `exp` and returns a string representing an employee role. The function is deterministic and uses a series of conditional statements to assign roles based on the value of `exp`.

Ans 14(b)

```
43 • select first_name,last_name,Exp,employee_role(exp) from data_science_team;
44
45
46
47
48
```

first_name	last_name	Exp	employee_role(exp)
Jenifer	Jhones	1	JUNIOR DATA SCIENTIST
Katrina	Allen	2	JUNIOR DATA SCIENTIST
David	Smith	3	ASSOCIATE DATA SCIENTIST
Claire	Brennan	3	ASSOCIATE DATA SCIENTIST
Steve	Hoffman	4	ASSOCIATE DATA SCIENTIST
Chad	Wilson	5	ASSOCIATE DATA SCIENTIST
Dianna	Wilson	6	SENIOR DATA SCIENTIST
Nian	Zhen	6	SENIOR DATA SCIENTIST
Roy	Collins	7	SENIOR DATA SCIENTIST
Karene	Nowak	8	SENIOR DATA SCIENTIST
Dorothy	Wilson	9	SENIOR DATA SCIENTIST
Eric	Hoffman	11	LEAD DATA SCIENTIST
William	Butler	12	LEAD DATA SCIENTIST

Ans 15(a)



Ans 15(b)

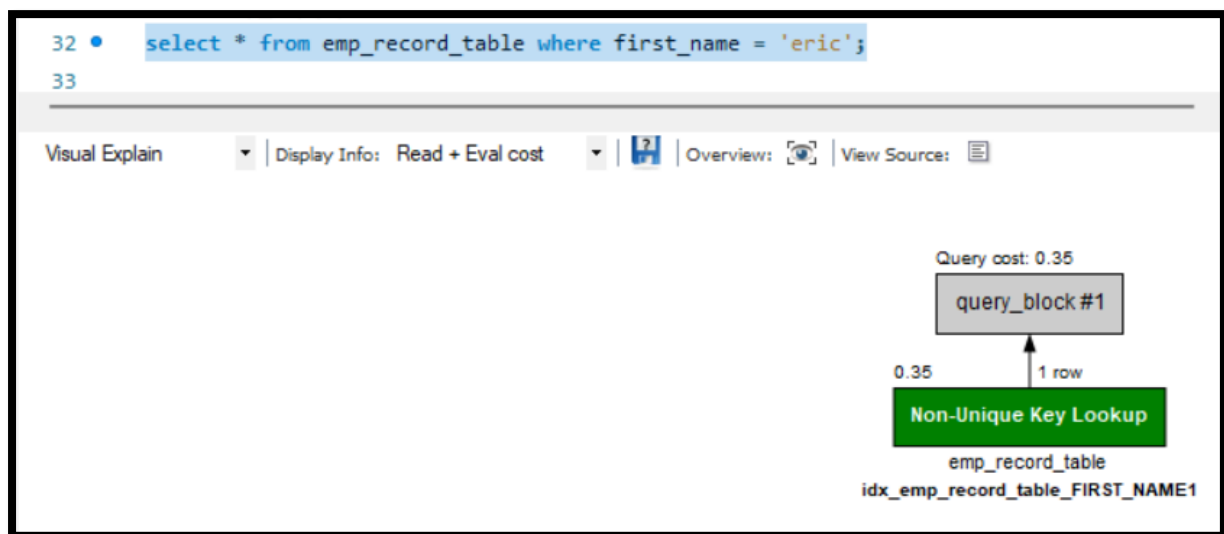
Submitted by Iti Aggarwal

```
43 • select * from emp_record_table where first_name = 'eric';
44
```

Result Grid

EMP_ID	FIRST_NAME	LAST_NAME	GENDER	ROLE	DEPT	EXP	COUNTRY	CONTINENT	SALARY	EMP_RATING	MANAGER_ID	PROJ_ID
E005	Eric	Hoffman	M	LEAD DATA SCIENTIST	FINANCE	11	USA	NORTH AMERICA	8500	3	E103	P105

Ans 15(c)



Ans 16.

43

44 • `select *,salary*.05*emp_rating as bonus from emp_record_table;`

45

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

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

Ans 17.

```

41 • select continent, country, avg(salary) as averagesalary
42      from emp_record_table
43      group by continent, country;
44

```

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

	continent	country	averagesalary
	NORTH AMERICA	USA	9440.0000
▶	EUROPE	FRANCE	9000.0000
	NORTH AMERICA	CANADA	7000.0000
	EUROPE	GERMANY	7600.0000
	ASIA	CHINA	6500.0000
	ASIA	INDIA	6166.6667
	SOUTH AMERICA	COLOMBIA	5600.0000