

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

```
CREATE DATABASE employee;
USE employee;
```

1.1 Create proj_table then import data.

```
CREATE TABLE proj_table(
PROJECT_ID VARCHAR(50) PRIMARY KEY,
PROJ_NAME VARCHAR(50) NOT NULL,
DOMAIN VARCHAR(50) NOT NULL,
START_DATE DATE NOT NULL,
CLOSURE_DATE DATE NOT NULL,
DEV_QTR VARCHAR(50) NOT NULL,
STATUS VARCHAR(50) NOT NULL);
```

```
INSERT INTO proj_table
VALUE('P103','Drug_Discovery','HEALTHCARE','2021-04-06','2021-06-20','Q1','DONE'),
('P105','Fraud_Detection','FINANCE','2021-04-11','2021-06-25','Q1','DONE'),
('P109','Market_Basket_Analysis','RETAIL','2021-04-12','2021-06-30','Q1','DELAYED'),
('P204','Supply_Chain_Management','AUTOMOTIVE','2021-07-15','2021-09-28','Q2','WIP'),
('P302','Early_Detection_of_Lung_Cancer','HEALTHCARE','2021-10-08','2021-12-18','Q3','YTS'),
('P406','Customer_Sentiment_Analysis','RETAIL','2021-07-09','2021-09-24','Q2','WIP');
```

```
SELECT * FROM proj_table ;
```

PROJECT_ID	PROJ_NAME	DOMAIN	START_DATE	CLOSURE_DATE	DEV_QTR	STATUS
P103	Drug_Discovery	HEALTHCARE	2021-04-06	2021-06-20	Q1	DONE
P105	Fraud_Detection	FINANCE	2021-04-11	2021-06-25	Q1	DONE
P109	Market_Basket_Analysis	RETAIL	2021-04-12	2021-06-30	Q1	DELAYED
P204	Supply_Chain_Management	AUTOMOTIVE	2021-07-15	2021-09-28	Q2	WIP
P302	Early_Detection_of_Lung_Cancer	HEALTHCARE	2021-10-08	2021-12-18	Q3	YTS
P406	Customer_Sentiment_Analysis	RETAIL	2021-07-09	2021-09-24	Q2	WIP
NULL	NULL	NULL	NULL	NULL	NULL	NULL

1.2 Create emp_record_table then import data.

```
CREATE TABLE emp_record (
EMP_ID VARCHAR(50) PRIMARY KEY,
FIRST_NAME VARCHAR(50) NOT NULL,
LAST_NAME VARCHAR(50) NOT NULL,
GENDER ENUM("M","F") NOT NULL,
ROLE VARCHAR(100) NOT NULL,
DEPT VARCHAR(100) NOT NULL,
EXP INT NOT NULL,
COUNTRY VARCHAR(100) NOT NULL,
CONTINENT VARCHAR(100) NOT NULL,
SALARY INT NOT NULL,
EMP_RATING INT NOT NULL,
MANAGER_ID VARCHAR(50),
```

```

PROJ_ID VARCHAR(50),
FOREIGN KEY (PROJ_ID) REFERENCES proj_table(PROJECT_ID));

```

```

SELECT * FROM emp_record ;

```

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
E403	Steve	Hoffman	M	ASSOCIATE DATA SCIENTIST	FINANCE	4	USA	NORTH AMERICA	5000	3	E103	P105
E428	Pete	Allen	M	MANAGER	AUTOMOTIVE	14	GERMANY	EUROPE	11000	4	E001	NULL
E478	David	Smith	M	ASSOCIATE DATA SCIENTIST	RETAIL	3	COLOMBIA	SOUTH AMERICA	4000	4	E583	P109
E505	Chad	Wilson	M	ASSOCIATE DATA SCIENTIST	HEALTHCARE	5	CANADA	NORTH AMERICA	5000	2	E083	P103
E532	Claire	Brennan	F	ASSOCIATE DATA SCIENTIST	AUTOMOTIVE	3	GERMANY	EUROPE	4300	1	E428	P204
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
E620	Katrina	Allen	F	JUNIOR DATA SCIENTIST	RETAIL	2	INDIA	ASIA	3000	1	E612	P406
E640	Jenifer	Jhones	F	JUNIOR DATA SCIENTIST	RETAIL	1	COLOMBIA	SOUTH AMERICA	2800	4	E612	P406

1.3 Create data_science_team table then import data.

```

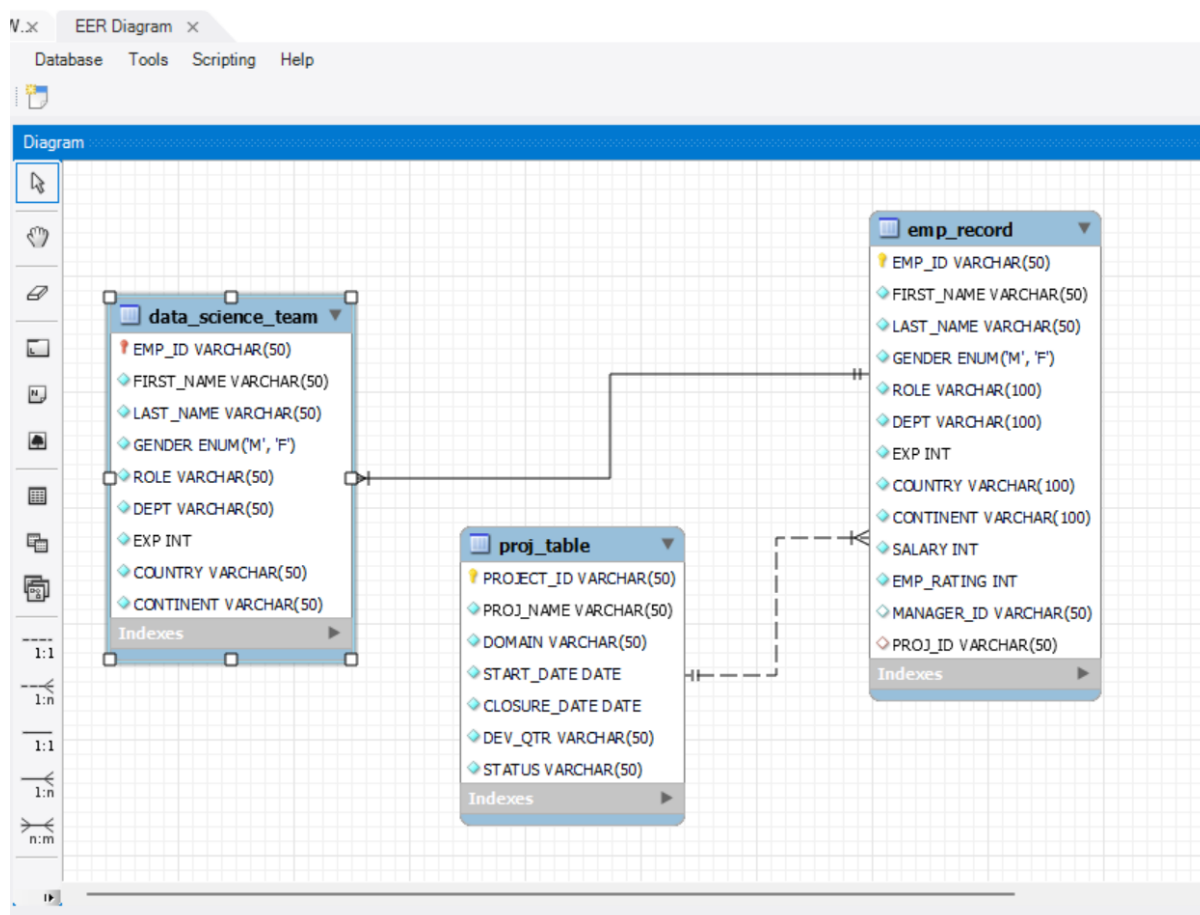
CREATE TABLE data_science_team(
EMP_ID VARCHAR(50) PRIMARY KEY,
FIRST_NAME VARCHAR(50)NOT NULL,
LAST_NAME VARCHAR(50)NOT NULL,
GENDER      ENUM("M","F")NOT NULL,
ROLE VARCHAR(50)NOT NULL,
DEPT VARCHAR(50)NOT NULL,
EXP      INT NOT NULL,
COUNTRY      VARCHAR(50)NOT NULL,
CONTINENT VARCHAR(50)NOT NULL,
FOREIGN KEY (EMP_ID) REFERENCES emp_record(EMP_ID));

```

SELECT * FROM data_science_team ;

EMP_ID	FIRST_NAME	LAST_NAME	GENDER	ROLE	DEPT	EXP	COUNTRY	CONTINENT
E005	Eric	Hoffman	M	LEAD DATA SCIENTIST	FINANCE	11	USA	NORTH AMERICA
E010	William	Butler	M	LEAD DATA SCIENTIST	AUTOMOTIVE	12	FRANCE	EUROPE
E052	Dianna	Wilson	F	SENIOR DATA SCIENTIST	HEALTHCARE	6	CANADA	NORTH AMERICA
E057	Dorothy	Wilson	F	SENIOR DATA SCIENTIST	HEALTHCARE	9	USA	NORTH AMERICA
E204	Karene	Nowak	F	SENIOR DATA SCIENTIST	AUTOMOTIVE	8	GERMANY	EUROPE
E245	Nian	Zhen	M	SENIOR DATA SCIENTIST	RETAIL	6	CHINA	ASIA
E403	Steve	Hoffman	M	ASSOCIATE DATA SCIENTIST	FINANCE	4	USA	NORTH AMERICA
E478	David	Smith	M	ASSOCIATE DATA SCIENTIST	RETAIL	3	COLOMBIA	SOUTH AMERICA
E505	Chad	Wilson	M	ASSOCIATE DATA SCIENTIST	HEALTHCARE	5	CANADA	NORTH AMERICA
E532	Claire	Brennan	F	ASSOCIATE DATA SCIENTIST	AUTOMOTIVE	3	GERMANY	EUROPE
E620	Katrina	Allen	F	JUNIOR DATA SCIENTIST	RETAIL	2	INDIA	ASIA
E640	Jenifer	Jhones	F	JUNIOR DATA SCIENTIST	RETAIL	1	COLOMBIA	SOUTH AMERICA
NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL

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.

```

select emp_id, first_name, last_name, gender, Dept
from emp_record order by Dept;
  
```

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	
E478	David	Smith	M	RETAIL	
E583	Janet	Hale	F	RETAIL	
E612	Tracy	Norris	F	RETAIL	
E620	Katrina	Allen	F	RETAIL	
E640	Jenifer	Jhones	F	RETAIL	

emp_record 6 x

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

#greater than four

#between two and four

#less than two

```
select emp_id, first_name, last_name, gender, Dept, Emp_rating
from emp_record
where Emp_rating < 2;
```

Result Grid						
Filter Rows:		Export:		Wrap Cell Content:		
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	

emp_record 7 x

#greater than four

```
select emp_id, first_name, last_name, gender, Dept, Emp_rating
from emp_record
where Emp_rating > 4;
```

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

emp_record 8 x

#between two and four

```
select emp_id, first_name, last_name, gender, Dept, Emp_rating
from emp_record
where Emp_rating between 2 and 4;
```

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

emp_record 9 x

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.

```
select concat(First_name, " ", Last_name) as Name from employee.emp_record where Dept="FINANCE";
```

Result Grid

Filter Rows:

Export:

Wrap Cell Content:

	Name
▶	Eric Hoffman
	Emily Grove
	Steve Hoffman

Result 10

×

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 m.Emp_id, m.First_name, m.Last_name, m.Role, m.Dept, count(e.Emp_id) as Emp_recording from
emp_record m
inner join emp_record e
on m.emp_id = e.Manager_id
where m.Role in("MANAGER","PRESIDENT")
group by m.Emp_id
order by m.Emp_id;

```

Result Grid						
Filter Rows:						
Export:						
Wrap Cell Content:						
	Emp_id	First_name	Last_name	Role	Dept	Emp_recording
▶	E001	Arthur	Black	PRESIDENT	ALL	5
	E083	Patrick	Voltz	MANAGER	HEALTHCARE	3
	E103	Emily	Grove	MANAGER	FINANCE	2
	E428	Pete	Allen	MANAGER	AUTOMOTIVE	3
	E583	Janet	Hale	MANAGER	RETAIL	2
	E612	Tracy	Norris	MANAGER	RETAIL	2

Result 11 ×

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.

```

select Emp_id, First_name, Last_name, Dept from emp_record
where Dept ="HEALTHCARE"
union select Emp_id, First_name, Last_name, Dept from emp_record
where Dept ="finance"
order by Dept;

```

Result Grid				
Filter Rows:				
Export:				
Wrap Cell Content:				
	Emp_id	First_name	Last_name	Dept
▶	E005	Eric	Hoffman	FINANCE
	E103	Emily	Grove	FINANCE
	E403	Steve	Hoffman	FINANCE
	E052	Dianna	Wilson	HEALTHCARE
	E057	Dorothy	Wilson	HEALTHCARE
	E083	Patrick	Voltz	HEALTHCARE
	E505	Chad	Wilson	HEALTHCARE

Result 12 ×

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.

```

SELECT emp_id, First_name, Last_name, Role, Dept, emp_rating,
MAX(EMP_RATING) OVER (PARTITION BY DEPT) AS MAX_RATING
FROM emp_record
ORDER BY DEPT, EMP_RATING DESC;

```


emp_id	First_name	Last_name	Role	Dept	emp_rating	MAX_RATING
E001	Arthur	Black	PRESIDENT	ALL	5	5
E204	Karene	Nowak	SENIOR DATA SCIENTIST	AUTOMOTIVE	5	5
E428	Pete	Allen	MANAGER	AUTOMOTIVE	4	5
E010	William	Butler	LEAD DATA SCIENTIST	AUTOMOTIVE	2	5
E532	Claire	Brennan	ASSOCIATE DATA SCIENTIST	AUTOMOTIVE	1	5
E103	Emily	Grove	MANAGER	FINANCE	4	4
E005	Eric	Hoffman	LEAD DATA SCIENTIST	FINANCE	3	4
E403	Steve	Hoffman	ASSOCIATE DATA SCIENTIST	FINANCE	3	4
E052	Dianna	Wilson	SENIOR DATA SCIENTIST	HEALTHCARE	5	5
E083	Patrick	Voltz	MANAGER	HEALTHCARE	5	5
E505	Chad	Wilson	ASSOCIATE DATA SCIENTIST	HEALTHCARE	2	5
E057	Dorothy	Wilson	SENIOR DATA SCIENTIST	HEALTHCARE	1	5
E478	David	Smith	ASSOCIATE DATA SCIENTIST	RETAIL	4	4
E612	Tracy	Norris	MANAGER	RETAIL	4	4
E640	Jenifer	Jhones	JUNIOR DATA SCIENTIST	RETAIL	4	4
E245	Nian	Zhen	SENIOR DATA SCIENTIST	RETAIL	2	4
E583	Janet	Hale	MANAGER	RETAIL	2	4
E620	Katrina	Allen	JUNIOR DATA SCIENTIST	RETAIL	1	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.

```
SELECT role, MIN(SALARY) AS MIN_SALARY, MAX(SALARY) AS MAX_SALARY
FROM emp_record
GROUP BY role;
```

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.

```
select emp_id, first_name, last_name, role, Dept, Exp , rank()over (order by Exp desc) emp_exp_rank from
emp_record;
```

emp_id	first_name	last_name	role	Dept	Exp	emp_exp_rank
E001	Arthur	Black	PRESIDENT	ALL	20	1
E083	Patrick	Voltz	MANAGER	HEALTHCARE	15	2
E103	Emily	Grove	MANAGER	FINANCE	14	3
E428	Pete	Allen	MANAGER	AUTOMOTIVE	14	3
E583	Janet	Hale	MANAGER	RETAIL	14	3
E612	Tracy	Norris	MANAGER	RETAIL	13	6
E010	William	Butler	LEAD DATA SCIENTIST	AUTOMOTIVE	12	7
E005	Eric	Hoffman	LEAD DATA SCIENTIST	FINANCE	11	8
E057	Dorothy	Wilson	SENIOR DATA SCIENTIST	HEALTHCARE	9	9
E204	Karene	Nowak	SENIOR DATA SCIENTIST	AUTOMOTIVE	8	10
E052	Dianna	Wilson	SENIOR DATA SCIENTIST	HEALTHCARE	6	11
E245	Nian	Zhen	SENIOR DATA SCIENTIST	RETAIL	6	11
E505	Chad	Wilson	ASSOCIATE DATA SCIENTIST	HEALTHCARE	5	13
E403	Steve	Hoffman	ASSOCIATE DATA SCIENTIST	FINANCE	4	14
E478	David	Smith	ASSOCIATE DATA SCIENTIST	RETAIL	3	15
E532	Claire	Brennan	ASSOCIATE DATA SCIENTIST	AUTOMOTIVE	3	15
E620	Katrina	Allen	JUNIOR DATA SCIENTIST	RETAIL	2	17
E640	Jenifer	Jhones	JUNIOR DATA SCIENTIST	RETAIL	1	18

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.

```
create view Employee_view AS
select Emp_id, Country, Salary from emp_record where salary > 6000
order by salary desc;
SELECT * FROM employee.employee_view;
```

employee

Tables

Views

Stored Procedures

Functions

garima

sys

world

Administration

Schemas

Information

No object selected

Emp_id	Country	Salary
E001	USA	16500
E428	GERMANY	11000
E103	CANADA	10500
E583	COLOMBIA	10000
E083	USA	9500
E010	FRANCE	9000
E005	USA	8500
E612	INDIA	8500
E057	USA	7700
E204	GERMANY	7500
E245	CHINA	6500

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
where exists(Select * from emp_record where Exp > 10)
and Exp > 10;
```

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.

Delimiter \$\$

```
create procedure get_experience()
begin
select * from emp_record where Exp > 3;
end $$
```

call get_experience;

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
E403	Steve	Hoffman	M	ASSOCIATE DATA SCIENTIST	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 SCIENTIST	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.

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 \$\$

```
CREATE FUNCTION employee.get_job_profile(Exp INT)
RETURNS VARCHAR(2000) DETERMINISTIC
BEGIN
```

```

DECLARE job_profile VARCHAR(2000);
IF Exp <= 2 THEN
    SET job_profile = 'JUNIOR DATA SCIENTIST';
ELSEIF Exp <= 5 THEN
    SET job_profile = 'ASSOCIATE DATA SCIENTIST';
ELSEIF Exp <= 10 THEN
    SET job_profile = 'SENIOR DATA SCIENTIST';
ELSEIF Exp <= 12 THEN
    SET job_profile = 'LEAD DATA SCIENTIST';
ELSEIF Exp <= 16 THEN
    SET job_profile = 'MANAGER';
END IF;
RETURN job_profile;
END $$
DELIMITER ;

SELECT First_name,Last_name,Exp,Role, get_job_profile(Exp) AS Employee_profile
FROM employee.emp_record order by Exp;

```

First_name	Last_name	Exp	Role	Employee_profile
Jenifer	Jhones	1	JUNIOR DATA SCIENTIST	JUNIOR DATA SCIENTIST
Katrina	Allen	2	JUNIOR DATA SCIENTIST	JUNIOR DATA SCIENTIST
David	Smith	3	ASSOCIATE DATA SCIENTIST	ASSOCIATE DATA SCIENTIST
Claire	Brennan	3	ASSOCIATE DATA SCIENTIST	ASSOCIATE DATA SCIENTIST
Steve	Hoffman	4	ASSOCIATE DATA SCIENTIST	ASSOCIATE DATA SCIENTIST
Chad	Wilson	5	ASSOCIATE DATA SCIENTIST	ASSOCIATE DATA SCIENTIST
Dianna	Wilson	6	SENIOR DATA SCIENTIST	SENIOR DATA SCIENTIST
Nian	Zhen	6	SENIOR DATA SCIENTIST	SENIOR DATA SCIENTIST
Karene	Nowak	8	SENIOR DATA SCIENTIST	SENIOR DATA SCIENTIST
Dorothy	Wilson	9	SENIOR DATA SCIENTIST	SENIOR DATA SCIENTIST
Eric	Hoffman	11	LEAD DATA SCIENTIST	LEAD DATA SCIENTIST
William	Butler	12	LEAD DATA SCIENTIST	LEAD DATA SCIENTIST
Tracy	Norris	13	MANAGER	MANAGER
Emily	Grove	14	MANAGER	MANAGER
Pete	Allen	14	MANAGER	MANAGER
Janet	Hale	14	MANAGER	MANAGER
Patrick	Voltz	15	MANAGER	MANAGER
Arthur	Black	20	PRESIDENT	NULL

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 idx_cost on emp_record(First_name);
select * from emp_record where First_name = 'Eric';

```

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

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, First_name, Last_name, Role, Salary, Emp_rating, 0.05*Salary*Emp_rating as TOTAL_BONUS from emp_record order by TOTAL_BONUS;

Result Grid							
		Filter Rows:		Export:	Wrap Cell Content:		
	Emp_id	First_name	Last_name	Role	Salary	Emp_rating	TOTAL_BONUS
▶	E620	Katrina	Allen	JUNIOR DATA SCIENTIST	3000	1	150.00
	E532	Claire	Brennan	ASSOCIATE DATA SCIENTIST	4300	1	215.00
	E057	Dorothy	Wilson	SENIOR DATA SCIENTIST	7700	1	385.00
	E505	Chad	Wilson	ASSOCIATE DATA SCIENTIST	5000	2	500.00
	E640	Jenifer	Jhones	JUNIOR DATA SCIENTIST	2800	4	560.00
	E245	Nian	Zhen	SENIOR DATA SCIENTIST	6500	2	650.00
	E403	Steve	Hoffman	ASSOCIATE DATA SCIENTIST	5000	3	750.00
	E478	David	Smith	ASSOCIATE DATA SCIENTIST	4000	4	800.00
	E010	William	Butler	LEAD DATA SCIENTIST	9000	2	900.00
	E583	Janet	Hale	MANAGER	10000	2	1000.00
	E005	Eric	Hoffman	LEAD DATA SCIENTIST	8500	3	1275.00
	E052	Dianna	Wilson	SENIOR DATA SCIENTIST	5500	5	1375.00
	E612	Tracy	Norris	MANAGER	8500	4	1700.00
	E204	Karene	Nowak	SENIOR DATA SCIENTIST	7500	5	1875.00
	E103	Emily	Grove	MANAGER	10500	4	2100.00
	E428	Pete	Allen	MANAGER	11000	4	2200.00
	E083	Patrick	Voltz	MANAGER	9500	5	2375.00
	E001	Arthur	Black	PRESIDENT	16500	5	4125.00

Result 20 ×

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

select country, continent, avg(Salary) over (partition by country) as AVG_Salary_Distr_Country, avg(Salary) over (partition by Continent) as AVG_Salary_Distr_Continent from emp_record ;

Result Grid				
		Filter Rows:		Export:
				Wrap Cell Content:
	country	continent	AVG_Salary_Distr_Country	AVG_Salary_Distr_Continent
▶	CHINA	ASIA	6500.0000	6000.0000
	INDIA	ASIA	5750.0000	6000.0000
	INDIA	ASIA	5750.0000	6000.0000
	FRANCE	EUROPE	9000.0000	7950.0000
	GERMANY	EUROPE	7600.0000	7950.0000
	GERMANY	EUROPE	7600.0000	7950.0000
	GERMANY	EUROPE	7600.0000	7950.0000
	CANADA	NORTH AMERICA	7000.0000	8525.0000
	CANADA	NORTH AMERICA	7000.0000	8525.0000
	CANADA	NORTH AMERICA	7000.0000	8525.0000
	USA	NORTH AMERICA	9440.0000	8525.0000
	USA	NORTH AMERICA	9440.0000	8525.0000
	USA	NORTH AMERICA	9440.0000	8525.0000
	USA	NORTH AMERICA	9440.0000	8525.0000
	USA	NORTH AMERICA	9440.0000	8525.0000
	COLOMBIA	SOUTH AMERICA	5600.0000	5600.0000
	COLOMBIA	SOUTH AMERICA	5600.0000	5600.0000
	COLOMBIA	SOUTH AMERICA	5600.0000	5600.0000

Result 21 ×