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.

```
mysql> DESC emp_record;
+------------+-------------+------+-----+---------+-------+
| Field      | Type        | Null | Key | Default | Extra |
+------------+-------------+------+-----+---------+-------+
| EMP_ID     | char(5)     | YES  |     | NULL    |       |
| FIRST_NAME | varchar(25) | YES  |     | NULL    |       |
| LAST_NAME  | varchar(25) | YES  |     | NULL    |       |
| GENDER     | char(3)     | YES  |     | NULL    |       |
| ROLE       | varchar(25) | YES  |     | NULL    |       |
| DEPT       | varchar(25) | YES  |     | NULL    |       |
| EXP        | int         | YES  |     | NULL    |       |
| COUNTRY    | varchar(25) | YES  |     | NULL    |       |
| CONTINENT  | varchar(25) | YES  |     | NULL    |       |
| SALARY     | int         | YES  |     | NULL    |       |
| EMP_RATING | int         | YES  |     | NULL    |       |
| MANAGER    | char(5)     | YES  |     | NULL    |       |
| PROJ_ID    | char(5)     | YES  |     | NULL    |       |
+------------+-------------+------+-----+---------+-------+
13 rows in set (0.01 sec)
```

```
ysql> DESC data_science_team;
+------------+-------------+------+-----+---------+-------+
| Field      | Type        | Null | Key | Default | Extra |
+------------+-------------+------+-----+---------+-------+
| EMP_ID     | char(5)     | NO   | PRI | NULL    |       |
| FIRST_NAME | varchar(15) | YES  |     | NULL    |       |
| LAST_NAME  | varchar(15) | YES  |     | NULL    |       |
| GENDER     | char(2)     | YES  |     | NULL    |       |
| ROLE       | varchar(30) | YES  |     | NULL    |       |
| DEPT       | varchar(30) | YES  |     | NULL    |       |
| EXP        | int         | YES  |     | NULL    |       |
| COUNTRY    | varchar(25) | YES  |     | NULL    |       |
| CONTINENT  | varchar(25) | YES  |     | NULL    |       |
+------------+-------------+------+-----+---------+-------+
 rows in set (0.00 sec)
```

```
ysql> DESC proj_table;
+--------------+-------------+------+-----+---------+-------+
| Field        | Type        | Null | Key | Default | Extra |
+--------------+-------------+------+-----+---------+-------+
| PROJECT_ID   | char(5)     | NO   | PRI | NULL    |       |
| PROJ_NAME    | varchar(50) | YES  |     | NULL    |       |
| DOMAIN       | varchar(25) | YES  |     | NULL    |       |
| START_DATE   | date        | YES  |     | NULL    |       |
| CLOSURE_DATE | date        | YES  |     | NULL    |       |
| DEV_QTR      | char(2)     | YES  |     | NULL    |       |
| STATUS       | varchar(15) | YES  |     | NULL    |       |
+--------------+-------------+------+-----+---------+-------+
rows in set (0.00 sec)
```

```
mysql> SELECT * FROM emp_record;
+--------+------------+-----------+--------+-------------------------+------------+-----+---------+---------------+--------+------------+---------+---------+
| EMP_ID | FIRST_NAME | LAST_NAME | GENDER | ROLE                    | DEPT       | EXP | COUNTRY | CONTINENT     | SALARY | EMP_RATING | MANAGER | 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    | NULL    |
| 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    |
+--------+------------+-----------+--------+-------------------------+------------+-----+---------+---------------+--------+------------+---------+---------+
19 rows in set (0.00 sec)
```

```
mysql> 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          |
| E260   | Roy        | Collins   | M      | SENIOR DATA SCIENTIST   | RETAIL     |   7 | INDIA   | 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 |
+--------+------------+-----------+--------+-------------------------+------------+-----+---------+---------------+
13 rows in set (0.00 sec)
```

```
mysql> SELECT * FROM proj_table;
+------------+--------------------------------+------------+------------+--------------+---------+---------+
| PROJECT_ID | PROJ_NAME                      | DOMAIN     | START_DATE | CLOSURE_DATE | DEV_QTR | STATUS  |
+------------+--------------------------------+------------+------------+--------------+---------+---------+
| P103       | Drug Discovery                 | HEALTHCARE | 2021-06-04 | 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     |
+------------+--------------------------------+------------+------------+--------------+---------+---------+
6 rows in set (0.00 sec)
```

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.

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

19 rows in set (0.00 sec)

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**

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

3 rows in set (0.00 sec)

```
+--------+------------+-----------+--------+------------+------------+
| 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 |
+--------+------------+-----------+--------+------------+------------+
4 rows in set (0.00 sec)
```

```
+--------+------------+-----------+--------+------------+------------+
| 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 |
+--------+------------+-----------+--------+------------+------------+
```

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.

```
+--------------+
| NAME         |
+--------------+
| EricHoffman  |
| EmilyGrove   |
| SteveHoffman |
+--------------+
3 rows in set (0.00 sec)
```

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

```
+---------+---------------+
| MANAGER | NUM_REPORTERS |
+---------+---------------+
| E001    |             5 |
| E428    |             3 |
| E083    |             3 |
| E583    |             3 |
| E103    |             2 |
| E612    |             2 |
| NULL    |             1 |
+---------+---------------+
7 rows in set (0.00 sec)
```

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 FR
+--------+------------+-----------+------------+
| EMP_ID | FIRST_NAME | LAST_NAME | DEPT       |
+--------+------------+-----------+------------+
| E052   | Dianna     | Wilson    | HEALTHCARE |
| E057   | Dorothy    | Wilson    | HEALTHCARE |
| E083   | Patrick    | Voltz     | HEALTHCARE |
| E505   | Chad       | Wilson    | HEALTHCARE |
| E005   | Eric       | Hoffman   | FINANCE    |
| E103   | Emily      | Grove     | FINANCE    |
| E403   | Steve      | Hoffman   | FINANCE    |
+--------+------------+-----------+------------+
7 rows in set (0.00 sec)
```

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

19 rows in set (0.00 sec)

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

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

rows in set (0.00 sec)

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

EMP_ID	FIRST_NAME	LAST_NAME	EXP	EXP_RANK
E001	Arthur	Black	20	1
E083	Patrick	Voltz	15	2
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

9 rows in set (0.01 sec)

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.

```
mysql> SELECT * FROM high_salary_emp_view;
```

EMP_ID	FIRST_NAME	LAST_NAME	GENDER	ROLE	DEPT	EXP	COUNTRY	CONTINENT	SALARY	EMP_RATING	MANAGER	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
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	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

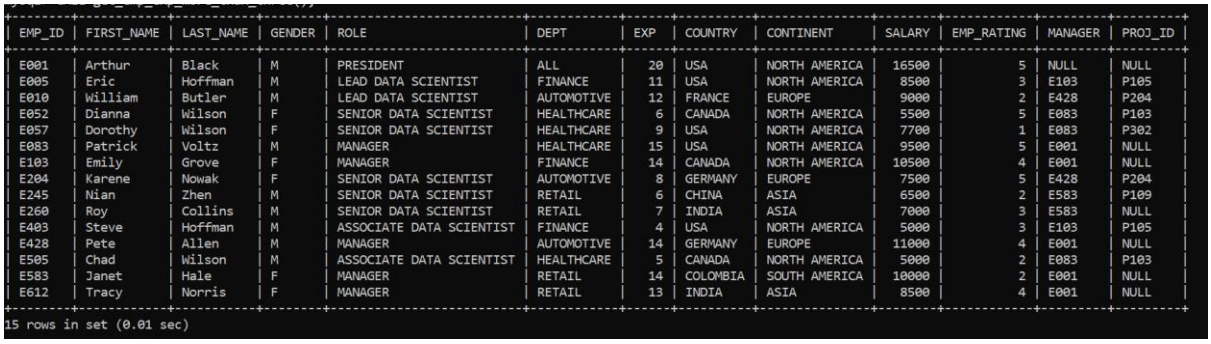
12 rows in set (0.01 sec)

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

EMP_ID	FIRST_NAME	LAST_NAME	GENDER	ROLE	DEPT	EXP	COUNTRY	CONTINENT	SALARY	EMP_RATING	MANAGER	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

8 rows in set (0.00 sec)

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.



EMP_ID	FIRST_NAME	LAST_NAME	GENDER	ROLE	DEPT	EXP	COUNTRY	CONTINENT	SALARY	EMP_RATING	MANAGER	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	NULL
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

15 rows in set (0.01 sec)

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'.

```
fe log_bin_trust_function_creators variable)
mysql> CREATE FUNCTION GetJobProfile(experience INT)
    -> RETURNS VARCHAR(100)
    -> DETERMINISTIC
    -> BEGIN
    ->     DECLARE job_profile VARCHAR(100);
    ->
    ->     IF experience <= 2 THEN
    ->         SET job_profile = 'JUNIOR DATA SCIENTIST';
    ->     ELSEIF experience <= 5 THEN
    ->         SET job_profile = 'ASSOCIATE DATA SCIENTIST';
    ->     ELSEIF experience <= 10 THEN
    ->         SET job_profile = 'SENIOR DATA SCIENTIST';
    ->     ELSEIF experience <= 12 THEN
    ->         SET job_profile = 'LEAD DATA SCIENTIST';
    ->     ELSE
    ->         SET job_profile = 'MANAGER';
    ->     END IF;
    -> RETURN job_profile;
    -> END//
Query OK, 0 rows affected (0.01 sec)
```

```
mysql> SELECT EMP_ID, FIRST_NAME, LAST_NAME, DEPT, EXP, GetJobProfile(EXP) AS JOB_PROFILE FROM data_science_team;
+--------+------------+-----------+------------+------+--------------------------+
| EMP_ID | FIRST_NAME | LAST_NAME | DEPT       | EXP  | JOB_PROFILE              |
+--------+------------+-----------+------------+------+--------------------------+
| E005   | Eric       | Hoffman   | FINANCE    |   11 | LEAD DATA SCIENTIST      |
| E010   | William    | Butler    | AUTOMOTIVE |   12 | LEAD DATA SCIENTIST      |
| E052   | Dianna     | Wilson    | HEALTHCARE |    6 | SENIOR DATA SCIENTIST    |
| E057   | Dorothy    | Wilson    | HEALTHCARE |    9 | SENIOR DATA SCIENTIST    |
| E204   | Karene     | Nowak     | AUTOMOTIVE |    8 | SENIOR DATA SCIENTIST    |
| E245   | Nian       | Zhen      | RETAIL     |    6 | SENIOR DATA SCIENTIST    |
| E260   | Roy        | Collins   | RETAIL     |    7 | SENIOR DATA SCIENTIST    |
| E403   | Steve      | Hoffman   | FINANCE    |    4 | ASSOCIATE DATA SCIENTIST |
| E478   | David      | Smith     | RETAIL     |    3 | ASSOCIATE DATA SCIENTIST |
| E505   | Chad       | Wilson    | HEALTHCARE |    5 | ASSOCIATE DATA SCIENTIST |
| E532   | Claire     | Brennan   | AUTOMOTIVE |    3 | ASSOCIATE DATA SCIENTIST |
| E620   | Katrina    | Allen     | RETAIL     |    2 | JUNIOR DATA SCIENTIST    |
| E640   | Jenifer    | Jhones    | RETAIL     |    1 | JUNIOR DATA SCIENTIST    |
+--------+------------+-----------+------------+------+--------------------------+
13 rows in set (0.01 sec)
```

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.

```
mysql> CREATE INDEX idx_first_name ON emp_record(FIRST_NAME);
Query OK, 0 rows affected (0.09 sec)
Records: 0  Duplicates: 0  Warnings: 0
```

```
mysql> EXPLAIN SELECT * FROM emp_record WHERE FIRST_NAME = 'Eric';
+----+-------------+------------+------------+------+---------------+----------------+---------+-------+------+----------+-------+
| id | select_type | table      | partitions | type | possible_keys | key            | key_len | ref   | rows | filtered | Extra |
+----+-------------+------------+------------+------+---------------+----------------+---------+-------+------+----------+-------+
|  1 | SIMPLE      | emp_record | NULL       | ref  | idx_first_name | idx_first_name | 103     | const |    1 |   100.00 | NULL  |
+----+-------------+------------+------------+------+---------------+----------------+---------+-------+------+----------+-------+
1 row in set, 1 warning (0.00 sec)
```

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).

```
ysql> SELECT EMP_ID, FIRST_NAME, LAST_NAME, DEPT, ROLE, SALARY * 0.05 * EMP_RATING AS BONUS FROM emp_record;
+--------+------------+-----------+------------+--------------------------+---------+
| EMP_ID | FIRST_NAME | LAST_NAME | DEPT       | ROLE                     | BONUS   |
+--------+------------+-----------+------------+--------------------------+---------+
| E001   | Arthur     | Black     | ALL        | PRESIDENT                | 4125.00 |
| E005   | Eric       | Hoffman   | FINANCE    | LEAD DATA SCIENTIST      | 1275.00 |
| E010   | William    | Butler    | AUTOMOTIVE | LEAD DATA SCIENTIST      |  900.00 |
| E052   | Dianna     | Wilson    | HEALTHCARE | SENIOR DATA SCIENTIST    | 1375.00 |
| E057   | Dorothy    | Wilson    | HEALTHCARE | SENIOR DATA SCIENTIST    |  385.00 |
| E083   | Patrick    | Voltz     | HEALTHCARE | MANAGER                  | 2375.00 |
| E103   | Emily      | Grove     | FINANCE    | MANAGER                  | 2100.00 |
| E204   | Karene     | Nowak     | AUTOMOTIVE | SENIOR DATA SCIENTIST    | 1875.00 |
| E245   | Nian       | Zhen      | RETAIL     | SENIOR DATA SCIENTIST    |  650.00 |
| E260   | Roy        | Collins   | RETAIL     | SENIOR DATA SCIENTIST    | 1050.00 |
| E403   | Steve      | Hoffman   | FINANCE    | ASSOCIATE DATA SCIENTIST |  750.00 |
| E428   | Pete       | Allen     | AUTOMOTIVE | MANAGER                  | 2200.00 |
| E478   | David      | Smith     | RETAIL     | ASSOCIATE DATA SCIENTIST |  800.00 |
| E505   | Chad       | Wilson    | HEALTHCARE | ASSOCIATE DATA SCIENTIST |  500.00 |
| E532   | Claire     | Brennan   | AUTOMOTIVE | ASSOCIATE DATA SCIENTIST |  215.00 |
| E583   | Janet      | Hale      | RETAIL     | MANAGER                  | 1000.00 |
| E612   | Tracy      | Norris    | RETAIL     | MANAGER                  | 1700.00 |
| E620   | Katrina    | Allen     | RETAIL     | JUNIOR DATA SCIENTIST    |  150.00 |
| E640   | Jenifer    | Jhones    | RETAIL     | JUNIOR DATA SCIENTIST    |  560.00 |
+--------+------------+-----------+------------+--------------------------+---------+
```

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

```
t on columns in GROUP BY clause; this is incompatible with sql_mode=only_full_group_by
mysql> SELECT CONTINENT, COUNTRY, AVG(SALARY) AS AVERAGE_SALARY FROM emp_record GROUP BY CONTINENT, COUNTRY;
+---------------+---------+----------------+
| CONTINENT     | COUNTRY | AVERAGE_SALARY |
+---------------+---------+----------------+
| 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 |
+---------------+---------+----------------+
```