

ScienceQtech Employee Performance Mapping.

Course-end Project 1

DESCRIPTION

ScienceQtech is a startup that works in the Data Science field. ScienceQtech has worked on fraud detection, market basket, self-driving cars, supply chain, algorithmic early detection of lung cancer, customer sentiment, and the drug discovery field. With the annual appraisal cycle around the corner, the HR department has asked you (Junior Database Administrator) to generate reports on employee details, their performance, and on the project that the employees have undertaken, to analyze the employee database and extract specific data based on different requirements.

Objective:

To facilitate a better understanding, managers have provided ratings for each employee which will help the HR department to finalize the employee performance mapping. As a DBA, you should find the maximum salary of the employees and ensure that all jobs are meeting the organization's profile standard. You also need to calculate bonuses to find extra cost for expenses. This will raise the overall performance of the organization by ensuring that all required employees receive training.

Note: You must download the dataset from the course resource section in LMS and create a table to perform the above objective.

Dataset description:

emp_record_table: It contains the information of all the employees.

- EMP_ID - ID of the employee
- FIRST_NAME - First name of the employee
- LAST_NAME - Last name of the employee
- GENDER - Gender of the employee
- ROLE - Post of the employee
- DEPT - Field of the employee
- EXP - Years of experience the employee has
- COUNTRY - Country in which the employee is presently living
- CONTINENT - Continent in which the country is
- SALARY - Salary of the employee
- EMP_RATING - Performance rating of the employee
- MANAGER_ID - The manager under which the employee is assigned
- PROJ_ID - The project on which the employee is working or has worked on

Proj_table: It contains information about the projects.

- PROJECT_ID - ID for the project
- PROJ_Name - Name of the project
- DOMAIN - Field of the project
- START_DATE - Day the project began
- CLOSURE_DATE - Day the project was or will be completed
- DEV_QTR - Quarter in which the project was scheduled
- STATUS - Status of the project currently

Data_science_team: It contains information about all the employees in the Data Science team.

- EMP_ID - ID of the employee
- FIRST_NAME - First name of the employee
- LAST_NAME - Last name of the employee
- GENDER - Gender of the employee
- ROLE - Post of the employee
- DEPT - Field of the employee
- EXP - Years of experience the employee has
- COUNTRY - Country in which the employee is presently living
- CONTINENT - Continent in which the country is

The task to be performed:

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.

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.

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

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**.

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

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.

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.
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.
10. Write a query to assign ranks to each employee based on their experience. Take data from the employee record table.
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.
12. Write a nested query to find employees with experience of more than ten years. Take data from the employee record table.
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.
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'~~

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'.

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).

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

proj_table
◊ PROJECT_ID TEXT
◊ PROJ_NAME TEXT
◊ DOMAIN TEXT
◊ START_DATE TEXT
◊ CLOSURE_DATE TEXT
◊ DEV_QTR TEXT
◊ STATUS TEXT

emp_record_table
◊ EMP_ID TEXT
◊ FIRST_NAME TEXT
◊ LAST_NAME TEXT
◊ GENDER TEXT
◊ ROLE TEXT
◊ DEPT TEXT
◊ EXP INT
◊ COUNTRY TEXT
◊ CONTINENT TEXT
◊ SALARY INT
◊ EMP_RATING INT
◊ MANAGER_ID TEXT
◊ PROJ_ID TEXT

data_science_team
◊ EMP_ID TEXT
◊ FIRST_NAME TEXT
◊ LAST_NAME TEXT
◊ GENDER TEXT
◊ ROLE TEXT
◊ DEPT TEXT
◊ EXP INT
◊ COUNTRY TEXT
◊ CONTINENT TEXT

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File Edit View Query Database Server Tools Scripting Help

SQL SQL i d b e f Schemas

SCHEMAS Filter objects employee sys

Object Info Schema: employee

Query 1 SQL File 4*

Limit to 1000 rows

1 -- creating database named employee
2 • CREATE DATABASE employee;

Query Completed

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SQL SQL i d b q

Schemas Query 1 SQL File 4*

SCHEMAS Filter objects

employee

- Tables
- Views
- Stored Procedures
- Functions

sys

Object Info

Schema: employee

```
1 -- creating database named employee
2 • CREATE DATABASE employee;
3
4 -- set employee as default database
5 • USE employee;
```

Limit to 1000 rows

Query Completed

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File Edit View Query Database Server Tools Scripting Help

SQL SQL i d b Schemas Query 1 SQL File 4*

Filter objects

employee

- Tables
- Views
- Stored Procedures
- Functions

sys

Result Grid Filter Rows: Export: Wrap Cell Content:

#	EMP_ID	FIRST_NAME	LAST_NAME	GENDER	DEPT
1	E001	Arthur	Black	M	ALL
2	E005	Eric	Hoffman	M	FINANCE
3	E010	William	Butler	M	AUTOMOTIVE
4	E052	Dianna	Wilson	F	HEALTHCARE
5	E057	Dorothy	Wilson	F	HEALTHCARE
6	E083	Patrick	Voltz	M	HEALTHCARE
7	E103	Emily	Grove	F	FINANCE
8	E204	Karene	Nowak	F	AUTOMOTIVE
9	E245	Nian	Zhen	M	RETAIL
10	E260	Roy	Collins	M	RETAIL
11	E403	Steve	Hoffman	M	FINANCE
12	E428	Pete	Allen	M	AUTOMOTIVE
13	E478	David	Smith	M	RETAIL

Object Info Schema: employee

emp_record_table 1 Read Only

Query Completed

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SQL SQL i d b Schemas Query 1 SQL File 4*

Limit to 1000 rows

```
11 -- query to fetch employee details based on employee ratings
12 • SELECT EMP_ID, FIRST_NAME, LAST_NAME, GENDER, DEPT, EMP_RATING
13 FROM emp_record_table
14 WHERE EMP_RATING < 2;
15
16 • SELECT EMP_ID, FIRST_NAME, LAST_NAME, GENDER, DEPT, EMP_RATING
17 FROM emp record table
```

Result Grid Filter Rows: Export: Wrap Cell Content:

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

Object Info Schema: employee

emp_record_table 2

Read Only

Query Completed

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Schemas

Filter objects

employee

- Tables
- Views
- Stored Procedures
- Functions

sys

Query 1 SQL File 4*

WHERE EMP_RATING < 2;

• SELECT EMP_ID,FIRST_NAME,LAST_NAME,GENDER,DEPT,EMP_RATING
FROM emp_record_table
WHERE EMP_RATING>4;

• SELECT EMP_ID,FIRST_NAME,LAST_NAME,GENDER,DEPT,EMP_RATING

Result Grid Filter Rows: Export: Wrap Cell Content:

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

Object Info

Schema: employee

emp_record_table 3

Read Only

Query Completed

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Schemas

Filter objects

employee

- Tables
- Views
- Stored Procedures
- Functions

sys

Query 1 SQL File 4*

17 FROM emp_record_table
18 WHERE EMP_RATING>4;
19
20 • SELECT EMP_ID,FIRST_NAME,LAST_NAME,GENDER,DEPT,EMP_RATING
21 FROM emp_record_table
22 WHERE EMP_RATING BETWEEN 2 AND 4;

Result Grid Filter Rows: Export: Wrap Cell Content:

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

Object Info Schema: employee

emp_record_table 4 Read Only

Query Completed

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Schemas

Filter objects

employee

- Tables
- Views
- Stored Procedures
- Functions

sys

Object Info

Schema: employee

Result Grid

Filter Rows:

Export: Wrap Cell Content:

NAME

#	NAME
1	Eric Hoffman
2	Emily Grove
3	Steve Hoffman

Result 5

SQL File 4*

22 WHERE EMP_RATING BETWEEN 2 AND 4;

23

24 -- query to concat first and last name of department of finance

25 • SELECT CONCAT(FIRST_NAME, ' ', LAST_NAME) AS NAME

26 FROM emp_record_table

27 WHERE DEPT = 'FINANCE';

Limit to 1000 rows

Result Grid

Form Editor

Field Types

Query Stats

Execution Plan

Read Only

Query Completed

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File Edit View Query Database Server Tools Scripting Help

Schemas

Filter objects

employee

- Tables
- Views
- Stored Procedures
- Functions

sys

Object Info

Schema: employee

Query Completed

SQL File 4*

```
17 FROM emp_record_table
18 WHERE EMP_RATING>4;
19
20 • SELECT EMP_ID,FIRST_NAME, LAST_NAME, GENDER, DEPT, EMP_RATING
21 FROM emp_record_table
22 WHERE EMP_RATING BETWEEN 2 AND 4;
23
24 -- query to concat first and last name of department of finance
25 • SELECT CONCAT(FIRST_NAME, ' ', LAST_NAME) AS NAME
26 FROM emp_record_table
27 WHERE DEPT ='FINANCE';
28
29 -- query to fetch data of employee who have someone reporting them
30 • SELECT
31     m.EMP_ID,m.FIRST_NAME,m.LAST_NAME,m.ROLE,
32     m.EXP,m.DEPT,COUNT(e.EMP_ID) AS 'EMP_COUNT'
33
34 FROM
35     emp_record_table m
36
37 INNER JOIN emp_record_table e ON m.EMP_ID=e.MANAGER_ID AND e.EMP_ID != e.MANAGER_ID
38
39 GROUP BY m.EMP_ID,m.FIRST_NAME,m.LAST_NAME,m.ROLE,
40     m.EXP,m.DEPT
41 ORDER BY m.EMP_ID;
```

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File Edit View Query Database Server Tools Scripting Help

Schemas

SCHEMAS

Filter objects

employee

- Tables
- Views
- Stored Procedures
- Functions

sys

Query 1 SQL File 4*

Limit to 1000 rows

```
36
37     INNER JOIN emp_record_table e ON m.EMP_ID=e.MANAGER_ID AND e.EMP_ID != e.MANAGER_ID
38
39     GROUP BY m.EMP_ID,m.FIRST_NAME,m.LAST_NAME,m.ROLE,
40             m.EXP,m.DEPT
41     ORDER BY m.EMP_ID;
```

Result Grid Filter Rows: Export: Wrap Cell Content:

#	EMP_ID	FIRST_NAME	LAST_NAME	ROLE	EXP	DEPT	EMP_COUNT
1	E001	Arthur	Black	PRESIDENT	20	ALL	5
2	E083	Patrick	Voltz	MANAGER	15	HEALTHCARE	3
3	E103	Emily	Grove	MANAGER	14	FINANCE	2
4	E428	Pete	Allen	MANAGER	14	AUTOMOTIVE	3
5	E583	Janet	Hale	MANAGER	14	RETAIL	3
6	E612	Tracy	Norris	MANAGER	13	RETAIL	2

Object Info

Schema: employee

Result 7

Read Only

Query Completed

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File Edit View Query Database Server Tools Scripting Help

SQL SQL i d b Schemas Query 1 SQL File 4*

Limit to 1000 rows

Filter objects

employee

- Tables
- Views
- Stored Procedures
- Functions

sys

Object Info

Schema: employee

```
23
24  -- query to concat first and last name of department of finance
25 • SELECT CONCAT(FIRST_NAME, ' ', LAST_NAME) AS NAME
26   FROM emp_record_table
27   WHERE DEPT = 'FINANCE';
28
29  -- query to fetch data of employee who have someone reporting them
30 • SELECT
31    m.EMP_ID, m.FIRST_NAME, m.LAST_NAME, m.ROLE,
32    m.EXP, m.DEPT, COUNT(e.EMP_ID) AS 'EMP_COUNT'
33  FROM emp_record_table m
34  INNER JOIN emp_record_table e ON m.EMP_ID=e.MANAGER_ID AND e.EMP_ID != e.MANAGER_ID
35  GROUP BY m.EMP_ID, m.FIRST_NAME, m.LAST_NAME, m.ROLE,
36    m.EXP, m.DEPT
37  ORDER BY m.EMP_ID;
38
39  -- employee from finance and healthcare department
40 • SELECT e.EMP_ID, e.FIRST_NAME, e.LAST_NAME, DEPT, EXP
41   FROM emp_record_table e
42   WHERE e.DEPT='FINANCE'
43 UNION
44 SELECT m.EMP_ID, m.FIRST_NAME, m.LAST_NAME, DEPT, EXP
45   FROM emp_record_table m
46   WHERE m.DEPT='HEALTHCARE';
47
```

Query Completed

labsuser

File Edit View Query Database Server Tools Scripting Help

Schemas

Filter objects

employee

- Tables
- Views
- Stored Procedures
- Functions

sys

Query 1 SQL File 4*

Limit to 1000 rows

```
40 • SELECT e.EMP_ID,e.FIRST_NAME,e.LAST_NAME,DEPT,EXP
41 FROM emp_record_table e
42 WHERE e.DEPT='FINANCE'
43 UNION
44 SELECT m.EMP_ID,m.FIRST_NAME,m.LAST_NAME,DEPT,EXP
45 FROM emp_record_table m
46 WHERE m.DEPT='HEALTHCARE';
```

Result Grid Filter Rows: Export: Wrap Cell Content:

#	EMP_ID	FIRST_NAME	LAST_NAME	DEPT	EXP
1	E005	Eric	Hoffman	FINANCE	11
2	E103	Emily	Grove	FINANCE	14
3	E403	Steve	Hoffman	FINANCE	4
4	E052	Dianna	Wilson	HEALTHCARE	6
5	E057	Dorothy	Wilson	HEALTHCARE	9
6	E083	Patrick	Voltz	HEALTHCARE	15
7	E505	Chad	Wilson	HEALTHCARE	5

Object Info

Schema: employee

Result 10 Read Only

Query Completed

File Edit View Query Database Server Tools Scripting Help

SQL File 4*

```
48 -- employee details with max emp rating for particular department
49 • SELECT EMP_ID,FIRST_NAME,LAST_NAME,ROLE,DEPT,EMP_RATING, MAX(EMP_RATING) AS MAX_EMP_RATING
50 FROM emp_record_table
51 GROUP BY EMP_ID,FIRST_NAME,LAST_NAME,ROLE,DEPT,EMP_RATING
52 ORDER BY DEPT;
53
```

Result Grid Filter Rows: Export: Wrap Cell Content:

#	EMP_ID	FIRST_NAME	LAST_NAME	ROLE	DEPT	EMP_RATING	MAX_EMP_RATING
1	E001	Arthur	Black	PRESIDENT	ALL	5	5
2	E010	William	Butler	LEAD DATA SCIENTIST	AUTOMOTIVE	2	2
3	E204	Karene	Nowak	SENIOR DATA SCIENTIST	AUTOMOTIVE	5	5
4	E428	Pete	Allen	MANAGER	AUTOMOTIVE	4	4
5	E532	Claire	Brennan	ASSOCIATE DATA SCIENTIST	AUTOMOTIVE	1	1
6	E005	Eric	Hoffman	LEAD DATA SCIENTIST	FINANCE	3	3
7	E103	Emily	Grove	MANAGER	FINANCE	4	4
8	E403	Steve	Hoffman	ASSOCIATE DATA SCIENTIST	FINANCE	3	3
9	E052	Dianna	Wilson	SENIOR DATA SCIENTIST	HEALTHCARE	5	5
10	E057	Dorothy	Wilson	SENIOR DATA SCIENTIST	HEALTHCARE	1	1
11	E083	Patrick	Voltz	MANAGER	HEALTHCARE	5	5
12	E505	Chad	Wilson	ASSOCIATE DATA SCIENTIST	HEALTHCARE	2	2
13	E640	Jenifer	Jhones	JUNIOR DATA SCIENTIST	RETAIL	4	4

Object Info Schema: employee

Result 11 Read Only

Query Completed

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File Edit View Query Database Server Tools Scripting Help

Schemas

Filter objects

employee

- Tables
- Views
- Stored Procedures
- Functions

sys

SQL File 4*

-- minimum and maximum salary for each role

```
54 -- minimum and maximum salary for each role
55 • SELECT ROLE,
56     MIN(SALARY) AS MIN_SALARY,
57     MAX(SALARY) AS MAX_SALRY
58 FROM emp_record_table
59 GROUP BY ROLE;
60
```

Result Grid

#	ROLE	MIN_SALARY	MAX_SALRY
1	PRESIDENT	16500	16500
2	LEAD DATA SCIENTIST	8500	9000
3	SENIOR DATA SCIENTIST	5500	7700
4	MANAGER	8500	11000
5	ASSOCIATE DATA SCIENTIST	4000	5000
6	JUNIOR DATA SCIENTIST	2800	3000

Object Info

Schema: employee

Result 12

Read Only

Query Completed

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File Edit View Query Database Server Tools Scripting Help

SQL File 4*

Limit to 1000 rows

Filter objects

employee

- Tables
- Views
- Stored Procedures
- Functions

sys

Result Grid

Filter Rows:

Export: Wrap Cell Content:

#	EMP_ID	FIRST_NAME	DEPT	EMP_RATING	EXP	EMP_RANK	EMP_DENSE_RANK
1	E640	Jenifer	RETAIL	4	1	1	1
2	E620	Katrina	RETAIL	1	2	2	2
3	E532	Claire	AUTOMOTIVE	1	3	3	3
4	E478	David	RETAIL	4	3	3	3
5	E403	Steve	FINANCE	3	4	5	4
6	E505	Chad	HEALTHCARE	2	5	6	5
7	E052	Dianna	HEALTHCARE	5	6	7	6
8	E245	Nian	RETAIL	2	6	7	6
9	E260	Roy	RETAIL	3	7	9	7
10	E204	Karene	AUTOMOTIVE	5	8	10	8
11	E057	Dorothy	HEALTHCARE	1	9	11	9
12	E005	Eric	FINANCE	3	11	12	10
13	E010	William	AUTOMOTIVE	2	12	13	11

Object Info

Schema: employee

Result 13

Read Only

Query Completed

File Edit View Query Database Server Tools Scripting Help

SQL SQL i Databases Schemas

Filter objects

employee

Tables Views EMPLOYEE_BY_COUNTRY Stored Procedures Functions

sys

Query 1 SQL File 4*

Limit to 1000 rows

FROM emp_record_table;

-- creating view for country with employee salary more than 6000

CREATE VIEW EMPLOYEE_BY_COUNTRY AS

SELECT EMP_ID,FIRST_NAME,SALARY,COUNTRY

FROM emp_record_table

WHERE SALARY > 6000

ORDER BY COUNTRY;

Action Output

#	Time	Action	Message	Duration / Fetch
52	16:46:34	SELECT EMP_ID,FIRST_NAME,LAST_NAME,GENDER,DEPT,...	4 row(s) returned	0.00034 sec / 0.000...
53	16:47:11	SELECT EMP_ID,FIRST_NAME,LAST_NAME,GENDER,DEPT,...	12 row(s) returned	0.00037 sec / 0.000...
54	16:48:29	SELECT CONCAT(FIRST_NAME, ' ', LAST_NAME) AS NAME F...	3 row(s) returned	0.00035 sec / 0.000...
55	16:50:11	SELECT m.EMP_ID,m.FIRST_NAME,m.LAST_NAME,m....	6 row(s) returned	0.00075 sec / 0.000...
56	16:50:31	SELECT m.EMP_ID,m.FIRST_NAME,m.LAST_NAME,m....	6 row(s) returned	0.00063 sec / 0.000...
57	16:51:28	SELECT m.EMP_ID,m.FIRST_NAME,m.LAST_NAME,m....	6 row(s) returned	0.00083 sec / 0.000...
58	16:53:01	SELECT e.EMP_ID,e.FIRST_NAME,e.LAST_NAME,DEPT,EXP ...	7 row(s) returned	0.00046 sec / 0.000...
59	16:53:52	SELECT e.EMP_ID,e.FIRST_NAME,e.LAST_NAME,DEPT,EXP ...	7 row(s) returned	0.00058 sec / 0.000...
60	16:56:08	SELECT EMP_ID,FIRST_NAME,LAST_NAME,ROLE,DEPT,EM...	19 row(s) returned	0.00048 sec / 0.000...
61	16:57:26	SELECT ROLE, MIN(SALARY) AS MIN_SALARY, MA...	6 row(s) returned	0.00041 sec / 0.000...
62	16:58:57	SELECT EMP_ID,FIRST_NAME,DEPT,EMP_RATING,EXP, RA...	19 row(s) returned	0.00046 sec / 0.000...
63	17:01:46	CREATE VIEW EMPLOYEE_BY_COUNTRY AS SELECT EMP_I...	0 row(s) affected	0.028 sec

Object Info

View: EMPLOYEE_BY_COUNTRY

Query Completed

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Schemas

Filter objects

employee

- Tables
- Views

EMPLOYEE_BY_COUNTRY

Stored Procedures

Functions

sys

Object Info

View:
EMPLOYEE_BY_COUNTRY

EMPLOYEE_BY_COUNTRY 14

Read Only

Query Completed

SQL File 4*

71 WHERE SALARY > 6000
72 ORDER BY COUNTRY;
73
74 • SELECT * FROM EMPLOYEE_BY_COUNTRY;
75

Result Grid

#	EMP_ID	FIRST_NAME	SALARY	COUNTRY
1	E103	Emily	10500	CANADA
2	E245	Nian	6500	CHINA
3	E583	Janet	10000	COLOMBIA
4	E010	William	9000	FRANCE
5	E204	Karene	7500	GERMANY
6	E428	Pete	11000	GERMANY
7	E260	Roy	7000	INDIA
8	E612	Tracy	8500	INDIA
9	E001	Arthur	16500	USA
10	E005	Eric	8500	USA
11	E057	Dorothy	7700	USA
12	E083	Patrick	9500	USA

Result Grid

Form Editor

Field Types

Query Stats

Execution Plan

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SQL File 4*

Limit to 1000 rows

```
76 -- employee with experience more than 10 years
77 • SELECT EMP_ID,FIRST_NAME,LAST_NAME,EXP,DEPT,SALARY
78 FROM emp_record_table
79 WHERE EXP>10;
80
```

Result Grid

#	EMP_ID	FIRST_NAME	LAST_NAME	EXP	DEPT	SALARY
1	E001	Arthur	Black	20	ALL	16500
2	E005	Eric	Hoffman	11	FINANCE	8500
3	E010	William	Butler	12	AUTOMOTIVE	9000
4	E083	Patrick	Voltz	15	HEALTHCARE	9500
5	E103	Emily	Grove	14	FINANCE	10500
6	E428	Pete	Allen	14	AUTOMOTIVE	11000
7	E583	Janet	Hale	14	RETAIL	10000
8	E612	Tracy	Norris	13	RETAIL	8500

Object Info

View:
EMPLOYEE BY COUNTRY

emp_record_table 15

Read Only

Query Completed

File Edit View Query Database Server Tools Scripting Help

SQL SQL Scripts Database Objects Search

Schemas Query 1 SQL File 4*

Limit to 1000 rows

```

79 WHERE EXP>10;
80
81 -- stored procedure of employee with expierence more than 3 years
82 DELIMITER $$*
83 • CREATE PROCEDURE EXP_MORE_THAN3()
84 BEGIN
85     SELECT * FROM emp_record_table where EXP>3;
86
87 END $$*
88

```

Action Output

#	Time	Action	Message	Duration / Fetch
55	16:50:11	SELECT m.EMP_ID,m.FIRST_NAME,m.LAST_NAME,m....	6 row(s) returned	0.00075 sec / 0.000...
56	16:50:31	SELECT m.EMP_ID,m.FIRST_NAME,m.LAST_NAME,m....	6 row(s) returned	0.00063 sec / 0.000...
57	16:51:28	SELECT m.EMP_ID,m.FIRST_NAME,m.LAST_NAME,m....	6 row(s) returned	0.00083 sec / 0.000...
58	16:53:01	SELECT e.EMP_ID,e.FIRST_NAME,e.LAST_NAME,DEPT,EXP ...	7 row(s) returned	0.00046 sec / 0.000...
59	16:53:52	SELECT e.EMP_ID,e.FIRST_NAME,e.LAST_NAME,DEPT,EXP ...	7 row(s) returned	0.00058 sec / 0.000...
60	16:56:08	SELECT EMP_ID,FIRST_NAME,LAST_NAME,ROLE,DEPT,EM... 19 row(s) returned		0.00048 sec / 0.000...
61	16:57:26	SELECT ROLE, MIN(SALARY) AS MIN_SALARY, MA... 6 row(s) returned		0.00041 sec / 0.000...
62	16:58:57	SELECT EMP_ID,FIRST_NAME,DEPT,EMP_RATING,EXP, RA... 19 row(s) returned		0.00046 sec / 0.000...
63	17:01:46	CREATE VIEW EMPLOYEE_BY_COUNTRY AS SELECT EMP_I... 0 row(s) affected		0.028 sec
64	17:02:17	SELECT * FROM EMPLOYEE_BY_COUNTRY LIMIT 0, 1000 12 row(s) returned		0.00054 sec / 0.000...
65	17:03:35	SELECT EMP_ID,FIRST_NAME,LAST_NAME,EXP,DEPT,SALA... 8 row(s) returned		0.00034 sec / 0.000...
66	17:05:07	CREATE PROCEDURE EXP_MORE_THAN3() BEGIN SELE... 0 row(s) affected		0.028 sec

Object Info

Procedure: EXP_MORE_THAN3

Query Completed

File Edit View Query Database Server Tools Scripting Help

SQL File 4*

Limit to 1000 rows

86
87 END \$\$
88
89
90 • CALL EXP_MORE_THAN3();

Result Grid Filter Rows: Export: Wrap Cell Content:

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

Result 16

Read Only

Query Completed

File Edit View Query Database Server Tools Scripting Help

SQL File 4*

Limit to 1000 rows

SCHEMAS

Filter objects

employee

- Tables
- Views
- Stored Procedures
 - EXP_MORE_THAN3
- jobprofile

Functions

sys

Object Info

Procedure: jobprofile

```
84 BEGIN
85     SELECT * FROM emp_record_table where EXP>3;
86
87 END $$

88

89

90 CALL EXP_MORE_THAN3();

91

92 -- query to display employee role based on their experience
93 DROP PROCEDURE IF EXISTS jobprofile;
94 DELIMITER $$

95 • CREATE PROCEDURE jobprofile()
96 BEGIN
97     SELECT DISTINCT ROLE,EXP FROM emp_record_table WHERE EXP <=2
98     UNION
99     SELECT DISTINCT ROLE, EXP FROM emp_record_table WHERE EXP BETWEEN 3 AND 5
100    UNION
101    SELECT DISTINCT ROLE,EXP FROM emp_record_table WHERE EXP BETWEEN 6 AND 10
102    UNION
103    SELECT DISTINCT ROLE,EXP FROM emp_record_table WHERE EXP BETWEEN 11 AND 12
104    UNION
105    SELECT DISTINCT ROLE,EXP FROM emp_record_table WHERE EXP BETWEEN 13 AND 16;
106 END $$

107

108 • CALL jobprofile();
```

Query Completed

labsuser

File Edit View Query Database Server Tools Scripting Help

Schemas

SCHEMAS Filter objects

employee

- Tables
- Views
- Stored Procedures

EXP_MORE_THAN3

jobprofile

Functions

sys

Object Info

Procedure: jobprofile

Result Grid Filter Rows: Export: Wrap Cell Content:

Result 17 Read Only

Query Completed

```
104 UNION
105 SELECT DISTINCT ROLE, EXP FROM emp_record_table WHERE EXP BETWEEN 13 AND 16;
106 END $$
```

107

```
108 • CALL jobprofile();
```

#	ROLE	EXP
1	JUNIOR DATA SCIENTIST	2
2	JUNIOR DATA SCIENTIST	1
3	ASSOCIATE DATA SCIENTIST	4
4	ASSOCIATE DATA SCIENTIST	3
5	ASSOCIATE DATA SCIENTIST	5
6	SENIOR DATA SCIENTIST	6
7	SENIOR DATA SCIENTIST	9
8	SENIOR DATA SCIENTIST	8
9	SENIOR DATA SCIENTIST	7
10	LEAD DATA SCIENTIST	11
11	LEAD DATA SCIENTIST	12
12	MANAGER	15
13	MANAGER	14
14	MANAGER	13

Result Grid Form Editor Field Types Query Stats Execution Plan

labsuser

File Edit View Query Database Server Tools Scripting Help

Schemas

Filter objects

employee

- Tables
- Views
- Stored Procedures

EXP_MORE_THAN3

jobprofile

- Functions

sys

Object Info

Procedure: jobprofile

Result Grid

Filter Rows: Export: Wrap Cell Content:

#	Table	Non_unique	Key_name	Seq_in_index	Column_name	Collation	Cardinality	Sub_part	Packed	Null	Index_type	Comment	Last_update
1	emp_record_table	1	idx_first_name	1	FIRST_NAME	A	19		NULL	NULL	YES	BTREE	2023-09-18 10:45:18

Result 18

Query Completed

Read Only

SQL File 4*

```
108 • CALL jobprofile();
109
110 -- creating index and fatching first name
111 CREATE INDEX idx_first_name ON emp_record_table(FIRST_NAME);
112 SHOW INDEXES FROM emp_record_table;
113
```

labsuser

File Edit View Query Database Server Tools Scripting Help

Schemas

Filter objects

employee

- Tables
- Views
- Stored Procedures

EXP_MORE_THAN3

jobprofile

Functions

sys

Object Info

Procedure: jobprofile

emp_record_table 20

SQL File 4*

Limit to 1000 rows

116
117
118 SELECT FIRST_NAME
119 FROM emp_record_table
120 WHERE FIRST_NAME = 'Eric';

Result Grid

FIRST_NAME

1 Eric

Read Only

Query Completed

The screenshot shows a SQL developer interface with the following details:

- Toolbar:** Includes icons for Home, File, Edit, View, Query, Database, Server, Tools, Scripting, Help, and various file operations.
- Schemas:** A tree view showing the schema structure. Under the 'employee' schema, there are tables, views, and stored procedures. A procedure named 'EXP_MORE_THAN3' is also listed under 'jobprofile'.
- Object Info:** Shows the current procedure being used is 'jobprofile'.
- Query Editor:** Contains two tabs: 'Query 1' and 'SQL File 4*'. The 'SQL File 4*' tab is active, displaying the following SQL code:

```
116  
117  
118   SELECT FIRST_NAME  
119   FROM emp_record_table  
120   WHERE FIRST_NAME = 'Eric';
```
- Result Grid:** Shows the output of the query. The column header is '# FIRST_NAME' and the result is a single row with the value 'Eric'.
- Right Panel:** A sidebar with icons for Result Grid, Form Editor, Field Types, Query Stats, and Execution Plan.
- Status Bar:** At the bottom right, it says 'Read Only'.
- Message Bar:** At the bottom left, it says 'Query Completed'.

File Edit View Query Database Server Tools Scripting Help

SQL File 4*

```
120 WHERE FIRST_NAME = 'Eric';
121
122 -- calculating bonus based on employee ratings and experience
123 SELECT EMP_ID, FIRST_NAME, LAST_NAME, EMP_RATING, SALARY, EMP_RATING*SALARY*0.05 AS BONUS
124 FROM emp_record_table;
```

Result Grid Filter Rows: Export: Wrap Cell Content:

#	EMP_ID	FIRST_NAME	LAST_NAME	EMP_RATING	SALARY	BONUS
1	E001	Arthur	Black	5	16500	4125.00
2	E005	Eric	Hoffman	3	8500	1275.00
3	E010	William	Butler	2	9000	900.00
4	E052	Dianna	Wilson	5	5500	1375.00
5	E057	Dorothy	Wilson	1	7700	385.00
6	E083	Patrick	Voltz	5	9500	2375.00
7	E103	Emily	Grove	4	10500	2100.00
8	E204	Karene	Nowak	5	7500	1875.00
9	E245	Nian	Zhen	2	6500	650.00
10	E260	Roy	Collins	3	7000	1050.00
11	E403	Steve	Hoffman	3	5000	750.00
12	E428	Pete	Allen	4	11000	2200.00
13	E478	David	Smith	4	4000	800.00
14	E505	Chad	Wilson	2	5000	500.00

Object Info Procedure: jobprofile

Result 21 Read Only

Query Completed

File Edit View Query Database Server Tools Scripting Help

SQL File 4*

```
126 -- average salary based on continent and country
127 SELECT EMP_ID, FIRST_NAME, LAST_NAME, COUNTRY, CONTINENT,
128 AVG(SALARY) OVER(PARTITION BY CONTINENT ORDER BY COUNTRY)
129 FROM emp_record_table;
130
131 -- THANK YOU, PLEASE SHARE YOUR VALUABLE FEEDBACK !!
```

Result Grid Filter Rows: Export: Wrap Cell Content:

#	EMP_ID	FIRST_NAME	LAST_NAME	COUNTRY	CONTINENT	AVG(SALARY) OVER(PARTITION BY CONTINENT ORDER BY COUNTRY)
1	E245	Nian	Zhen	CHINA	ASIA	6500.0000
2	E620	Katrina	Allen	INDIA	ASIA	6250.0000
3	E612	Tracy	Norris	INDIA	ASIA	6250.0000
4	E260	Roy	Collins	INDIA	ASIA	6250.0000
5	E010	William	Butler	FRANCE	EUROPE	9000.0000
6	E532	Claire	Brennan	GERMANY	EUROPE	7950.0000
7	E204	Karene	Nowak	GERMANY	EUROPE	7950.0000
8	E428	Pete	Allen	GERMANY	EUROPE	7950.0000
9	E052	Dianna	Wilson	CANADA	NORTH AMERICA	7000.0000
10	E103	Emily	Grove	CANADA	NORTH AMERICA	7000.0000
11	E505	Chad	Wilson	CANADA	NORTH AMERICA	7000.0000
12	E005	Eric	Hoffman	USA	NORTH AMERICA	8525.0000
13	E403	Steve	Hoffman	USA	NORTH AMERICA	8525.0000
14	E083	Patrick	Voltz	USA	NORTH AMERICA	8525.0000

Result 22

Object Info

Procedure: jobprofile

Read Only

Query Completed