

SQL- PROJECT

Employee Performance Mapping

Problem Statement 1:

Create a database named employee_performance_mapping, then import data_science_team.csv proj_table.csv and emp_record_table.csv into the employee database from the given resources.

SQL QUERY :- CREATE DATABASE employee_performance_mapping;

Output:-

```
6 05:57:18 create database employee_performance_mapping 1 row(s) affected
```

Importing 3 tables into employee_performance_mapping the data base - A)data_science_team.csv, B)proj_table.csv, C)emp_record_table.csv

SQL QUERY:-

```
SELECT * FROM data_science_team;
```

```
SELECT * FROM emp_record_table;
```

```
SELECT * FROM proj_table;
```

Output:-

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

EMP_ID	FIRST_NAME	LAST_NAME	GENDER	ROLE	DEPT	EXP	COUNTRY	CONTINENT
E001	Arthur	Black	M	PRESIDENT	ALL	20	USA	NORTH AMERICA
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
E083	Patrick	Voltz	M	MANAGER	HEALTHCARE	15	USA	NORTH AMERICA
E103	Emily	Grove	F	MANAGER	FINANCE	14	CANADA	NORTH AMERICA
E204	Karene	Nowak	F	SENIOR DATA SCIENTIST	AUTOMOTIVE	8	GERMANY	EUROPE

Proj_ID	PROJ_NAME	DOMAIN	START_DATE	CLOSURE_DATE	DEV_QTR	STATUS
P103	Drug Discovery	HEALTHCARE	04-06-2021	6/20/2021	Q1	DONE
P105	Fraud Detection	FINANCE	04-11-2021	6/25/2021	Q1	DONE
P109	Market Basket Analysis	RETAIL	04-12-2021	6/30/2021	Q1	DELAYED
P204	Supply Chain Management	AUTOMOTIVE	07/15/2021	9/28/2021	Q2	WIP
P302	Early Detection of Lung Cancer	HEALTHCARE	10-08-2021	12/18/2021	Q3	YTS
P406	Customer Sentiment Analysis	RETAIL	07-09-2021	9/24/2021	Q2	WIP
*	NULL	NULL	NULL	NULL	NULL	NULL

Problem Statement 2:

Write a query to fetch EMP_ID, FIRST_NAME, LAST_NAME, GENDER, and DEPARTMENT from the employee record table, and make a list of employees and details of their department.

SQL QUERY:- `SELECT EMP_ID, FIRST_NAME, LAST_NAME, GENDER, DEPT FROM emp_record_table;`

Output:-

Result Grid					
	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
emp_record_table 4					

Problem Statement 3:

Write a query to fetch EMP_ID, FIRST_NAME, LAST_NAME, GENDER, DEPARTMENT, and EMP_RATING if the EMP_RATING is:

- 1) less than two
- 2) greater than four
- 3) between two and four

SQL QUERY:-

```
SELECT EMP_ID, FIRST_NAME, LAST_NAME, GENDER, DEPT, emp_rating,  
CASE  
    WHEN emp_rating < 2 THEN 'Less than 2'  
    WHEN emp_rating < 4 THEN 'Between two and four'  
    ELSE 'Greater than 4'  
END AS emp_rating_Status  
FROM emp_record_table ;
```

Output:-

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

	EMP_ID	FIRST_NAME	LAST_NAME	GENDER	DEPT	emp_rating	emp_rating_Status
▶	E001	Arthur	Black	M	ALL	5	Greater than 4
	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 4
	E057	Dorothy	Wilson	F	HEALTHCARE	1	Less than 2
	E083	Patrick	Voltz	M	HEALTHCARE	5	Greater than 4
	E103	Emily	Grove	F	FINANCE	4	Greater than 4
	E204	Karene	Nowak	F	AUTOMOTIVE	5	Greater than 4

Result 5 ×

Problem Statement 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.

SQL QUERY:-

```
SELECT * FROM emp_record_table;
```

```
SELECT CONCAT(First_NAME, ' ', LAST_NAME) AS 'NAME' FROM emp_record_table WHERE DEPT = 'FINANCE';
```

Output:-

Result Grid | Filter

	NAME
▶	Eric Hoffman
	Emily Grove
	Steve Hoffman

Problem Statement 5:

Write a query to list down all the employees from the healthcare and finance departments using union.
Take data from the employee record table.

SQL QUERY:-

```
SELECT * FROM emp_record_table WHERE Dept = 'healthcare'
```

UNION

```
SELECT * FROM emp_record_table WHERE Dept = 'finance';
```

Output:-

Result Grid						Filter Rows:	Export:	Wrap Cell Content:
	EMP_ID	FIRST_NAME	LAST_NAME	GENDER	ROLE	DEPT		
▶	E052	Dianna	Wilson	F	SENIOR DATA SCIENTIST	HEALTHCARE		
	E057	Dorothy	Wilson	F	SENIOR DATA SCIENTIST	HEALTHCARE		
	E083	Patrick	Voltz	M	MANAGER	HEALTHCARE		
	E505	Chad	Wilson	M	ASSOCIATE DATA SCIENTIST	HEALTHCARE		
	E005	Eric	Hoffman	M	LEAD DATA SCIENTIST	FINANCE		
	E103	Emily	Grove	F	MANAGER	FINANCE		
	E403	Steve	Hoffman	M	ASSOCIATE DATA SCIENTIST	FINANCE		

Result 9 ×

Problem Statement 6:

Write a query to list down employee details such as EMP_ID, FIRST_NAME, LAST_NAME, ROLE, DEPARTMENT, and EMP_RATING grouped by dept. Also include the respective employee rating along with the max emp rating for the department.

SQL QUERY:-

```
SELECT EMP_ID, FIRST_NAME, LAST_NAME, ROLE, DEPT, EMP_RATING,  
       MAX(EMP_RATING) OVER(PARTITION BY dept) AS Max_Emp_Rating  
  FROM emp_record_table;
```

Output:-

Result Grid						Filter Rows:	Export:	Wrap Cell Content:
	EMP_ID	FIRST_NAME	LAST_NAME	ROLE	DEPT	EMP_RATING	Max_Emp_Rating	
▶	E001	Arthur	Black	PRESIDENT	ALL	5	5	
	E010	William	Butler	LEAD DATA SCIENTIST	AUTOMOTIVE	2	5	
	E204	Karene	Nowak	SENIOR DATA SCIENTIST	AUTOMOTIVE	5	5	
	E428	Pete	Allen	MANAGER	AUTOMOTIVE	4	5	
	E532	Claire	Brennan	ASSOCIATE DATA SCIENTIST	AUTOMOTIVE	1	5	
	E005	Eric	Hoffman	LEAD DATA SCIENTIST	FINANCE	3	4	
	E103	Emily	Grove	MANAGER	FINANCE	4	4	
	E403	Steve	Hoffman	ASSOCIATE DATA SCIENTIST	FINANCE	3	4	

Result 10 ×

Read

Problem Statement 7:

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

SQL QUERY:-

```
SELECT EMP_ID, FIRST_NAME, LAST_NAME, GENDER, DEPT, ROLE, SALARY,  
       max(salary) OVER(PARTITION BY ROLE) as Max_Salary,  
       min(salary) OVER(PARTITION BY ROLE) AS Min_Salary  
  FROM emp_record_table;
```

Output:-

	EMP_ID	FIRST_NAME	LAST_NAME	GENDER	DEPT	ROLE	SALARY	Max_Salary	Min_Salary
▶	E403	Steve	Hoffman	M	FINANCE	ASSOCIATE DATA SCIENTIST	5000	5000	4000
	E478	David	Smith	M	RETAIL	ASSOCIATE DATA SCIENTIST	4000	5000	4000
	E505	Chad	Wilson	M	HEALTHCARE	ASSOCIATE DATA SCIENTIST	5000	5000	4000
	E532	Claire	Brennan	F	AUTOMOTIVE	ASSOCIATE DATA SCIENTIST	4300	5000	4000
	E620	Katrina	Allen	F	RETAIL	JUNIOR DATA SCIENTIST	3000	3000	2800
	E640	Jenifer	Jhones	F	RETAIL	JUNIOR DATA SCIENTIST	2800	3000	2800
	E005	Eric	Hoffman	M	FINANCE	LEAD DATA SCIENTIST	8500	9000	8500
	E010	William	Butler	M	AUTOMOTIVE	LEAD DATA SCIENTIST	9000	9000	8500

Problem Statement 8:

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

SQL QUERY:-

```
SELECT EMP_ID, FIRST_NAME, LAST_NAME, GENDER, ROLE, DEPT, COUNTRY, CONTINENT, SALARY, EMP_RATING, EXP,  
DENSE_RANK() OVER(ORDER BY exp DESC) AS Rank_based_on_exp FROM emp_record_table;
```

Output:-

EMP_ID	FIRST_NAME	LAST_NAME	GENDER	ROLE	DEPT	COUNTRY	CONTINENT	SALARY	EMP_RATING	EXP	Rank_based_on_exp
E001	Arthur	Black	M	PRESIDENT	ALL	USA	NORTH AMERICA	16500	5	20	1
E083	Patrick	Voltz	M	MANAGER	HEALTHCARE	USA	NORTH AMERICA	9500	5	15	2
E103	Emily	Grove	F	MANAGER	FINANCE	CANADA	NORTH AMERICA	10500	4	14	3
E428	Pete	Allen	M	MANAGER	AUTOMOTIVE	GERMANY	EUROPE	11000	4	14	3
E583	Janet	Hale	F	MANAGER	RETAIL	COLOMBIA	SOUTH AMERICA	10000	2	14	3
E612	Tracy	Norris	F	MANAGER	RETAIL	INDIA	ASIA	8500	4	13	4
E010	William	Butler	M	LEAD DATA SCIENTIST	AUTOMOTIVE	FRANCE	EUROPE	9000	2	12	5
E005	Eric	Hoffman	M	LEAD DATA SCIENTIST	FINANCE	USA	NORTH AMERICA	8500	3	11	6

Problem Statement 9:

Write a query to create a view that displays employees in various countries whose salary is more than six thousand. Take data from the employee record table.

SQL QUERY:-

```
CREATE VIEW Emp_country AS
```

```
SELECT emp_id,first_name,last_name,salary,country FROM emp_record_table WHERE salary >6000  
ORDER BY COUNTRY;
```

Now to check the view is created successfully imported, we will use the below query.

```
SELECT * FROM emp_country
```

Output:-

emp_id	first_name	last_name	salary	country
E103	Emily	Grove	10500	CANADA
E245	Nian	Zhen	6500	CHINA
E583	Janet	Hale	10000	COLOMBIA
E010	William	Butler	9000	FRANCE
E204	Karene	Nowak	7500	GERMANY
E428	Pete	Allen	11000	GERMANY
E260	Roy	Collins	7000	INDIA
E612	Tracy	Norris	8500	INDIA