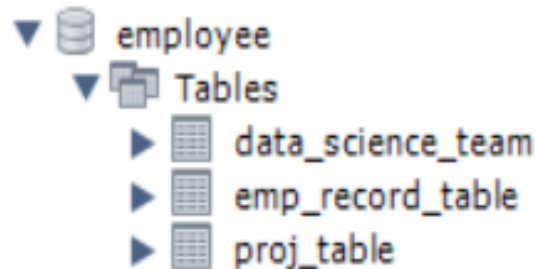


SQL PROJECT

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. 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.

USE EMPLOYEE;

```
SELECT EMP_ID, FIRST_NAME, LAST_NAME, GENDER, DEPT
```

```
FROM emp_record_table;
```

OUTPUT

	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

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

- less than two

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

```
FROM emp_record_table
```

```
WHERE EMP_RATING < 2;
```

OUTPUT

	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

- greater than four

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

OUTPUT

	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

- between two and four

```
SELECT EMP_ID, FIRST_NAME, LAST_NAME, GENDER, DEPT, EMP_RATING
FROM emp_record_table
WHERE EMP_RATING BETWEEN 2 AND 4;
```

OUTPUT

	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.

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

OUTPUT

	NAME
▶	Eric Hoffman
	Emily Grove
	Steve Hoffman

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.

```
SELECT EMP_ID, FIRST_NAME, LAST_NAME, GENDER, DEPT
FROM emp_record_table
WHERE DEPT = 'Healthcare'

UNION

SELECT EMP_ID, FIRST_NAME, LAST_NAME, GENDER, DEPT
FROM emp_record_table
WHERE DEPT = 'Finance';
```

OUTPUT

	EMP_ID	FIRST_NAME	LAST_NAME	GENDER	DEPT
▶	E052	Dianna	Wilson	F	HEALTHCARE
	E057	Dorothy	Wilson	F	HEALTHCARE
	E083	Patrick	Voltz	Wilson	HEALTHCARE
	E505	Chad	Wilson	M	HEALTHCARE
	E005	Eric	Hoffman	M	FINANCE
	E103	Emily	Grove	F	FINANCE
	E403	Steve	Hoffman	M	FINANCE

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.

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

OUTPUT

	EMP_ID	FIRST_NAME	LAST_NAME	ROLE	DEPT	EMP_RATING	MAX_DEPT_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	MANAGER	3	4
	E052	Dianna	Wilson	SENIOR DATA SCIENTIST	HEALTHCARE	5	5
	E057	Dorothy	Wilson	SENIOR DATA SCIENTIST	HEALTHCARE	1	5
	E083	Patrick	Voltz	MANAGER	HEALTHCARE	5	5
	E505	Chad	Wilson	ASSOCIATE DATA SCIENTIST	HEALTHCARE	2	5
	E245	Nian	Zhen	SENIOR DATA SCIENTIST	RETAIL	2	4
	E260	Roy	Collins	SENIOR DATA SCIENTIST	RETAIL	3	4
	E478	David	Smith	ASSOCIATE DATA SCIENTIST	RETAIL	4	4
	E583	Janet	Hale	MANAGER	RETAIL	2	4
	E612	Tracy	Norris	MANAGER	RETAIL	4	4
	E620	Katrina	Allen	JUNIOR DATA SCIENTIST	RETAIL	1	4
	E640	Jenifer	Jhones	JUNIOR DATA SCIENTIST	RETAIL	4	4

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

```
SELECT ROLE, MIN(SALARY) AS MIN_SALARY, MAX(SALARY) AS MAX_SALARY
FROM emp_record_table GROUP BY ROLE;
```

OUTPUT

	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

8. 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, EXP,
RANK() OVER (ORDER BY EXP DESC) AS EXPERIENCE_RANK
FROM emp_record_table;
```

OUTPUT

	EMP_ID	FIRST_NAME	LAST_NAME	EXP	EXPERIENCE_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. 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 HighEmployeeSalary AS
SELECT EMP_ID, FIRST_NAME, LAST_NAME, COUNTRY, SALARY
FROM emp_record_table
WHERE SALARY > 6000;
```

OUTPUT

```

employee
├── Tables
│   ├── data_science_team
│   ├── emp_record_table
│   └── proj_table
└── Views
    └── highemployeessalary
        ├── EMP_ID
        ├── FIRST_NAME
        ├── LAST_NAME
        ├── COUNTRY
        └── SALARY
  
```

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

```
SELECT EMP_ID, FIRST_NAME, LAST_NAME, EXP
FROM emp_record_table
WHERE EXP > ( SELECT MAX(EXP) FROM emp_record_table WHERE EXP <= 10);
```

OUTPUT

	EMP_ID	FIRST_NAME	LAST_NAME	EXP
▶	E001	Arthur	Black	20
	E005	Eric	Hoffman	11
	E010	William	Butler	12
	E083	Patrick	Voltz	15
	E103	Emily	Grove	14
	E428	Pete	Allen	14
	E583	Janet	Hale	14
	E612	Tracy	Norris	13

11. 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.

```
CREATE PROCEDURE GetExperiencedEmployees()
BEGIN
    SELECT EMP_ID, FIRST_NAME, LAST_NAME, EXP, SALARY
    FROM emp_record_table WHERE EXP > 3;
END
use employee;
call getexperiencedemployees;
```

OUTPUT

	EMP_ID	FIRST_NAME	LAST_NAME	EXP	SALARY
▶	E001	Arthur	Black	20	16500
	E005	Eric	Hoffman	11	8500
	E010	William	Butler	12	9000
	E052	Dianna	Wilson	6	5500
	E057	Dorothy	Wilson	9	7700
	E083	Patrick	Voltz	15	9500
	E103	Emily	Grove	14	10500
	E204	Karene	Nowak	8	7500
	E245	Nian	Zhen	6	6500
	E260	Roy	Collins	7	7000
	E403	Steve	Hoffman	4	5000
	E428	Pete	Allen	14	11000
	E505	Chad	Wilson	5	5000
	E583	Janet	Hale	14	10000
	E612	Tracy	Norris	13	8500

12. 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, SALARY, EMP_RATING,
(SALARY * 0.05 * EMP_RATING) AS BONUS FROM emp_record_table;
```

OUTPUT

	EMP_ID	FIRST_NAME	LAST_NAME	SALARY	EMP_RATING	BONUS
▶	E001	Arthur	Black	16500	5	4125.00
	E005	Eric	Hoffman	8500	3	1275.00
	E010	William	Butler	9000	2	900.00
	E052	Dianna	Wilson	5500	5	1375.00
	E057	Dorothy	Wilson	7700	1	385.00
	E083	Patrick	Voltz	9500	5	2375.00
	E103	Emily	Grove	10500	4	2100.00
	E204	Karene	Nowak	7500	5	1875.00
	E245	Nian	Zhen	6500	2	650.00
	E260	Roy	Collins	7000	3	1050.00
	E403	Steve	Hoffman	5000	3	750.00
	E428	Pete	Allen	11000	4	2200.00
	E478	David	Smith	4000	4	800.00
	E505	Chad	Wilson	5000	2	500.00
	E532	Claire	Brennan	4300	1	215.00
	E583	Janet	Hale	10000	2	1000.00
	E612	Tracy	Norris	8500	4	1700.00
	E620	Katrina	Allen	3000	1	150.00
	E640	Jenifer	Jhones	2800	4	560.00

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

```
SELECT CONTINENT, COUNTRY, AVG(SALARY) AS AVERAGE_SALARY
FROM emp_record_table GROUP BY CONTINENT, COUNTRY;
```

OUTPUT

	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