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SIMPLILEARN SQL PROJECT

ScienceQtech Employee Performance Mapping.

JULY 2023
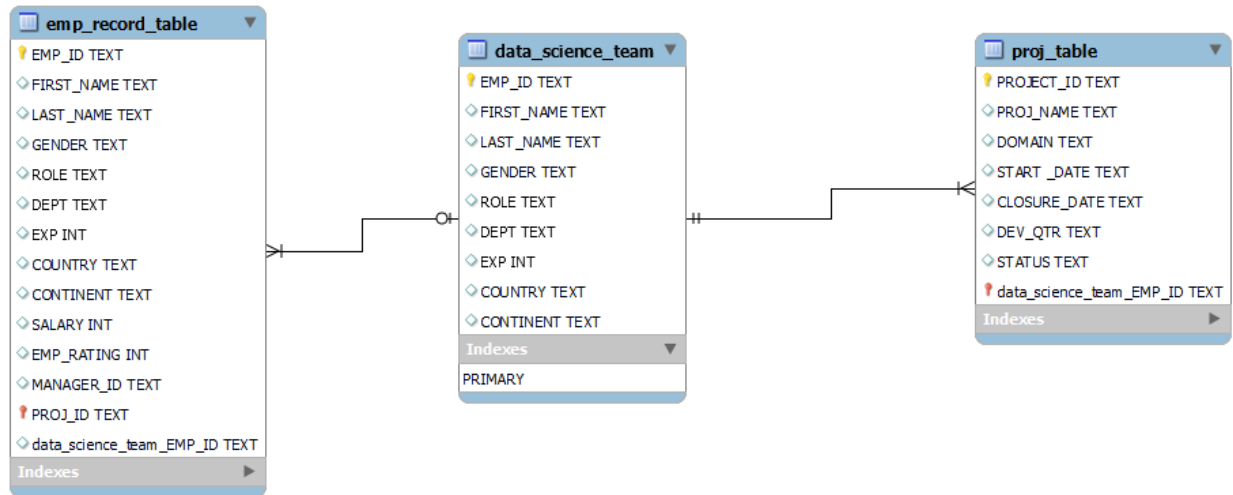
Task 1

```
1 ●    CREATE database employee;
2 ✗         +--------------------+
3           |       Employee     |
4           +--------------------+
5           | - employee_id      |
6           | - first_name       |
7           | - last_name        |
8           | - gender           |
9           | - role             |
10          | - dept             |
11          | - country          |
12          | - continent        |
13          | - salary           |
14          | - emp-rating       |
```

Output

Action Output ▾

#	Time	Action	Message
1	02:04:16	SHOW SESSION VARIABLES LIKE 'lower_case_table_names'	OK
2	02:04:16	SHOW DATABASES	OK
3	02:04:35	SHOW SESSION VARIABLES LIKE 'lower_case_table_names'	OK
4	02:04:35	SHOW TABLES FROM `employee` like 'data_science_team'	OK
5	02:04:52	CREATE TABLE `employee`.`data_science_team` (`EMP_ID` text, `FIRST_NAME` t...	OK
6	02:04:52	PREPARE stmt FROM 'INSERT INTO `employee`.`data_science_team` (`EMP_ID`,...	OK

Task 2

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

Indexes ▶

data_science_team
- 🔑 EMP_ID TEXT
- ◇ FIRST_NAME TEXT
- ◇ LAST_NAME TEXT
- ◇ GENDER TEXT
- ◇ ROLE TEXT
- ◇ DEPT TEXT
- ◇ EXP INT
- ◇ COUNTRY TEXT
- ◇ CONTINENT TEXT

Indexes ▼
PRIMARY

proj_table
- 🔑 PROJECT_ID TEXT
- ◇ PROJ_NAME TEXT
- ◇ DOMAIN TEXT
- ◇ START _DATE TEXT
- ◇ CLOSURE_DATE TEXT
- ◇ DEV_QTR TEXT
- ◇ STATUS TEXT
- 🔑 data_science_team_EMP_ID TEXT

Indexes ▶

Task 3

```
23    SELECT emp_id, first_name, last_name, gender, dept
24    FROM employee.emp_record_table
25    ORDER BY emp_id;
26
```

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

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

Task 4

```
27    SELECT emp_id, first_name, last_name, gender, dept, emp_rating
28    FROM employee.emp_record_table
29    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

```
28    SELECT emp_id, first_name, last_name, gender, dept, emp_rating
29    FROM employee.emp_record_table
30    WHERE emp_rating > 4;
```

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

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

SQL File 5* ×

Limit to 1000 rows

```
26
27
28
29      SELECT emp_id, first_name, last_name, gender, dept, emp_rating
30      FROM employee.emp_record_table
31      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
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

emp_record_table 4 ×

Task 5

```
33 •    SELECT CONCAT(first_name, ' ', last_name) AS NAME
34      FROM employee.emp_record_table
35      WHERE dept = 'Finance';
```

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

NAME
Eric Hoffman
Emily Grove
Steve Hoffman

Task 6

```
37 •    SELECT emp_id, first_name, last_name, COUNT(manager_id) AS num_emp
38      FROM employee.emp_record_table
39      WHERE manager_id IS NOT NULL
40      GROUP BY emp_id
41
```

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

emp_id	first_name	last_name	num_emp
E005	Eric	Hoffman	1
E010	William	Butler	1
E052	Dianna	Wilson	1
E057	Dorothy	Wilson	1
E083	Patrick	Voltz	1

Task 7

SQL File 4*   SQL File 5* ×

Limit to 1000 rows

```
53 •    SELECT emp_id, first_name, last_name, dept
54      FROM employee.emp_record_table
55      WHERE dept = 'Healthcare'
56      UNION
57      SELECT emp_id, first_name, last_name, dept
58      FROM employee.emp_record_table
59      WHERE dept = 'Finance';
```

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

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

Result 12 ×

Task 8

```
61 •    SELECT emp_id, first_name, last_name, role, dept, emp_rating,
62      MAX(emp_rating) OVER (PARTITION BY dept) AS max_rating
63      FROM employee.emp_record_table
64      GROUP BY dept;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: $\overline{IA}$

emp_id	first_name	last_name	role	dept	emp_rating	max_rating
▶ E001	Arthur	Black	PRESIDENT	ALL	5	5
E010	William	Butler	LEAD DATA SCIENTIST	AUTOMOTIVE	2	2
E005	Eric	Hoffman	LEAD DATA SCIENTIST	FINANCE	3	3
E052	Dianna	Wilson	SENIOR DATA SCIENTIST	HEALTHCARE	5	5
E245	Nian	Zhen	SENIOR DATA SCIENTIST	RETAIL	2	2

Result 13 ×

Task 9

```
66 •    SELECT role, MIN(salary) AS min_salary, MAX(salary) AS max_salary
67      FROM employee.emp_record_table
68      GROUP BY role;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: $\overline{IA}$

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

Result 14 ×

Output

Action Output ▾

#	Time	Action	Message
✅	60	14:13:08	SELECT emp_id, first_name, last_name, COUNT(manager_id) AS num_emp FROM ...	18 row(s) returned
❌	61	14:14:32	ELECT emp_id, first_name, last_name, department FROM employee.emp_record_ta...	Error Code: 1064. You have an err
❌	62	14:14:41	SELECT emp_id, first_name, last_name, department FROM employee.emp_record_...	Error Code: 1054. Unknown colum
✅	63	14:14:58	SELECT emp_id, first_name, last_name, dept FROM employee.emp_record_table ...	7 row(s) returned
✅	64	14:17:39	SELECT emp_id, first_name, last_name, role, dept, emp_rating, MAX(emp_rating) O...	5 row(s) returned
✅	65	14:20:48	SELECT role, MIN(salary) AS min_salary, MAX(salary) AS max_salary FROM employ...	6 row(s) returned

Task 10

```
70 •    SELECT emp_id, first_name, last_name, exp,
71      RANK() OVER (ORDER BY exp DESC) AS 'rank'
72      FROM employee.emp_record_table;
73
```

emp_id	first_name	last_name	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

Result 15 ✕

Task 11

Task 12

```
83  •    SELECT emp_id, first_name, last_name, dept,
84       DATE_SUB(CURDATE(), INTERVAL exp YEAR) AS hire_date
85       FROM employee.emp_record_table
86       WHERE exp > 10;
```

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

emp_id	first_name	last_name	dept	hire_date
E001	Arthur	Black	ALL	2003-07-15
E005	Eric	Hoffman	FINANCE	2012-07-15
E010	William	Butler	AUTOMOTIVE	2011-07-15
E083	Patrick	Voltz	HEALTHCARE	2008-07-15
E103	Emily	Grove	FINANCE	2009-07-15

Result 16 ×

Output

Action Output ▼

#	Time	Action	Message	Duration / Fet...
✓	70	14:25:59	SELECT emp_id, first_name, last_name, exp, RANK() OVER (ORDER BY exp DES...	19 row(s) returned	0.015 sec / 0...
✓	71	14:28:18	CREATE VIEW high_salary_employees AS SELECT emp_id, first_name, last_name...	0 row(s) affected	0.063 sec
✗	72	14:28:38	CREATE VIEW high_salary_employees AS SELECT emp_id, first_name, last_name...	Error Code: 1050. Table 'high_salary_employees' already exists	0.031 sec
✗	73	14:29:01	CREATE VIEW high_salary_employees AS SELECT emp_id, first_name, last_name...	Error Code: 1050. Table 'high_salary_employees' already exists	0.000 sec
✗	74	14:32:03	SELECT emp_id, first_name, last_name, dept, DATE_SUB(CURDATE(), INTERVA...	Error Code: 1054. Unknown column 'experience' in 'where clause'	0.015 sec
✓	75	14:32:15	SELECT emp_id, first_name, last_name, dept, DATE_SUB(CURDATE(), INTERVA...	8 row(s) returned	0.016 sec / 0...

Task 13

```
91       DATE_SUB(CURDATE(), INTERVAL exp YEAR) AS hire_date
92       FROM employee.emp_record_table
93       WHERE exp > 3;
94       END;
95
96       DELIMITER //
97  •    CREATE PROCEDURE GetExperiencedEmployees()
98       BEGIN
99           SELECT EMP_ID, FIRST_NAME, LAST_NAME, EXP
100          FROM employee.emp_record_table
101          WHERE EXP > 3;
102      END //
103      DELIMITER ;
```

Navigator

SCHEMAS

Filter objects

▼ employee
  ▼ Tables
    ▶ data_science_team
    ▶ emp_record_table
    ▶ proj_table
  ▶ Views
    Stored Procedures
    Functions
▶ sql_basics
▶ sql_basics2
▶ sql_hr
▶ sql_intro

Administration Schemas

Information

Schema: employee

Output

Action Output ▼

#	Time	Action	Message	Duration / Fe...
✗	80	14:36:15	CREATE PROCEDURE get_employees_with_exp_more_than_three_years() BEGI...	Error Code: 1064. You have an error in your SQL syntax; check the manual that corr...	0.000 sec
✗	81	14:37:30	CREATE PROCEDURE get_employees_with_exp_more_than_three_years() BEGI...	Error Code: 1064. You have an error in your SQL syntax; check the manual that corr...	0.000 sec
✗	82	14:38:11	CREATE PROCEDURE get_employees_with_exp_more_than_three_years() BEGI...	Error Code: 1064. You have an error in your SQL syntax; check the manual that corr...	0.000 sec
✗	83	14:38:32	CREATE PROCEDURE get_employees_with_exp_more_than_three_years() BEGI...	Error Code: 1064. You have an error in your SQL syntax; check the manual that corr...	0.000 sec
✗	84	14:40:27	CREATE PROCEDURE GetExperiencedEmployees() BEGIN SELECT EMP_ID, ...	Error Code: 1064. You have an error in your SQL syntax; check the manual that corr...	0.000 sec
✓	85	14:40:32	CREATE PROCEDURE GetExperiencedEmployees() BEGIN SELECT EMP_ID, ...	0 row(s) affected	0.031 sec

Object Info Session

```
 99        SELECT EMP_ID, FIRST_NAME, LAST_NAME, EXP
100        FROM employee.emp_record_table
101        WHERE EXP > 3;
102   END //
103    DELIMITER ;
104 ●  CALL GetExperiencedEmployees();
```

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

EMP_ID	FIRST_NAME	LAST_NAME	EXP
E001	Arthur	Black	20
E005	Eric	Hoffman	11
E010	William	Butler	12
E052	Dianna	Wilson	6
E057	Dorothy	Wilson	9

Result 17 ×

Task 14

```
36 ●   select FIRST_NAME, LAST_NAME, ROLE, EXP,
37  ⊖  case
38
39      when exp <= 2 then 'Junior Data Scientist'
40      when exp between 2 and 5 then 'Associate Data Scientist'
41      when exp between 5 and 10 then 'Senior Data Scientist'
42      when exp between 10 and 12 then 'Lead Data Scientist'
43      When exp between 12 and 16 then 'Manager'
44
45      else 'Not Assign A Value'
46
47      end as Role_Assigned from emp_record_table;
```

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

FIRST_NAME	LAST_NAME	ROLE	EXP	Role_Assigned
Arthur	Black	PRESIDENT	20	Not Assign A Value
Eric	Hoffman	LEAD DATA SCIENTIST	11	Lead Data Scientist
William	Butler	LEAD DATA SCIENTIST	12	Lead Data Scientist
Dianna	Wilson	SENIOR DATA SCIENTIST	6	Senior Data Scientist
Dorothy	Wilson	SENIOR DATA SCIENTIST	9	Senior Data Scientist

Result 1 ×

Task 15

```
200 •    CREATE INDEX index_name ON data_science_team (FIRST_NAME (10));
201 •    EXPLAIN SELECT * FROM employee.data_science_team WHERE FIRST_NAME = 'Eric';
```

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

	id	select_type	table	partitions	type	possible_keys	key	key_len	ref	rows	filtered	Extra
▶	1	SIMPLE	data_science_team	NULL	ref	index_name	index_name	43	const	1	100.00	Using where

Result 18 ✕

Output

Action Output ▼

	#	Time	Action	Message	Duration / Fetch
❌	97	15:39:10	CREATE INDEX index_name ON data_science_team (column_FIRST_NAME)	Error Code: 1072. Key column 'column_FIRST_NAME' doesn't exist in table	0.000 sec
❌	98	15:39:37	CREATE INDEX index_name ON data_science_team (FIRST_NAME)	Error Code: 1170. BLOB/TEXT column 'FIRST_NAME' used in key specification wit...	0.000 sec
❌	99	15:43:07	CREATE INDEX idx_first_name ON employee.data_science_team (FIRST_NAME)	Error Code: 1170. BLOB/TEXT column 'FIRST_NAME' used in key specification wit...	0.000 sec
❌	100	15:51:20	CREATE INDEX index_name ON data_science_team (FIRST_NAME ,(10))	Error Code: 1170. BLOB/TEXT column 'FIRST_NAME' used in key specification wit...	0.000 sec
✅	101	15:51:51	CREATE INDEX index_name ON data_science_team (FIRST_NAME (10))	0 row(s) affected Records: 0 Duplicates: 0 Warnings: 0	0.125 sec
✅	102	15:52:58	EXPLAIN SELECT * FROM employee.data_science_team WHERE FIRST_NAME ...	1 row(s) returned	0.016 sec / 0.000 sec

Task 16

```
207    ALTER TABLE employee.emp_record_table
208    ADD COLUMN bonus DECIMAL(10,2);
209    SELECT EMP_ID, FIRST_NAME, LAST_NAME, SALARY, EMP_RATING, (SALARY * EMP_RATING * 0.05) AS BONUS
210    FROM employee.emp_record_table;
211
```

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

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

Result 22 ×

Task 17

```
212    SELECT Continent, Country, AVG(Salary) AS AverageSalary
213    FROM employee.emp_record_table
214    GROUP BY Continent, Country;
215
```

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

Continent	Country	AverageSalary
NORTH AMERICA	USA	9440.0000
EUROPE	FRANCE	9000.0000
NORTH AMERICA	CANADA	7000.0000
EUROPE	GERMANY	7600.0000
ASIA	CHINA	6500.0000

Result 23 ×