"Employee Information Table for Advanced SQL Query Practice"

Summary:

This dataset represents dummy employee information containing essential columns such as Employee ID, Name, Department, Salary, and Date of Joining. Using this table, a set of **10 real-time SQL queries** has been executed to demonstrate various practical scenarios encountered in data analysis and database management.

The solved queries include operations such as:

- **Finding the Second and Third Highest Salaries.**
- **Calculating Total Salary of Each Department.**
- **Computing Total Salary by Total Employees and Department.**
- **Identifying Departments with the Highest, Lowest, Second Highest, and Second Lowest Total Salaries.**
- **Finding Employees with the Same Salary across or within Departments.**
- **Applying a 10% Salary Increment to Employees Serving More Than Two Years in the Company.**

For each of these scenarios, the respective SQL queries have been provided without the use of other operator i.e. **LIMIT**, along with their **accurate output results**, to showcase both query construction and expected results.

INPUT:

	emp_id [PK] integer	emp_name character varying (100)	emp_dept character varying (50)	emp_salary numeric (10,2)	emp_joining_date date
1	101	Amit Kumar	Finance	34000.00	2023-05-01
2	102	Aditi Verma	Finance	39000.00	2023-01-01
3	103	Rohit Sharma	Sales	25000.00	2024-07-02
4	104	Rakshit Gupta	HR	42000.00	2024-03-12
5	105	Preet Singh	Analyst	75000.00	2025-06-12
6	106	Jyoti Singh	Developer	69000.00	2025-02-17
7	107	Amanpreet Kaur	CA	72000.00	2024-11-01
8	108	Jaspreet Kaur	HR	45000.00	2024-12-11
9	109	Harjot Singh	Sales	32000.00	2023-01-01
10	110	Sanjana Kumar	Developer	72000.00	2024-11-10
11	111	Sanjot Verma	Operations	55000.00	2025-03-01
12	112	Harmeet Singh	Event Planner	40000.00	2025-01-01
13	113	Boomika Gupta	Event palnner	40000.00	2025-03-01
14	114	Manjot Kaur	Analyst	68000.00	2025-04-02
15	115	Manmeet Singh	Event Planner	46000.00	2024-12-12
16	116	Abdul Shaikh	Marketing	39000.00	2024-05-01
17	117	Asif Shaikh	Marketing	35000.00	2025-01-01
18	118	Jahnvi Jethani	Social Media	47000.00	2025-05-01
19	119	Chandni Sharma	Product Management	65000.00	2024-11-15
20	120	Sarprit Singh	Editor	55000.00	2025-06-01

1.SECOND HIGHEST SALARY

```
SELECT MAX (emp_salary) AS second_highest_salary
FROM Employee_new
WHERE EMP_salary < (
SELECT MAX (emp_salary) FROM Employee_new);
```

OUTPUT:

	second_highest_salary numeric
1	72000.00

2.TOTAL SALARY OF EACH DEPARTMENT

```
SELECT EMP_dept, SUM(EMP_salary) AS total_salary
FROM Employee_new
GROUP BY EMP_dept;
```

OUTPUT:

	emp_dept character varying (50)	total_salary numeric
1	Event Planner	86000.00
2	Marketing	74000.00
3	Operations	55000.00
4	Finance	73000.00
5	Product Management	65000.00
6	Event palnner	40000.00
7	Social Media	47000.00
8	Analyst	143000.00
9	CA	72000.00
10	Developer	141000.00
11	Sales	57000.00
12	HR	87000.00
13	Editor	55000.00

3.TOTAL SALARY BY TOTAL EMP AND DEPARTMENT

```
SELECT COUNT (*) AS total_emp, COUNT(DISTINCT(EMP_dept)) AS total_dept,
SUM(EMP_salary) AS total_month_salary
FROM Employee_new;
```

OUTPUT:

	total_emp bigint	total_dept bigint	total_month_salary numeric
1	20	13	995000.00

4.THIRD HIGHEST SALARY

```
SELECT MAX(EMP_salary) AS third_highest_salary
FROM Employee_new
WHERE EMP_salary < (SELECT MAX(EMP_salary) FROM Employee_new
                    WHERE EMP_salary < (SELECT MAX(EMP_salary)
                     FROM Employee_new));
```

OUTPUT:

	third_highest_salary numeric
1	69000.00

5.TOTAL HIGHEST DEPARTMENT SALARY

```
SELECT EMP_dept AS Department, SUM(EMP_salary) AS total_salary
FROM Employee_new
GROUP BY EMP_dept
HAVING SUM(EMP_salary) = (SELECT MAX (total_dept_salary) FROM
                (SELECT EMP_dept, SUM(EMP_salary) AS total_dept_salary
                  FROM employee_new
                  GROUP BY EMP_dept)
                  AS HIGHEST_dept_salary);
```

OUTPUT:

	department character varying (50)	total_salary numeric
1	Analyst	143000.00

6.TOTAL LOWEST DEPARTMENT SALARY

```
SELECT DISTINCT(EMP_dept) AS Department, SUM(EMP_salary) AS total_dept_salary
FROM Employee_new
GROUP BY DISTINCT(EMP_dept)
HAVING SUM(EMP_salary) = (SELECT MIN (total_dept_salary) FROM
                (SELECT DISTINCT(EMP_dept), SUM(EMP_salary) AS total_dept_salary
                        FROM Employee_new
                        GROUP BY DISTINCT(EMP_dept)
                        ) AS LOWEST_dept_salary);
```

OUTPUT:

	department character varying (50)	total_dept_salary numeric
1	Event palnner	40000.00

7.TOTAL SECOND HIGHEST DEPARTMENT SALARY

```
SELECT EMP_DEPT, SUM(EMP_SALARY) AS SECOND_TOTAL_DEPT_SALARY
FROM EMPLOYEE_NEW
GROUP BY EMP_DEPT
HAVING SUM(EMP_SALARY) =
                (SELECT MAX(HIGHEST_DEPT_SALARY)
                FROM
                (SELECT EMP_DEPT, SUM(EMP_SALARY) AS HIGHEST_DEPT_SALARY
                FROM
                   EMPLOYEE_NEW
                GROUP BY EMP_DEPT
                HAVING SUM(EMP_SALARY) < (SELECT MAX(HIGHEST_DEPT_SALARY)
                FROM
                     (SELECT EMP_DEPT, SUM(EMP_SALARY) AS HIGHEST_DEPT_SALARY
                      FROM EMPLOYEE_NEW
                      GROUP BY EMP_DEPT) AS DEPT_SALARY)
                        ) AS HIGH_SALARY
                        );
```

OUTPUT:

	emp_dept character varying (50)	second_total_dept_salary numeric
1	Developer	141000.00

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8. TOTAL SECOND LOWEST DEPARTMENT SALARY

```
SELECT EMP_DEPT, SUM(EMP_SALARY) AS SECOND_TOTAL_DEPT_SALARY
FROM EMPLOYEE_NEW
GROUP BY EMP_DEPT
HAVING SUM(EMP_SALARY) =
                (SELECT MIN(LOWEST_DEPT_SALARY)
                FROM
               (SELECT EMP_DEPT, SUM(EMP_SALARY) AS LOWEST_DEPT_SALARY
                FROM EMPLOYEE_NEW
                GROUP BY EMP_DEPT
                HAVING SUM(EMP_SALARY) > (SELECT MIN(HIGHEST_DEPT_SALARY)
                FROM
                  (SELECT EMP_DEPT, SUM(EMP_SALARY) AS HIGHEST_DEPT_SALARY
                     FROM EMPLOYEE_NEW
                     GROUP BY EMP_DEPT) AS DEPT_SALARY)
                       ) AS HIGH_SALARY
               );
```

OUTPUT:

	emp_dept character varying (50)	second_total_dept_salary numeric
1	Social Media	47000.00

9.FIND EMPLOYEES WHO HAVE SAME SALARY WITH SAME DEPARTMENT OR ANOTHER

```
SELECT e1.EMP_name, e1.EMP_salary, e1.EMP_dept
FROM Employee_new e1
JOIN Employee_new e2
ON e1.EMP_salary = e2.EMP_salary
AND e1.EMP_dept<>e2.EMP_dept
ORDER BY EMP_salary ASC;
```

OUTPUT:

	emp_name character varying (100)	emp_salary numeric (10,2)	emp_dept character varying (50)
1	Aditi Verma	39000.00	Finance
2	Abdul Shaikh	39000.00	Marketing
3	Harmeet Singh	40000.00	Event Planner
4	Boomika Gupta	40000.00	Event palnner
5	Sarprit Singh	55000.00	Editor
6	Sanjot Verma	55000.00	Operations
7	Sanjana Kumar	72000.00	Developer
8	Amanpreet Kaur	72000.00	CA

10.INCREASE THE SALARY BY 10% FOR ALL EMPLOYEE WHOSE EXPERIENCE MORE THAN 2 YEAR IN THE COMPANY

```
SELECT EMP_name, EMP_dept,EMP_salary, (CURRENT_DATE - EMP_joining_date) AS
Days_of_duration,
CASE
 WHEN (CURRENT_DATE - EMP_joining_date)>730
                    THEN EMP_salary*0.10
                   ELSE 0
          END AS increment_,
EMP_salary+ CASE
WHEN (CURRENT_DATE - EMP_joining_date)>730
                     THEN EMP_salary*0.10
                    ELSE 0
          END AS EMP_new_salary
FROM employee_new;
```

OUTPUT:

	emp_name character varying (100)	emp_dept character varying (50)	emp_salary numeric (10,2)	days_of_duration integer	increment_ numeric	emp_new_salary numeric
1	Amit Kumar	Finance	34000.00	780	3400.0000	37400.0000
2	Aditi Verma	Finance	39000.00	900	3900.0000	42900.0000
3	Rohit Sharma	Sales	25000.00	352	0	25000.00
4	Rakshit Gupta	HR	42000.00	464	0	42000.00
5	Preet Singh	Analyst	75000.00	7	0	75000.00
6	Jyoti Singh	Developer	69000.00	122	0	69000.00
7	Amanpreet Kaur	CA	72000.00	230	0	72000.00
8	Jaspreet Kaur	HR	45000.00	190	0	45000.00
9	Harjot Singh	Sales	32000.00	900	3200.0000	35200.0000
10	Sanjana Kumar	Developer	72000.00	221	0	72000.00
11	Sanjot Verma	Operations	55000.00	110	0	55000.00
12	Harmeet Singh	Event Planner	40000.00	169	0	40000.00
13	Boomika Gupta	Event palnner	40000.00	110	0	40000.00
14	Manjot Kaur	Analyst	68000.00	78	0	68000.00
15	Manmeet Singh	Event Planner	46000.00	189	0	46000.00
16	Abdul Shaikh	Marketing	39000.00	414	0	39000.00
17	Asif Shaikh	Marketing	35000.00	169	0	35000.00
18	Jahnvi Jethani	Social Media	47000.00	49	0	47000.00
19	Chandni Sharma	Product Management	65000.00	216	0	65000.00
20	Sarprit Singh	Editor	55000.00	18	0	55000.00