"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.

IN	PUT:				
	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

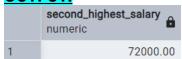
1.SECOND HIGHEST SALARY

SELECT MAX (emp_salary) AS second_highest_salary FROM Employee_new

WHERE EMP_salary < (

SELECT MAX (emp_salary) FROM Employee_new);

OUTPUT:



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;

	total_emp bigint	total_dept bigint	total_month_salary numeric
1	20	13	995000.00

4.THIRD HIGHEST SALARY

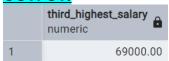
SELECT MAX(EMP_salary) AS third_highest_salary

FROM Employee_new

WHERE EMP_salary < (SELECT MAX(EMP_salary) FROM Employee_new WHERE EMP_salary < (SELECT MAX(EMP_salary)

FROM Employee_new));

OUTPUT:



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);

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

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7.TOTAL SECOND HIGHEST DEPARTMENT SALARY
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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
                );
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OUTPUT:



8. TOTAL SECOND LOWEST DEPARTMENT SALARY

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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
          );
```

	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;

	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