Ex.No.: 10		A CODE O ATIMO DATA LICIMO ODOUD FUNCTIONO
Date: 12/	/09/2024	AGGREGATING DATA USING GROUP FUNCTIONS

Find the Solution for the following:

Determine the validity of the following three statements. Circle either True or False.

- 1. Group functions work across many rows to produce one result per group. True/False TRUE
- 2. Group functions include nulls in calculations. True/False FALSE
- 3. The WHERE clause restricts rows prior to inclusion in a group calculation. True/False FALSE
- 4) Find the highest, lowest, sum, and average salary of all employees. Label the columns Maximum, Minimum, Sum, and Average, respectively. Round your results to the nearest whole number

SELECT ROUND(MAX(salary)) AS Maximum, ROUND(MIN(salary)) AS Minimum, ROUND(SUM(salary)) AS Sum, ROUND(AVG(salary)) AS Average FROM employees;



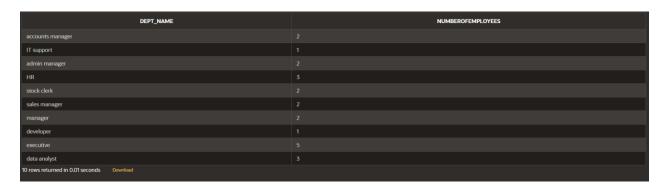
5) Modify the above query to display the minimum, maximum, sum, and average salary for each job type.

SELECT ROUND(MAX(salary)) AS Maximum, ROUND(MIN(salary)) AS Minimum, ROUND(SUM(salary)) AS Sum, ROUND(AVG(salary)) AS Average FROM employees join department on department.dept_id = employees.department_id group by dept_name;

махімим	MINIMUM	SUM	AVERAGE
4000	2500	6500	3250
13500	13500	13500	13500
7800	4500	12300	6150
13500	5200	26700	8900
7000	1100	8100	4050
6500	5500	12000	6000
13500	6000	19500	9750
13500	13500	13500	13500
13500	3500	40500	8100
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6) Write a query to display the number of people with the same job. Generalize the query so that the user in the HR department is prompted for a job title.

SELECT d.dept_name , COUNT(*) AS NumberOfEmployees FROM Employees e join department d on e.department_id = d.dept_id group by d.dept_name;



7) Determine the number of managers without listing them. Label the column Number of Managers

SELECT COUNT(DISTINCT MANAGER_ID) AS "Number of Managers" FROM Employees WHERE MANAGER_ID IS NOT NULL;



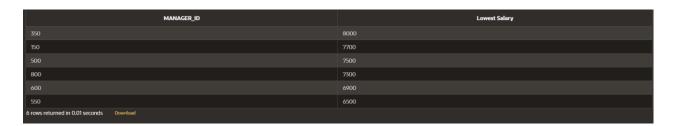
8) Find the difference between the highest and lowest salaries. Label the column DIFFERENCE.

select max(salary) - min(salary) as "DIFFERENCE" from employees;



9) Create a report to display the manager number and the salary of the lowest-paid employee for that manager. Exclude anyone whose manager is not known. Exclude any groups where the minimum salary is \$6,000 or less. Sort the output in descending order of salary.

SELECT MANAGER_ID, MIN(SALARY) AS "Lowest Salary" FROM Employees WHERE MANAGER_ID IS NOT NULL GROUP BY MANAGER_ID HAVING MIN(SALARY) > 6000 ORDER BY "Lowest Salary" DESC;



10) Create a query to display the total number of employees and, of that total, the number of employees hired in 1995, 1996, 1997, and 1998. Create appropriate column headings.

SELECT EXTRACT(YEAR FROM hire_date) AS "yearly wise employment", COUNT(*) FROM employees
GROUP BY EXTRACT(YEAR FROM hire_date)
HAVING EXTRACT(YEAR FROM hire_date) IN (1995, 1996, 1997, 1998);



11) Create a matrix query to display the job, the salary for that job based on department number, and the total salary for that job, for departments 20, 50, 80, and 90, giving each column an appropriate heading.

select d.dept_name , sum(e.salary)
from employees e
join department d on e.department_id = d.dept_id
where department_id in (20,50,80,90)
group by d.dept_name;



12) Write a query to display each department's name, location, number of employees, and the

average salary for all the employees in that department. Label the column name-Location,

Number of people, and salary respectively. Round the average salary to two decimal places.

SELECT d.dept_name AS "Name", d.Location_id AS "Location", COUNT(e.department_id) AS "Number of People", ROUND(AVG(e.Salary), 2) AS "Salary"
FROM department d
JOIN employees e ON d.dept_id = e.department_id

GROUP BY d.dept_name, d.location_id;

Name	Location	Number of People	Salary				
sales manager							
data analyst	1700		9733.33				
stock clerk							
HR			8900				
admin manager							
manager			9750				
accounts manager							
executive			6333.33				
developer			13500				
executive			10750				
More than 10 rows available. Increase rows selector to view more rows.							
10 rows returned in 0.03 seconds Observed							