SQL ASSIGNMENT

PEER LEARNING DOCUMENT

Problem Statement -

Question 1. Given a table of employees, find the number of male and female employees in each department:

EmpID	Name	Gender	Department
1	X	Female	Finance
2	Y	Male	IT
3	Z	Male	HR
4	W	Female	IT

Output:

Department	Num of male	Num of Female
Finance	0	1
HR	1	0
IT	1	1

Question 2. Given a table with salaries of employees for different month, find the max amount from the rows with month name:

Name	Jan	Feb	Mar
X	5200	9093	3832
Y	9023	8942	4000
Z	9834	8197	9903
W	3244	4321	0293

Output:

Name	Value	Month
X	9093	Feb
Y	9023	Jan
Z	9903	Mar
W	4321	Feb

Question 3. Given the marks obtained by candidates in a test, rank them in proper order.

Candidate_ID	Marks
1	98
2	78
3	87
4	98
5	78

Output:

Marks	Rank	Candidate_ID
98	1	1,4
87	2	3
78	3	2,5

Question 4. If same value is repeated for different id, then keep the value that has smallest id and delete all the other rows having same value:

Candidate_ID	Email
45	abc@gmail.com
23	def@yahoo.com
34	abc@gmail.com
21	bcf@gmail.com
94	def@yahoo.com

Output:

Candidate_ID	Email
34	abc@gmail.com
23	def@yahoo.com
21	bcf@gmail.com

Pankaj Kumar Singh

Approach -

Question - 1

As, said in the question, we need to find the no of female and male in each Department. Therefore, he used *group by* department to count the number of men and women per department. When the condition is met, he added using the Sum function. When the first condition is satisfied, the case expression checks each condition and returns a value of 1; otherwise, it returns a value of 0. (like an if-else statement) and sums up them, and stores them in the column under their department.

Question - 2

As, said in the question, we need to find the max amount from the rows with the month name Therefore, he used the any value function to select any month (in our case, January, February, or March) that meets the condition that the salary is highest. Once more, a case expression is used to determine which month is the largest, and the maximum amount is returned as a value. He obtained the maximum using the greatest function as it can be used on more than two values(unlike Max which works on only two values)

Question - 3

As, said in the question, we need to rank them in proper order.
He utilized the Dense Rank() function, which gives each row a rank, to solve this problem. Because we needed to assign the highest mark to the top position he gave order by marks description. Since multiple students can have the same grade, their rank ought to be the same as well, so we need to concat their ID's and he did this by concatenating the candidate id using the group concat function.

Question - 4

As, we need to keep the value that has a smallest id and delete all the other rows having the same value, If the same value is repeated for a different id, then he had used a join on the same table in order to resolve this query (self join). Based on the criteria that c1.email id = c1.email id and c1.candidate id are more than c2.email id, we are deleting the rows from table c1 as these are the rows that are ones with the same email id and with greater than smaller ID value.

Kushagra Singh

Approach -

Question - 1

As stated in the question, we must determine the number of male and female employees in each Department.
He utilised group by department to count the number of men and women in each department as a result. He used the Sum function to add once the criteria was satisfied. A value of 1 is returned by the case expression when the first condition is met; otherwise, a value of 0 is returned. (similar to an if-else expression) and totals them, then stores the results in the column under the appropriate department.

Question - 2

As, said in the question, we need to find the max amount from the rows with the month name Once, the largest month is determined using a case expression, and the highest amount is returned as a value. he used the any value function to select any month (in our case, January, February, or March) that meets the condition that the salary is highest.
He utilized the greatest function, which may be used to more than two numbers, to get the maximum (unlike Max which works on only two values)

Question - 3

As, said in the question, we need to rank them in proper order.
To resolve this issue, he used the Dense Rank() function, which assigns a rank to each row. He provided an order by marks explanation because we needed to assign the highest mark to the top spot. He accomplished this by concatenating the candidate id using the group concat function because numerous students may have the same grade, therefore their rank should also be the same.

Question - 4

As, we need to keep the value that has a smallest id and delete all the other rows having the same value, If the same value is repeated for a different id, then he had used a join on the same table in order to resolve this query (self join). Based on the criteria that c1.email id = c1.email id and c1.candidate id are more than c2.email id, we are deleting the rows from table c1 as these are the rows that are ones with the same email id and with greater than smaller ID value.

Rithish Punna

Approach -

Question - 1

As stated in the question, we must determine the number of male and female employees in each Department.
Data from the "employees" database is selected, grouped by the "Department" column, and then counted for the number of times "Male" and "Female" appeared in the "Gender" column. The results are returned as two independent columns, "Num of Male" and "Num of Female." Returns the name of the department and the number of male and female employees in each department, with a default value of "Not Assigned" for departments without assigned personnel. Ascending order is used to sort the results according to the "Department" column.

Question - 2

As, said in the question, we need to find the max amount from the rows with the month name The maximum value from the columns "Jan," "Feb," and "March" is found and stored in the "value" column. The month corresponding to the maximum value is then determined using the "field" function, which returns the index of a value in a list of values, and the result is stored in the "idx" column. translates the "idx" column into the month name (Jan, Feb, or Mar) using a "CASE WHEN" statement and then returns the result in the "Month" column.

Question - 3

As, said in the question, we need to rank them in proper order.
Three columns are chosen by the query: "Marks," "Rank," and "Candidate id." The dense rank() determines each candidate's rank based on their grades, The query groups the data by marks in a way that keeps the same marks together, The candidate IDs for each group are concatenated by the "GROUP CONCAT()" function.

Question - 4

As, we need to keep the value that has the smallest id and deletes all the other rows having the same value, If the same value is repeated for a different id, When the candidate IDs are greater than the smallest candidate IDs with identical email addresses, the candidate IDs in those rows are deleted from the "mailids" table. To locate all the duplicates in the "mail" column of the "mailids" database, the inner join technique is utilized in the subquery. The DELETE statement deletes all of these rows except for the ones with the shortest candidate IDs after the subquery returns the candidate IDs with duplicate email addresses. The remaining rows in the "mailids" table are shown, arranged in decreasing order by the candidate IDs.