January 2025 CSE 216

Online 1: Basic SQL (A1+A2)

Time: 45 min + Submission: 5 min Total Mark: 5 * 5 = 25

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1. Count the number of employees hired during each quarter of the year. [Hint: You can convert a number (e.g., 1) into its corresponding month 'Jan' by using the function to_char (to_date (1,'MM'), 'Mon')]

2. Display the full name (full name includes first name, a space and last name) of the employees formatted as right justified in the column, in such a way that a total 20 characters are shown including the name. Order the result in ascending order of the length of their full names.

3. Display the country id and address for each of the locations. Address should be generated in the format (street_address, city, state_province - postal_code). Your address should be displayed only when all the required fields are available. Order the result in lexicographic order of the country id. In case of any tie, break it by the reverse lexicographic order of the postal code.

4. For each department and each job, show the department id, job id, the first hiring date, the last hiring date and average salary. Show the outputs with an average salary more than 8000. Make sure any sort of null value is not printed and the average salary value is rounded to two decimal digits. Order the result by department id.

5. Show the full name (full name includes first name, a space and last name) and hire date of all employees whose first name starts with a consonant and the last name does not contain the letter B/b, and who have joined in November. Show the hire date along with the full name of the employees. Show the results in the lexicographical order of full name.

8:55 - 9:50

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1. Find the employee id, full name (first name <space> last name), department id, total monthly salary with commission percentage of the employees whose first name starts with 'D' and the fourth character of the last name is 'n' and works in departments with ID between 20 and 70. (Assume zero commission percentage for the employees with null commission percentage)

2. Display the job IDs of jobs that were held by at least two employees for a duration of at most 1500 days.

3. Show the department_id, minimum, maximum, and average salary of all departments except depeartment_id 50. Sort the list in descending order of the difference between maximum salary and minimum salary of each department and then sort by average salary in ascending order. (The average salary value is rounded to four decimal digits)

4. For each manager who manages less than 10 employees, show the manager id, number of employees and the average salary of the employees managed by him/her. Show the outputs with an average salary less than 4000. Print the output in the ascending order of number of employees managed and if there is a tie then print those in descending order of average salary. Make sure any sort of null value is not printed.

5. Find the last name of those employees whose last name contains odd number of consonants.

↳ replace with nothing ⇓ means delete

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1. For each country, show country_id, number of cities and number of provinces. Sort the output in ascending order of country_id. Discard those countries which have no provinces and less than two cities.

2. Display department IDs in which at most 1 employee had worked for at most 600 days.

3. Show the department_id, minimum hire_date, maximum hire_date, and average salary of all departments. Sort the list in ascending order of the difference between maximum and minimum hire_date of each department and then sort by average salary in descending order. Make sure no null values are printed.

4. For each employee, display their full name (full name includes first name, a space and last name), current annual salary, current monthly salary, commission percentage, and their next year's increased monthly salary. Consider that employees will get a year-end increment according to the formula (increment = annual salary * commission percentage / 100). Employees who do not have any defined commission percentage will get a 0.05% pay deduction (based on their annual salary) at the end of the year.

5. For each manager, show the manager id, number of employees under his management who joined in March, September or December and average salary of those employees. Show the outputs where the average salary is integer. Print the output in the ascending order of number of employees managed and if there is a tie then print those in descending order of average salary. Make sure any sort of null value is not printed.

Mistakes:

সম্পূর্ণ Question পড়া লাগবে, 2-1টা case miss হয়ে যায় (revise)

কিছু প্রশ্নের null value check করার লাগে তাইরে মনে রেখো

কিছু প্রশ্নের answer খুবই absurd হয়, here ওনারা চায় যে দুইটা condition by at most and at least something else, এইসব case গুলায় বেশ carefull where clause মারতে হয় তারপর then পরে একবার having মারতে হয় count এর উপর।

< & ≤ difference বুঝতে পারা neccessary

- ☆ Answer easy question at first
- ☆ give 5 minutes per easy question
- ☆ Ready every condition of easy questions carefully, no mistake is allowed
- ☆ NULL checking তাতো করা better in the where clause

- RPAD → Left justified
  LPAD → right justified