Lab 02A: SQL Aggregations

Objective

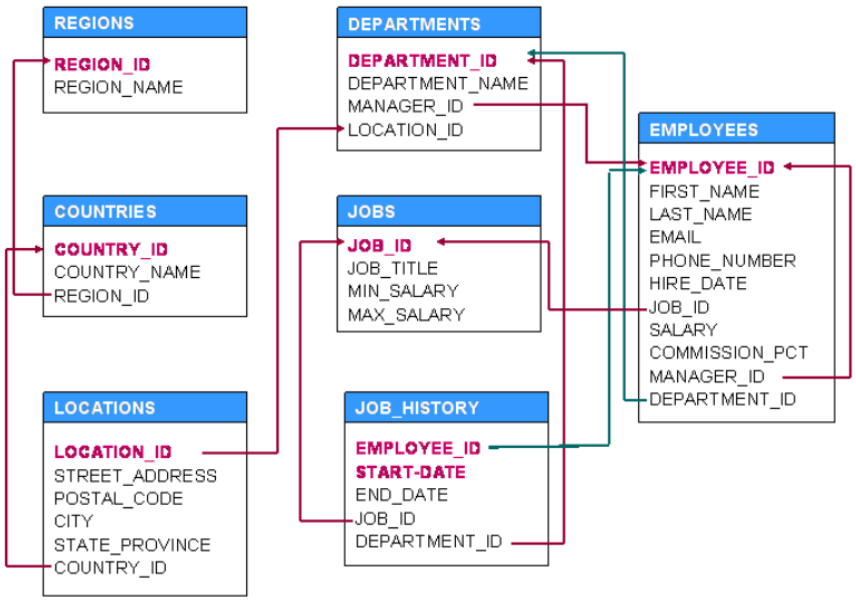
The students should be able to:

1. Understand the use of GROUP BY and ORDER BY clause
2. Understand the use of HAVING clause
3. Use Aggregate functions like SUM, AVG, MIN, MAX, COUNT, DISTINCT

Submission Requirements

Save your script file and upload it to LMS.

HR Database Schema



SQL Queries

Use the same user created in the last lab and write and execute SQL queries for the following information needs. Make use of suitable column aliases for the new aggregated columns.

1. How many employees are working in department with ID = 50
2. What is the total number of employees belonging to department 80 and have salary greater than 24000
3. How many employees are receiving a commission
4. What is average, minimum and maximum salary of employees having JOB_ID ending with CLERK? Use suitable alias for each new column.
5. How many distinct departments are there in employees table?
6. How many distinct job_ids are there in employees table?
7. Compute average COMMISSION_PCT rounded up to two decimal places
8. Compute average COMMISSION_PCT ignoring NULL values rounded up to two decimal places
9. Compute average COMISSON_PCT considering NULL values truncated upto two decimal places.
10. Compute AVG_SALARY for each department in employees table rounded up to two decimal places
11. Compute AVG_SALARY for each JOB_ID in employees table
12. Compute department-wise total salary of all employees sorted by department_id
13. Which department has the lowest average salary and what is the value. Hint: *fetch first row only*
14. Show the top 5 job_titles based on max_salary.

For the next 2 questions, type and execute the given query and identify the problems in comments. Then, execute your corrected query.

15.
```
SELECT department_id, job_id, COUNT(last_name)
FROM   employees
GROUP BY department_id;
```

16.
```
SELECT   department_id, AVG(salary)
FROM     employees
WHERE    AVG(salary) > 8000
GROUP BY department_id;
```

17. Display DEPARTMENT_ID, JOB_ID and department-wise job-wise SALARY_TOTAL of all employees with SALARY_TOTAL > 10,000 and output in sorted order of DEPARTMENT_ID
18. What is average job duration in months for each DEPARTMENT_ID (hint: end_date and start_date is given)
19. What is the maximum job duration in months for each JOB_ID
20. Display the number of locations for each COUNTRY_ID