CSC 355 Database Systems 501T-530
Winter 2023
Assignment 4 (02/15) – SQL Queries, Subqueries, and Set Operations

Name:
Course Number:
Section:
Date:

Part I Use subqueries and the regular tables from HR unless told otherwise in the exercise.

1. write a SQL query to find those employees who work as FI_ACCOUNT or ST_CLERK either in Southlake, Texas or Seattle, Washington, with experience of more than 5 years without receiving the commission. Sort the result-set in ascending order by department location. Return employee ID, employee name, salary, and department name.

    For this, you will have to create a new table called **dept** by using subqueries. The structure and data for this new subquery will come from HR tables departments and locations. This new dept table should contain only the info for location and department needed for the solution.

    -   First, use a subquery to create the structure for dept with no data
    -   Then, copy the data into dept using subqueries
    -   Last, create a solution using subqueries for the retrieve the employees that comply with the request. Any subquery is valid if the result is the same.

2. Use subqueries to write a SQL query to find the employees of grades 4 and 5 (salary within the defined ranges). Return all the information of employees and salary details, including grade, min, and max for the corresponding salary.

    For this, you will have to create a table sal_grade with 3 columns: grade (as PK), min, and max. Pick the right domains according to the values in the following table

    Populate this table with

Grade	MIN	MAX
G1	2,000.00	3,000.00
G2	3,001.00	4,000.00
G3	4,001.00	7,000.00
G4	7,001.00	10,000.00
G5	10,001.00	99,999.00

3. find those employees whose salary is more than the salary of the employee whose phone number is 590.423.4568. Return complete information about the employees (Use subqueries)

4. Display a list of departments' names, managers' full names, and employees' full names for departments of Finance, IT, and Purchasing. Use subqueries to determine the departments you need.

5. Using the table sal_grade created in question 2. Write a SQL query to find those employees of grades 2 to 4, working in the department of Shipping or Sales, and whose salary is more than the salary of Kelly Chung, and who have been working at the company longer than Lindsey Smith. Return complete information about the employees.

6. Write a query to retrieve employees who work in the same department as Payam Kaufling, and their salary is higher than the salary of Hazel Philtanker. Exclude all those records where the first name starts with either J or P. Return first name, last name, salary and hire date.

Part II - Set Operations

1. **Use tables and data from HW3**. To send birthday emails, write a query to get the id and full names and email of customers and directors that were born in the second quarter of the year (meaning from April to June). Use set operations.
2. **Use HR tables and data from homework 1.** Find a list of employees that earn a salary higher than 8999 but lower than 17001 within departments Executive and Finance. Use difference (minus) operation
3. Solve the query on question Part II. Q2 (previous question) but using the union operation.
4. Use the intersection operation to solve Part I Q5, but only return id, first name, last name, and salary. You must use the operator 3 times.

Part III – Script and OUTPUT
- Clear the script output Window and then run the complete script and save the complete contents of the script output window, including the displayed tables, to a text file. Save it as HW04_OUTPUT_YOURNAME.txt
- Include a comment at the top of your script file giving your name, the course number and section number, the assignment number, and the date of submission (i.e., fill in the appropriate values for name, and submission date in a comment such as the one below):

```
/*
YourName
CSC 355 Section SectionNumber
Homework 4
SubmissionDate
*/
```

Do not forget the semicolons after each statement. Do not forget your commit statement.
- Save your script as HW04_SCRIPT_YOURNAME.sql

Submission
- Submit two files to the Homework 4 submission folder:
    1) your HW04_SCRIPT_YOURNAME.sql script file and
    2) the text file HW04_OUTPUT_YOURNAME.txt, containing the complete output that was generated by running your script.

Remarks

1. It is your responsibility to make sure that the files you have uploaded are readable and in the correct locations. You should verify that you can successfully download them from the submissions folder after submitting them to be sure that they have been uploaded correctly.

2. Remember that all work must be completed individually and without copying, either entirely or in part, from any examples posted or from anyone else's work. Do not post this assignment to any website in search of answers, and do not consult posted answers on any website while completing the assignment.