CENG316 – Database Systems

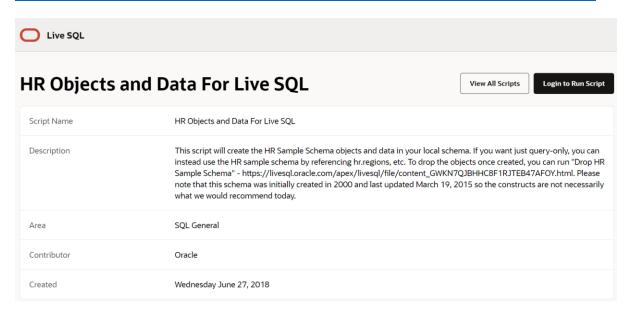
Assignment 2 (Due: Friday, May 12 at 23:59:59, SUBMIT TO LMS)

Notes:

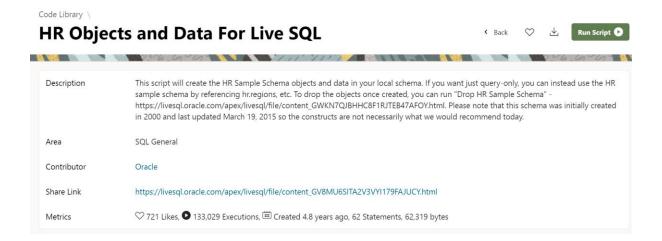
- You must complete all assignments on your own.
- Plagiarism will not be tolerated. If detected, you may get a zero for the assignment.
- You can use either Oracle SQL Developer or *Oracle Live SQL* which is the platform that I recommend you to test your queries.
- Please follow the steps below to start using Oracle Live SQL platform.
- You are required to show your answers by putting the SCREENSHOTS OF THE WRITTEN QUERIES AND THEIR RESULTS IN THE DEVELOPMENT ENVIRONMENT. Writing queries in a plaintext file is not accepted.

How to use Oracle Live SQL?

1. Go to the below link and then press the "Login to Run Script" button: https://livesgl.oracle.com/apex/livesgl/file/content_GV8MU6SITA2V3VYI179FAJUCY.html



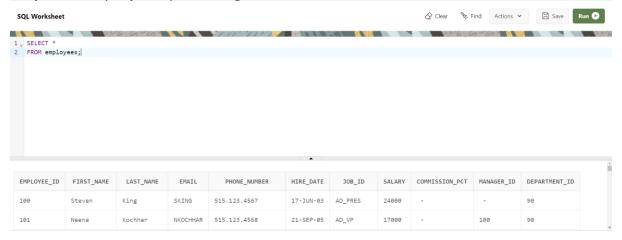
2. After completing all login processes (signing up or signing in) press the green "Run Script" button and run 62 statements in the script to create the HR Schema that you will work with:



3. After creating HR Schema, press the "SQL Worksheet" button.



4. From now on, you can write your SQL statements and see the resultant tables. Write your SQL query and press the green "Run" button to execute it.



Part 1 (17 points)

1. There are four coding errors in the following statement. Identify and list them. (4 points)

```
SELECT employee_id, last_name
sal x 12 ANNUAL SALARY
FROM employees;
```

2. The HR department wants a query to display the last name, job ID, hiredate, and employee ID for each employee, with the employee ID appearing first. Provide an alias STARTDATE for the HIRE_DATE column. Write the necessary query statement. (8 points)

3. Write a query statement to display all unique job IDs from the EMPLOYEES table. (5 points)

Part 2 (32 points)

- **4.** The HR department has requested a report of all employees and their job IDs. Write a query statement to display the last name concatenated with the job ID (separated by a comma and space) and name the column "Employee and Title". (8 points)
- **5.** The HR department needs to find high-salary and low-salary employees. Write a query statement to display the last name and salary for all employees whose salary is NOT in the range \$5,000 -- \$12,000. (8 points)
- 6. Modify your statement from Question 5 to display the last name and salary of employees who earn between \$5,000 and \$12,000, and are in department 20 or 50. Label the columns **Employee** and **Monthly Salary**, respectively. (8 points)
- **7.** Write a query statement to display the last name and hire date of all employees who were hired in 2002. (8 points)

Part 3 (51 points)

- **8.** Write a statement to display the last name and department ID of all employees in departments 20 or 50 in ascending alphabetical order by last name. (8 points)
- **9.** Write a statement to display the last name, salary, and commission percentage for all employees who earn commissions. Sort data in descending order of salary and commissions. Use the column's numeric position in the ORDER BY clause. (8 points)
- **10.** Write a statement to display the last names of all employees who have both an "a" and an "e" in their last name. *(10 points)*
- **11.** Write a statement to display the last name, job, and salary for all employees whose job is a sales representative (SA_REP) or a stock clerk (ST_CLERK), and whose salary is not equal to \$2,500, \$3,500, or \$7,000. (10 points)
- **12.** Write a statement to display the employee number, last name, salary, and salary increased by 15.5% (expressed as the nearest whole number, with column label <code>New Salary</code>) for each employee. *(10 points)*
- **13.** Modify your query from Question 12 to add a column that subtracts the old salary from the new salary. Label the column Increase. (5 points)