

COSC 344

Lab for Week 9

Overview

The purpose of this lab is to have further practice on programming using Java & SQL, C & SQL, and PHP & SQL. Three versions are provided based on different host languages, and you should complete at least one of them.

Java Language

Use *TestLogin.java* as a basis. Change its name to *ListEmp.java*.

Your program should retrieve the first and last names and salary of all employees.

Create a new file named *EmpData.java*, in which you should create a Java class to contain data from each row returned by Oracle. Create an appropriate constructor, access methods, a comparison method, and a print method.

In your main program in *ListEmp.java*, use an ArrayList to hold the rows (now a Java class). Sort the rows in the ArrayList using Java code (NOT using the “order by clause” in the select statement) in the order of increasing salary.

Finally, print the sorted ArrayList.

C Language

Use *pt1.pc* as a basis. Change its name to *ListEmp.pc*.

For this lab, you must use a cursor with embedded SQL. Your program should retrieve the first and last names and salary of all employees into an array or list of an appropriate *struct*. Sort the data using C code in the order of increasing salary in your program. Print the data.

PHP Language

Part 1: Query and Sorting

Using *query.php* as a basis. Change its name to *ListEmp.php*.

Your program should retrieve the first and last names and salary of all employees and show it on a web page.

Sort the data in your PHP scripts in the order of increasing salary.

Print the data.

Part 2: AJAX Query

Edit `ajax_query.html` and `ajax_query.php` to find an employee in the employee table.

Part 3: Configuration Practice

Change the name of your includes file, and the name of the variable which contains the connection details (your Oracle username and password)

Create a sub-directory in your projects directory (e.g. 344) and copy `connect.php` to this directory, then make the necessary changes to `connect.php` to get the same browser message as before (i.e. a response to say that it connected to Oracle).

Assessment: 10 marks - due at 5pm on May 18

You just need to submit your programs for one host language in Blackboard.

- If you worked on this lab using Java, submit *ListEmp.java* and *EmpData.java*
- If you worked on this lab using C, submit *ListEmp.pc*.
- If you worked on this lab using PHP, submit *ListEmp.php* and include the full URL to access this PHP page. Part 2 and Part 3 for PHP will not be assessed.