

CSCI 232 Lab 1

Due Thursday 5/18 at 11:59 PM.

Please submit this assignment (your .java files) to the appropriate dropbox on D2L. You must follow the collaboration policy detailed on the course website.

Background

In this lab, you will build, test, and analyze four additional methods for the Student Database code we have been working on in class. Download the code from May 15th for the `Student`, `StudentDatabase`, `StudentDatabaseLinkedList`, and `StudentDatabaseDemo` Java classes. Do not change any code other than adding the body for the four methods described below and modifying the main method. You do not need any more instance variables or methods.

Instructions

Fill in the body of the **`findStudentsByName(String name)`** and **`removeStudent(String name)`** methods in both the `StudentDatabase` and `StudentDatabaseLinkedList` class (four methods in total). **`findStudentsByName()`** will print the information of *all* students with the provided name. **`removeStudent()`** will remove the student with that name from the database.

Actually remove the entry, don't just set it to null: In the array implementation, the array needs to shrink in size by 1 and in the linked list implementation, the node object needs to be removed from the list (you can just use a method from the Linked List documentation). If the student's name does not exist in the database, the program should print out "Student not found". When removing a student, you can assume there will be only one student with that name. There is no need to handle duplicate names.

After you have added these methods, modify the main method in `StudentDatabaseDemo.java` to test all of your methods to give you confidence that you are submitting correct work.

Submission

Submit your source code (.java files for `Student`, `StudentDatabase`, `StudentDatabaseLinkedList`, and `StudentDatabaseDemo`) to D2L.

Grading

- `findStudentsByName` - 2 point each (4 points total)
- `removeStudent` - 2 points each (4 points total)
- Testing of the new methods - 2 points

NOTE: If your code does not compile, correctness cannot be verified, and you won't receive any points for your code. Turn in code that compiles!