CISC 3115 TY2
Lists and Arrays: Exercises

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Exercises

- Deleting elements from lists and measuring computation time

- Use iterator to search and update elements

- Sorting and searching lists and measuring computation time

Deleting elements from lists and measuring computation time

- Create directories in your journal, work from there

- Add methods to delete the first element from an ArrayList and a LinkedList similar to the "insert" element methods discussed in class and in the example code

- Revise the main method to invoke your method.

- Run the program, and compare the time used to delete many times from an ArrayList and that from a LinkedList.

- Document your observation as a comment in the program

- Use git to make submission

Use iterator to search and update elements

- Create directories in your journalm and work from there

- copy the example program TestUpdateLisitObjects to the directory

- Add a method to TestListStudent class that replace every student whose first name starting with "J" to "John" via a ListIterator.

- Revise the main method to invoke your method with both an ArrayList and a LinkedList

- Use git to make a submission

Sorting and searching lists and arrays and measuring time

- Use Comparator and Collections, and follow the steps below

    - Create directories in your journal

    - Sort the lists (ArrayList and LinkedList) and an array in descending order by student's last name

    - Use binary search to find a student given the student's last name

    - Write a generic method to measure sorting for either an ArrayList or a LinkedList

    - Write a method to measure sorting time for an array

    - Write a method to measure search time for a large number of searches in either an ArrayList or a LinkedList

    - Write a method to measure search time for a large number of searches in an array

    - Revise the main method to invoke your method to show and compare the sorting and searching times.

    - Use git to make a submission