

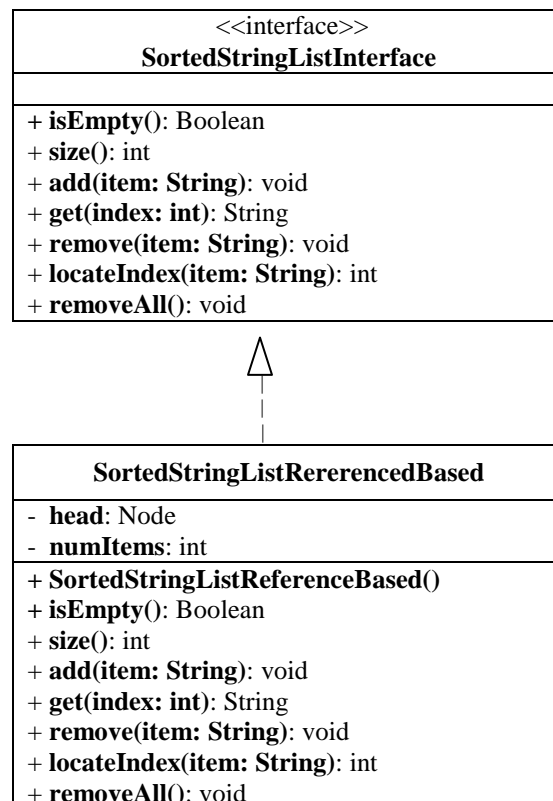
SortedStringListReferenceBased

Topics

- Throughout this lab, we want to practice abstract data type (ADT).
- In particular, this lab asks you to implement a SortedStringList class, which is reference-based.
- After finishing this lab, you will be more confident in manipulating array index and reference.

Activities

- Start with the following supportive files (“ListException.java”, “ListIndexOutOfBoundsException.java”, “SortedStringListInterface.java”, “SortedStringListDriver.java”, and “SortedStringListReferenceBased.java”).
- The first four java files are complete, thus use them as they are. You’re asked to show your work on the java file, “**SortedStringListReferenceBased.java**”.
- Remind that in Chapter 5, “ListReferenceBased.java” implements “ListInterface”. In this lab, “SortedStringListInterface” is analogous to “ListInterface” and “SortedStringListReferenceBased.java” implements “SortedStringListInterface” as shown below.



- In class, we discussed an example of interface on shopping list (refer to the textbook and the lecture note). Required implementation description/requirement of each method is given in “SortedStringListReferenceBased.java”.
- You should keep the sorted (say, non-decreasing) order of items, while adding and deleting an item using “add()” and “delete()”, respectively. Keeping the sorted order of the contents in the list is the key in this lab.
- Note that index starts from 0, not 1. Therefore, the valid index ranges from 0 to size()-1.

Running Example

0. apples 1. black beans 2. bread 3. butter 4. chicken 5. eggs 6. flour 7. milk 8. pecans 9. rice 10. sausage numItems is now: 11 Adding juice ... item 5 is: eggs 0. apples 1. black beans 2. bread 3. butter 4. chicken 5. eggs 6. flour 7. juice 8. milk 9. pecans 10. rice 11. sausage numItems is now: 12	Removing juice... 0. apples 1. black beans 2. bread 3. butter 4. chicken 5. eggs 6. flour 7. milk 8. pecans 9. rice 10. sausage numItems is now: 11 Adding banana ... 0. apples 1. banana 2. black beans 3. bread 4. butter 5. chicken 6. eggs 7. flour 8. milk 9. pecans 10. rice 11. sausage numItems is now: 12	Removing sausage... 0. apples 1. banana 2. black beans 3. bread 4. butter 5. chicken 6. eggs 7. flour 8. milk 9. pecans 10. rice numItems is now: 11 Removing cheese... 0. apples 1. banana 2. black beans 3. bread 4. butter 5. chicken 6. eggs 7. flour 8. milk 9. pecans 10. rice numItems is now: 11 Press any key to continue ...
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What to Hand in

- Turn in your program, “SortedStringListReferenceBased.java”, via Blackboard.