

Practice with Strings, ArrayLists, and File Reading

Test each of these functions in `main()` after writing them.

1. Write the function `noDuplicates()` which takes an `ArrayList` and returns a new version of the `ArrayList` with any duplicate elements removed. That is, each element appears at most once.
 - a. Challenge: how would you do this if you wanted the function to modify the `ArrayList` argument "in-place," meaning that no copy is made; rather, the original list is modified to remove duplicates.
2. Write the function `reverseString()` which takes a `String` and returns its reversed version. Note that this cannot be done in place, because `Strings` in Java are immutable. (Meaning you will need to create a new `String`.)
3. Fill in the function `readWords()` which should open the `words.txt` file, read in all the words into a new `ArrayList` of `Strings`, and return the list.
4. Write the function `wordsContainingEveryVowel()` which returns all the words from the `ArrayList` parameter that contain every vowel (a, e, i, o, u).
5. Write the function `wordsContainingEveryVowel()` which returns all the words from the `ArrayList` parameter that contain every vowel (a, e, i, o, u) exactly once.
6. Write the function `lettersInAlphaOrder()` which returns all the words from the `ArrayList` parameter that happen to have all the letters of the word in alphabetical order. For example, the word "empty" satisfies this criteria, because "e" comes before "m," "m" comes before "p," etc. Challenge: can you have your program find the **longest** such word?
7. Write the function `findPalindromes()` which returns all the words from the `ArrayList` parameter that happen read the same forwards and backwards. For example, the word "racecar" satisfies this criteria. Challenge: can you have your program find the **longest** such word?
8. Write the function `simpleAutocorrect()` which takes a list of correctly-spelled words and one single incorrectly-spelled word. The function will search the list of words for all words of the same length as the incorrectly-spelled word, but have exactly one character that differs between the two. For example, if the incorrectly-spelled word is "cst", that will match the correctly-spelled "cat," "cot," and "cut." Return the list of all matching words.