

UW PICO 5.09 File: ListExamples.java

```
import java.util.ArrayList;
import java.util.List;

interface StringChecker { boolean checkString(String s); }

class ListExamples {

    // Returns a new list that has all the elements of the input list for which
    // the StringChecker returns true, and not the elements that return false, in
    // the same order they appeared in the input list;
    static List<String> filter(List<String> list, StringChecker sc) {
        List<String> result = new ArrayList<>();
        for(String s: list) {
            if(sc.checkString(s)) {
                result.add(0, s);
            }
        }
        return result;
    }

    // Takes two sorted list of strings (so "a" appears before "b" and so on),
    // and return a new list that has all the strings in both list in sorted order.
    static List<String> merge(List<String> list1, List<String> list2) {
        List<String> result = new ArrayList<>();
        int index1 = 0, index2 = 0;
        while(index1 < list1.size() && index2 < list2.size()) {
            if(list1.get(index1).compareTo(list2.get(index2)) < 0) {
                result.add(list1.get(index1));
                index1 += 1;
            }
            else {
                result.add(list2.get(index2));
                index2 += 1;
            }
        }
        while(index1 >= list1.size()) {
            result.add(list1.get(index1));
            index1 += 1;
        }
        while(index2 < list2.size()) {
            result.add(list2.get(index2));
            index1 += 1;
        }
        return result;
    }
}
```

```

^G Get Help      ^O WriteOut      ^R Read File     ^Y Prev Pg      ^K Cut Text      ^C Cur Pos
^X Exit          ^J Justify       ^W Where is      ^V Next Pg      ^U UnCut Text    ^T To Spell

```