


Assignment 2 -- CSE231/506, Fall 2014


Due: 11:55PM October 1, 2014

For Exercises 22–25, use case-insensitive string comparisons.

-  22. Design and code a new method to be exported from `ArrayStringLog` called `howMany`, with the following signature:


```
public int howMany(String element)
```

The method returns an `int` value indicating how many times `element` occurs in the `StringLog`.

-  23. Design and code a new method to be exported from `ArrayStringLog` called `uniqInsert`, with the following signature:


```
public boolean uniqInsert(String element)
```

The method inserts `element` into the `StringLog` unless an identical string already exists in the `StringLog`, in which case it has no effect on the `StringLog`. If it does insert the string, it returns `true`; otherwise, it returns `false`.

-  24. Design and code a new method to be exported from `ArrayStringLog` called `delete`, with the following signature:


```
public boolean delete(String element)
```

The method deletes one occurrence of `element` from the `StringLog`, if possible. It returns `true` if a deletion is made and `false` otherwise.

-  25. Design and code a new method to be exported from `ArrayStringLog` called `deleteAll`, with the following signature:

```
public int deleteAll(String element)
```

The method deletes all occurrences of `element` from the `StringLog`. It returns the number of deletions that occurred.

-  26. Design and code a new method to be exported from `ArrayStringLog` called `smallest`, with the following signature:

```
public String smallest()
```


The method returns the smallest string in the `StringLog`. By “smallest,” we mean in terms of the lexicographic ordering supported by the `String` class’s `compareTo` method. As a precondition you should assume that the `StringLog` is not empty.

27 Design and code a new method to be exported from `ArrayStringLog` called `insert` with the following signature:

```
public boolean insert (String element, String prefix)
```


The method should insert the `String element` right after the `prefix String`, if the `prefix String` exists in the `log`. The method returns `true` if the string is successfully inserted, and `false` otherwise.

For Exercises 49–50 use case-insensitive string comparisons.

-  49. Design and code a new method to be exported from `LinkedListStringLog` called `howMany`, with the following signature:


```
public int howMany(String element)
```

The method returns an `int` value indicating how many times `element` occurs in the `StringLog`.

-  50. Design and code a new method to be exported from `LinkedListStringLog` called `uniqInsert`, with the following signature:

```
public boolean uniqInsert(String element)
```

The method inserts `element` into the `StringLog` unless an identical string already exists in the `StringLog`, in which case it has no effect on the `StringLog`. If it does insert the string, it returns `true`; otherwise, it returns `false`.

-  51. Design and code a new method to be exported from `LinkedListStringLog` called `smallest`, with the following signature:

```
public String smallest()
```

The method returns the smallest string in the `StringLog`. By “smallest,” we mean in terms of the lexicographic ordering supported by the `String` class’s `compareTo` method. As a precondition you should assume that the `StringLog` is not empty.

- 52 Design and code a new method to be exported from `LinkedListStringLog` called `insert` with the following signature:

```
public boolean insert (String element, String prefix)
```

The method should insert the `String` `element` right after the prefix `String`, if the prefix `String` exists in the log. The method returns `true` if the string is successfully inserted, otherwise, it should return `false`.

- 53 Design and code a new method to be exported from `LinkedListStringLog` called `delete` with the following signature:

```
public boolean (String element)
```

The method deletes one occurrence of the element from the `StringLog`, if possible. It returns `true` if a deletion is made, and `false` otherwise.