

CS 314 EXAM ONE REVIEW — SORTED LIST INSERT

Array-based Lists

Recall the `SortedIntList` class we developed in lecture before we developed the `GenericList`. Write an instance method for the `SortedIntList` class which inserts an element into the list. The list must be in sorted order before and after this operation.

Complete the following method.

```
// Adds an element to this list
// pre: val != null, con is sorted from 0 to size - 1
// post: val is inserted at the correct place in the list
public void insert(int val)
```

Here are some example calls to `insert()`:

```
[2, 3, 4, 5].insert(1) → [1, 2, 3, 4, 5]
```

```
[1, 2, 4, 5].insert(3) → [1, 2, 3, 4, 5]
```

```
[] .insert(7) → [7]
```

```
[1, 2, 3].insert(4) → [1, 2, 3, 4]
```

Your method will be in the following `SortedIntList` class:

```
public class SortedIntList{
    private int size;
    private int[] con;
    // ...
}
```

Do not use or assume there are any provided methods in the `SortedIntList` class. Do not use any other Java classes or methods.

```
// Adds an element to this list
// pre: val != null, con is sorted from 0 to size - 1
// post: val is inserted at the correct place in the list
public void insert(int val) {
```