

Class ClassList

java.lang.Object
ClassList

```
public class ClassList
extends java.lang.Object
```

Represents a doubly-linked list made up of students. NOTE: You may NOT use the java.util.LinkedList class.

Nested Class Summary

Nested Classes

Modifier and Type	Class and Description
private class	ClassList.StudentNode An inner class that represents a node in the class list; the public variables are accessed by the ClassList class.

Field Summary

Fields

Modifier and Type	Field and Description
private ClassList.StudentNode	end The last node in the list.
private ClassList.StudentNode	front The first node in the list.
private int	size The current size of the list.

Constructor Summary

Constructors

Constructor and Description
ClassList()

Constructs an empty list.

Method Summary

All Methods	Instance Methods	Concrete Methods
Modifier and Type	Method and Description	
void	add (Student studentIn)	Add a new node representing a specified student at the appropriate position in the list; proper ordering of the students must be maintained.
int	getNumStudents ()	Returns the number of students currently in the list.
Student []	getReversedList ()	Creates and returns an array containing all of the Students in this list, stored in reverse order in the array (ie: index 0 contains the last element in the list).
void	remove (Student studentOut)	Removes from this list the node containing the specified student.
java.lang.String	toString ()	Returns a textual string of the contents of the list in order.

Methods inherited from class java.lang.Object

clone, equals, finalize, getClass, hashCode, notify, notifyAll, wait, wait, wait

Field Detail

front

```
private ClassList.StudentNode front
```

The first node in the list.

end

```
private ClassList.StudentNode end
```

The last node in the list.

size

```
private int size
```

The current size of the list.

Constructor Detail

ClassList

```
public ClassList()
```

Constructs an empty list.

Method Detail

getNumStudents

```
public int getNumStudents()
```

Returns the number of students currently in the list.

Returns:

The number of students in the list.

add

```
public void add(Student studentIn)
```

Add a new node representing a specified student at the appropriate position in the list; proper ordering of the students must be maintained.

Parameters:

studentIn - The student to be added to the list.

remove

```
public void remove(Student studentOut)
```

Removes from this list the node containing the specified student.

Parameters:

studentOut - The student to be removed from the list.

Throws:

??? - (you decide the exception) if not found.

getReversedList

```
public Student[] getReversedList()
```

Creates and returns an array containing all of the Students in this list, stored in reverse order in the array (ie: index 0 contains the last element in the list).

Returns:

The list of Students as an array in reverse.

toString

```
public java.lang.String toString()
```

Returns a textual string of the contents of the list in order.

Overrides:

toString in class java.lang.Object

Returns:

The list of students.

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