Numbers List Lab

Lab 9

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Contents

1 Class Index 1

1.1 Class List . . . 1

2 Class Documentation 1

2.1 NumberList Class Reference . . . 1

2.1.1 Detailed Description . . . 2

2.1.2 Constructor & Destructor Documentation . . . 2

2.1.3 Member Function Documentation . . . 2

2.1.4 Member Data Documentation . . . 4

2.2 PublicTests Class Reference . . . 4

2.3 ReleaseTests Class Reference . . . 4

Index 7

1 Class Index

1.1 Class List

Here are the classes, structs, unions and interfaces with brief descriptions:

NumberList 1

PublicTests 4

ReleaseTests 4

2 Class Documentation

2.1 NumberList Class Reference

Public Member Functions

- NumberList ()
- NumberList (int[ ] a)
- NumberList (NumberList original)
- int getSize ()
- int getAt (int index)
- long getSum ()
- boolean contains (int searchVal)
- int indexOf (int target)
- int findMin ()
- boolean sameArrays (int[ ] array1)
- void append (int newValue)
- int[ ] reverse ()

Public Attributes

- int[ ] values

2.1.1 Detailed Description

This class encapsulates an array of integers, called `values`.

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2.1.2 Constructor & Destructor Documentation

2.1.2.1 NumberList ( )

Default CTOR for this class: creates `values` as an empty array.

2.1.2.2 NumberList (int[ ] *a*)

Given an array `a`, use its contents to initialize the contents of the internal array, `values`.

Parameters

a	

2.1.2.3 NumberList (NumberList *original*)

Copy Constructor for this class: must create a shallow-copy of `original`.

Parameters

original	

2.1.3 Member Function Documentation

2.1.3.1 void append (int *newValue*)

Append (add to the end) of the `values` instance variable by creating a new array large enough to hold the extra item and returning it.

Parameters

newValue	

2.1.3.2 boolean contains (int *searchVal*)

Returns true if `searchVal` is found in `values` (the instance variable belonging to the class).

Parameters

searchVal	

Returns

2.1.3.3 int findMin ( )

Returns the index of the smallest integer in `values`. Precondition: `values` is not empty. Note, this method returns the index of the "first" occurrence of the smallest element in the array. For example: suppose values = [9, 2, 3, 2] then findMin returns 1, because this is the index of the smallest element first encountered scanning the array from left to right.

Parameters

newValue	

2.1.3.4 int getAt (int *index*)

Returns the value found at `index`, or throws a new `IndexOutOfboundsException` if the `index` is bad.

Parameters

index	

Returns

2.1.3.5 int getSize ( )

Returns the size of the instance variable, `values`

Returns

2.1.3.6 long getSum ( )

Returns the sum (as a `double` number of the values found in the `values` array. Note: returns 0 if `values` is empty.

Returns

2.1.3.7 int indexOf (int *target*)

Returns the index of the first (searching from left to right) target (an int) in the `values` array; returns -1 if the target is not found in the array.

Parameters

newValue	

2.1.3.8 int [ ] reverse ( )

Returns a copy of `values` but with its contents reversed. As a precondition, assumes that `values` is non-empty.

2.1.3.9 boolean sameArrays (int[ ] *array1*)

Returns true only when `array1` has the same elements as `values` element for element.

Parameters

array1	
array2	

Returns

2.1.4 Member Data Documentation

2.1.4.1 int [ ] values

The instance variable: `values`

Referenced by NumberList().

The documentation for this class was generated from the following file:

- /Users/tomreinhardt/Dropbox/CMSC131/Labs/Lab-Numbers-List-Canonical/NumberList.java

2.2 PublicTests Class Reference

Public Member Functions

- void **setUp** () throws Exception
- void **testConstructorsLab9** ()
- void **testGetSizeLab9** ()
- void **testGetAtLab9** ()

The documentation for this class was generated from the following file:

- /Users/tomreinhardt/Dropbox/CMSC131/Labs/Lab-Numbers-List-Canonical/PublicTests.java

2.3 ReleaseTests Class Reference

Public Member Functions

- void **setUp** () throws Exception
- void **testTotalLab9** ()
- void **testContainsLab9** ()

- void **testAddLab9** ()
- void **testEqualsArrays** ()
- void **testReverse** ()
- void **findMin** ()
- void **testIndexOf** ()

The documentation for this class was generated from the following file:

- /Users/tomreinhardt/Dropbox/CMSC131/Labs/Lab-Numbers-List-Canonical/ReleaseTests.java

Index

append
    NumberList, 2

contains
    NumberList, 2

findMin
    NumberList, 3

getAt
    NumberList, 3
getSize
    NumberList, 3
getSum
    NumberList, 3

indexOf
    NumberList, 3

NumberList, 1
    append, 2
    contains, 2
    findMin, 3
    getAt, 3
    getSize, 3
    getSum, 3
    indexOf, 3
    NumberList, 2
    reverse, 4
    sameArrays, 4
    values, 4

PublicTests, 4

ReleaseTests, 4
reverse
    NumberList, 4

sameArrays
    NumberList, 4

values
    NumberList, 4