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| |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | | [**Package**](http://docs.google.com/package-summary.html) | **Class** | [**Use**](http://docs.google.com/class-use/MyHashSet.html) | [**Tree**](http://docs.google.com/package-tree.html) | [**Deprecated**](http://docs.google.com/deprecated-list.html) | [**Index**](http://docs.google.com/index-files/index-1.html) | [**Help**](http://docs.google.com/help-doc.html) | | |  |
| PREV CLASS   NEXT CLASS | [**FRAMES**](http://docs.google.com/index.html?MyHashSet.html)    [**NO FRAMES**](http://docs.google.com/MyHashSet.html)     [**All Classes**](http://docs.google.com/allclasses-noframe.html) |
| SUMMARY: NESTED | [FIELD](#3znysh7) | [CONSTR](#2et92p0) | [METHOD](#tyjcwt) | DETAIL: [FIELD](#1t3h5sf) | [CONSTR](#17dp8vu) | [METHOD](#lnxbz9) |

## Class MyHashSet<T>

java.lang.Object  
 **MyHashSet<T>**

**All Implemented Interfaces:** java.lang.Iterable<T>

public class **MyHashSet<T>**extends java.lang.Objectimplements java.lang.Iterable<T>

The MyHashSet API is similar to the Java Set interface. This collection is backed by a hash table.

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| **Field Summary** | |
| static int | [**DEFAULT\_INITIAL\_CAPACITY**](http://docs.google.com/MyHashSet.html#DEFAULT_INITIAL_CAPACITY)            Unless otherwise specified, the table will start as an array of this length. |
| static double | [**LOAD\_FACTOR**](http://docs.google.com/MyHashSet.html#LOAD_FACTOR)            When the ratio of size/capacity reaches or exceeds this value, it is time for the table to be expanded |

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| **Constructor Summary** | |
| [**MyHashSet**](http://docs.google.com/MyHashSet.html#MyHashSet())()            Initializes an empty table of length equal to DEFAULT\_INITIAL\_CAPACITY |
| [**MyHashSet**](http://docs.google.com/MyHashSet.html#MyHashSet(int))(int initialCapacity)            Initializes an empty table of the specified length (capacity). |

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| **Method Summary** | |
| void | [**add**](http://docs.google.com/MyHashSet.html#add(T))([T](http://docs.google.com/MyHashSet.html) element)            Adds the specified element to the collection. |
| boolean | [**contains**](http://docs.google.com/MyHashSet.html#contains(T))([T](http://docs.google.com/MyHashSet.html) element)            Looks for the specified element in the table. |
| int | [**getCapacity**](http://docs.google.com/MyHashSet.html#getCapacity())()            Returns the length of the table (the number of buckets). |
| int | [**getSize**](http://docs.google.com/MyHashSet.html#getSize())()            Returns the number of elements stored in the table. |
| java.util.Iterator<[T](http://docs.google.com/MyHashSet.html)> | [**iterator**](http://docs.google.com/MyHashSet.html#iterator())()            Returns an Iterator that can be used to iterate over all of the elements in the collection. |
| void | [**remove**](http://docs.google.com/MyHashSet.html#remove(T))([T](http://docs.google.com/MyHashSet.html) element)            Removes the specified element from the collection. |

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| **Methods inherited from class java.lang.Object** |
| equals, getClass, hashCode, notify, notifyAll, toString, wait, wait, wait |

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| **Field Detail** |

### DEFAULT\_INITIAL\_CAPACITY

public static final int **DEFAULT\_INITIAL\_CAPACITY**

Unless otherwise specified, the table will start as an array of this length.

**See Also:**[Constant Field Values](http://docs.google.com/constant-values.html#MyHashSet.DEFAULT_INITIAL_CAPACITY)

### LOAD\_FACTOR

public static final double **LOAD\_FACTOR**

When the ratio of size/capacity reaches or exceeds this value, it is time for the table to be expanded

**See Also:**[Constant Field Values](http://docs.google.com/constant-values.html#MyHashSet.LOAD_FACTOR)

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| **Constructor Detail** |

### MyHashSet

public **MyHashSet**(int initialCapacity)

Initializes an empty table of the specified length (capacity). Relies on the static makeArray method of the Node class.

**Parameters:**initialCapacity - initial length (capacity) of table

### MyHashSet

public **MyHashSet**()

Initializes an empty table of length equal to DEFAULT\_INITIAL\_CAPACITY

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| **Method Detail** |

### getSize

public int **getSize**()

Returns the number of elements stored in the table.

**Returns:**number of elements in the table

### getCapacity

public int **getCapacity**()

Returns the length of the table (the number of buckets).

**Returns:**length of the table (capacity)

### contains

public boolean **contains**([T](http://docs.google.com/MyHashSet.html) element)

Looks for the specified element in the table.

**Parameters:**element - to be found **Returns:**true if the element is in the table, false otherwise

### add

public void **add**([T](http://docs.google.com/MyHashSet.html) element)

Adds the specified element to the collection. If the element is already in the collection, then this method should do nothing. Important: After adding this element to the table, consider the ratio of size/capacity. If this ratio is greater than or equal to the LOAD\_FACTOR then you must double the size of the table. This will require re-hashing of all of the data!

**Parameters:**element - the element to be added to the collection

### remove

public void **remove**([T](http://docs.google.com/MyHashSet.html) element)

Removes the specified element from the collection. If the element is not present then this method should do nothing.

**Parameters:**element - the element to be removed

### iterator

public java.util.Iterator<[T](http://docs.google.com/MyHashSet.html)> **iterator**()

Returns an Iterator that can be used to iterate over all of the elements in the collection.

**Specified by:**iterator in interface java.lang.Iterable<[T](http://docs.google.com/MyHashSet.html)>

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