

Package `GtuContainer`

Class `JavaSet<T>`

`java.lang.Object`
`GtuContainer.JavaSet<T>`

Type Parameters:
T - the type of elements held in the set.

All Implemented Interfaces:
`JavaContainer<T>`

```
public class JavaSet<T>
extends Object
implements JavaContainer<T>
```

A generic implementation of `JavaContainer` using a dynamically resizing array.

Constructor Summary

Constructors	
Constructor	Description
<code>JavaSet()</code>	Constructs a new <code>JavaSet</code> with an initial capacity of 10.
<code>JavaSet(int cap)</code>	Constructs a new <code>JavaSet</code> with given capacity.

Method Summary

All Methods	Instance Methods	Concrete Methods
Modifier and Type	Method	Description
void	<code>add(T element)</code>	Adds an element to the set if it does not already exist.
<code>JavaSet<T></code>	<code>clone()</code>	Creates and returns a clone of the <code>JavaSet</code> .
boolean	<code>equals(Object element)</code>	Checks if this set is equal to another object.
<code>Iterator<T></code>	<code>getIterator()</code>	Returns an iterator over the elements in the set.
void	<code>remove(T element)</code>	Removes the first occurrence of the specified element from the set.
int	<code>size()</code>	Returns the current size of the set.
<code>String</code>	<code>toString()</code>	Returns a string representation of the set.

Methods inherited from class [java.lang.Object](#)

[finalize](#), [getClass](#), [hashCode](#), [notify](#), [notifyAll](#), [wait](#), [wait](#), [wait](#)

Constructor Details**JavaSet**

```
public JavaSet()
```

Constructs a new JavaSet with an initial capacity of 10.

JavaSet

```
public JavaSet(int cap)
```

Constructs a new JavaSet with given capacity.

Parameters:

`cap` - Initial capacity of the Set.

Method Details**add**

```
public void add(T element)
```

Adds an element to the set if it does not already exist.

Specified by:

[add](#) in interface [JavaContainer](#)<[T](#)>

Parameters:

`element` - the element to be added.

remove

```
public void remove(T element)
```

Removes the first occurrence of the specified element from the set.

Specified by:

[remove](#) in interface [JavaContainer](#)<[T](#)>

Parameters:

`element` - the element to be removed.

size

```
public int size()
```

Returns the current size of the set.

Specified by:

`size` in interface `JavaContainer<T>`

Returns:

size of the set.

toString

```
public String↗ toString()
```

Returns a string representation of the set.

Overrides:

`toString↗` in class `Object↗`

Returns:

string representation of the set.

equals

```
public boolean equals(Object↗ element)
```

Checks if this set is equal to another object.

Overrides:

`equals↗` in class `Object↗`

Parameters:

`element` - the object to compare.

Returns:

true if equal, false otherwise.

clone

```
public JavaSet<T> clone()
```

Creates and returns a clone of the JavaSet.

Overrides:

`clone↗` in class `Object↗`

Returns:

a clone of the JavaSet.

getIterator

```
public Iterator<T> getIterator()
```

Returns an iterator over the elements in the set.

Specified by:

[getIterator](#) in interface [JavaContainer](#)<T>

Returns:

an iterator over the elements in the set.