Class BST12Tester

java.lang.Object
    BST12Tester

```
public class BST12Tester
extends java.lang.Object
```

This class is a JUnit tester for the BST12 and BST12Adapt classes. This class extends junit.framework.TestCase

Constructor Summary

Constructors

Constructor and Description
`BST12Tester()`

Method Summary

All Methods | **Instance Methods** | **Concrete Methods**

Modifier and Type	Method and Description
void	`setUp()` Standard Test Fixture.
void	`testAdaptIteHasNext()` The tester tests if BST12Adapt iterator functions properly using Adapter Design Pattern.
void	`testAdaptIteRemove()` The tester tests if BST12Adapt throws proper exception while using remove(), since it's undefined.
void	`testAddAll()` This tester tests if addAll by adding a collection works.
void	`testAddDuplicates()` Supplied tester.
void	`testAddUnique()` Supplied Tester.

void	**testDepth**() Supplied tester.
void	**testEmptyTree**() supplied tester
void	**testMyAddDuplicates**() Modified by supplied tester, to test duplicates on add() on BST12 object.
void	**testMyAddUnique**() This tester is modified by the supplied tester.
void	**testMyDepth**() Modified by supplied tester, test BST12 object height.
void	**testMyDynamicHeight**() This tester dynamically tests the height of a BST12 object called mytree, after every add and remove, to see if the height meets my speculation based on how the tree works.
void	**testMyEmptyTree**() this tester tests clear method for BST12
void	**testMyIteRemove**() The tester tests if BST12 throws proper exception while using remove()
void	**testMyOtherType**() Modified by supplied tester.
void	**testMyRandomAddAndRemove**() Modified by supplied tester to test on BST12 object.
void	**testMyRemoveExistingLeaf**() Modified by supplied tester, to test basic remove function on specific element on BST12 object.
void	**testMyRemoveExistingMiddleItemWithEmptyLeftChild**() Modified by supplied tester, to test remove method on an internal node with empty left child on BST12 object.
void	**testMyRemoveExistingMiddleItemWithEmptyRightChild**() Modified by supplied tester, to test remove an internal node with empty right child on BST12 object.
void	**testMyRemoveExistingMiddleItemWithTwoChildren**() Modified by supplied tester, to test remove method on an internal node with both children on BST12 object.
void	**testMyRemoveRoot**() Modified by supplied tester, to test if removing roots of a BST12 object works properly.
void	**testMySize**()

	Modified by supplied tester to test BST12 size.
void	**testOtherType**() Supplied tester.
void	**testRandomAddAndRemove**() Supplied tester.
void	**testRemoveExistingLeaf**() Supplied tester.
void	**testRemoveExistingMiddleItemWithEmptyLeftChild**() Supplied tester.
void	**testRemoveExistingMiddleItemWithEmptyRightChild**() Supplied tester.
void	**testRemoveExistingMiddleItemWithTwoChildren**() Supplied tester.
void	**testRemoveRoot**() Supplied tester.
void	**testSeventeenChildrenNumber**() This tester verifies the BST12 tree called seventeen has correct numbers of children for each nodes as I speculated.
void	**testSeventeenContains**() Test basic contains() method on seventeen.
void	**testSeventeenDepth**() Test height on BST12 object called seventeen.
void	**testSeventeenSize**() Test size on BST12 object called seventeen.
void	**testSize**() Supplied tester.
void	**testToString**() Supplied tester.

Methods inherited from class java.lang.Object

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

Constructor Detail

BST12Tester

```
public BST12Tester()
```

Method Detail

testEmptyTree

```
public void testEmptyTree()
```

supplied tester

testMyEmptyTree

```
public void testMyEmptyTree()
```

this tester tests clear method for BST12

setUp

```
public void setUp()
           throws java.lang.Exception
```

Standard Test Fixture. Use either BST12Adapt or BST12 as a test fixture, depending on the need.

Throws:

`java.lang.Exception`

testAdaptIteRemove

```
public void testAdaptIteRemove()
```

The tester tests if BST12Adapt throws proper exception while using remove(), since it's undefined.

testMyIteRemove

```
public void testMyIteRemove()
```

The tester tests if BST12 throws proper exception while using remove()

testAdaptIteHasNext

```
public void testAdaptIteHasNext()
```

The tester tests if BST12Adapt iterator functions properly using Adapter Design Pattern.

testAddUnique

```
public void testAddUnique()
```

Supplied Tester.

testMyAddUnique

```
public void testMyAddUnique()
```

This tester is modified by the supplied tester. Tests on BST12.

testAddAll

```
public void testAddAll()
```

This tester tests if addAll by adding a collection works. The collection contains same things as mytree (in the setup) does.

testSeventeenChildrenNumber

```
public void testSeventeenChildrenNumber()
```

This tester verifies the BST12 tree called seventeen has correct numbers of children for each nodes as I speculated. and verifies proper exceptions are caught.

testSize

```
public void testSize()
```

Supplied tester.

testMySize

```
public void testMySize()
```

Modified by supplied tester to test BST12 size.

testDepth

```
public void testDepth()
```

Supplied tester. Modified to fit the requirement.

testMyDepth

```
public void testMyDepth()
```

Modified by supplied tester, test BST12 object height.

testSeventeenSize

```
public void testSeventeenSize()
```

Test size on BST12 object called seventeen.

testSeventeenDepth

```
public void testSeventeenDepth()
```

Test height on BST12 object called seventeen.

testSeventeenContains

```
public void testSeventeenContains()
```

Test basic contains() method on seventeen.

testMyDynamicHeight

```
public void testMyDynamicHeight()
```

This tester dynamically tests the height of a BST12 object called mytree, after every add and remove, to see if the height meets my speculation based on how the tree works.

testToString

```
public void testToString()
```

Supplied tester.

testAddDuplicates

```
public void testAddDuplicates()
```

Supplied tester.

testMyAddDuplicates

```
public void testMyAddDuplicates()
```

Modified by supplied tester, to test duplicates on add() on BST12 object.

testRemoveExistingLeaf

```
public void testRemoveExistingLeaf()
```

Supplied tester.

testMyRemoveExistingLeaf

```
public void testMyRemoveExistingLeaf()
```

Modified by supplied tester, to test basic remove function on specific element on BST12 object.

testRemoveExistingMiddleItemWithEmptyRightChild

```
public void testRemoveExistingMiddleItemWithEmptyRightChild()
```

Supplied tester.

testMyRemoveExistingMiddleItemWithEmptyRightChild

```
public void testMyRemoveExistingMiddleItemWithEmptyRightChild()
```

Modified by supplied tester, to test remove an internal node with empty right child on BST12 object.

testRemoveExistingMiddleItemWithEmptyLeftChild

```
public void testRemoveExistingMiddleItemWithEmptyLeftChild()
```

Supplied tester.

testMyRemoveExistingMiddleItemWithEmptyLeftChild

```
public void testMyRemoveExistingMiddleItemWithEmptyLeftChild()
```

Modified by supplied tester, to test remove method on an internal node with empty left child on BST12 object.

testRemoveExistingMiddleItemWithTwoChildren

```
public void testRemoveExistingMiddleItemWithTwoChildren()
```

Supplied tester.

testMyRemoveExistingMiddleItemWithTwoChildren

```
public void testMyRemoveExistingMiddleItemWithTwoChildren()
```

Modified by supplied tester, to test remove method on an internal node with both children on BST12 object.

testRemoveRoot

```
public void testRemoveRoot()
```

Supplied tester.

testMyRemoveRoot

```
public void testMyRemoveRoot()
```

Modified by supplied tester, to test if removing roots of a BST12 object works properly.

testRandomAddAndRemove

```
public void testRandomAddAndRemove()
```

Supplied tester.

testMyRandomAddAndRemove

```
public void testMyRandomAddAndRemove()
```

Modified by supplied tester to test on BST12 object.

testOtherType

```
public void testOtherType()
```

Supplied tester. See if adding other types work.

testMyOtherType

```
public void testMyOtherType()
```

Modified by supplied tester. Adding string on BST12 object and see if it works.