BasicLinkedCollection class Test Plan

Test Case 1   Test empty default collection

Operation	Purpose	Object State	Expected Result
Collection<String> cEmpty = new BasicCollection	To create a new empty collection	null	A new empty collection
assertEquals (cEmpty.size(),0);	To test initialized with a size of zero	null	true
assertTrue(cEmpty.isEmpty());	To test initialized empty	Null	true

Test Case 2   Test client instantiate collection

Operation	Purpose	Object State	Expected Result
assertEquals("verify size after the 3 add ops", movies.size(),3);	To make sure movies has 3 elements	Has three elements, and a size of three	true
assertTrue(!movies.isEmpty());	Verify collection is not empty.		true
assertTrue(movies.contains(	Verify collection contains element.		true

Operation	Purpose	Object State	Expected Result
"Inception"));			
assertTrue(movies.contains("Insomnia"));	Verify collection contains element.		true
assertTrue(movies.contains("Memento"));	Verify collection contains element.		true
assertTrue(!movies.contains("Missing"));	Verify collection does not contain element.		true

Test Case 3 Test add method

Operation	Purpose	Object State	Expected Result
assertTrue(movies.add("The Prestige"));	To add a new element to the collection	Four elements in collection	True
assertEquals(movies.size(), 4);	Verify collection size is now 4	Size = 4	true
assertTrue(movies.contains("Inception"));	Verify original elements still in collection		true
assertTrue(	Verify original		True

movies.contains("Insomnia"));	elements still in collection		
assertTrue(movies.contains("Memento"));	Verify original elements still in collection		true
assertTrue(movies.contains("The Presige"));	Verify added element is in collection		True
assertTrue(!movies.contains("Missing"));	Verify collection does not contain elements that have not been added		True

Test Case 4   Test remove element

Operation	Purpose	Object State	Expected Result
assertTrue(movies.remove("Inception"));	Remove "inception from movie list"	Has three elements, and a size of three	true
assertEquals(movies.size(), 2);	Verify collection has 2 elements		true

Operation	Purpose	Object State	Expected Result
assertTrue(!c.contains("Inception"));	Verify collection does not contain removed element.		true
assertTrue(!movies.isEmpty());	Verify collection is not empty element.		true

Test Case 5   Test remove all elements from collection

Operation	Purpose	Object State	Expected Result
assertTrue(removeAll (movies))	To remove all movies from instantiated collection	null	true
assertTrue(movies.isEmpty());	Verify collection is empty.	Null	true
assertTrue(!movies.contains("Inception"));	Verify collection does not contain element.		true
assertTrue(!movies.contains("Insomnia"));	Verify collection does not contain element.		true
assertTrue(!movies.contains(	Verify collection does not contain		true

"Memento"));	element.		

Test Case 6   Test adding all elements

Operation	Purpose	Object State	Expected Result
`Collection<String> c = new BasicCollection`	Create a new collection	Null	True
`assertTrue( c.addAll (movies))`	Add all elements from movies collection to new collection	Populated with elements of other collection	True
`assertEquals("verify size after the 3 add ops", c.size(),3);`	Verify new size = 3	Has three elements, and a size of three	true
`assertTrue( !c.isEmpty() );`	Verify collection is not empty.		true
`assertTrue( c.contains( "Inception" ) );`	Verify collection contains element.		true
assertTrue(c.contains("Insomnia"));	Verify collection contains element.		true
assertTrue(c.contains(	Verify collection		true

Operation	Purpose	Object State	Expected Result
"Memento"));	contains element.		
assertTrue(!movies.contains("Missing"));	Verify collection does not contain element.		true

Test Case 7   Test size method

Operation	Purpose	Object State	Expected Result
assertEquals("verify size of empty collection" cEmpty.size(), 0);	Verify empty collection has size of zero	null	True
assertEquals("verify size after the 3 add ops", movies.size(), 3);	Verify collection with three elements has a size of three.	3 elements added	true
assertTrue(movies.add("The Prestige"));	Add an element	4 elements in list	True
assertEquals("verify size after one more add op",	Verify collection has a size of 4.	4 elements in list	True

`movies.size(), 4` `);`			
`assertTrue(` `movies.remove(` `"Inception" ) );`	Remove an element	2 elements in list	true
`assertEquals(` `"verify size after` `remove` `op",movies.size(),` `2 );`	Verify collection that had three elements then removed one now has 2 elements	2 elements in list	True
`assertTrue(` `movies.removeAll(` `movies));`	Remove all elements from list	Empty list	True
`assertEquals(` `"verify size after` `removeall` `op",movies.size(),` `0 );`	Verify size of list is now zero	Empty list	True