

```

1  package TestBags;
2
3  import Bags.*;
4  import BasicIO.*;
5
6
7  /* This class is a test harness to test the Bags library including ConBag.
8   *
9   * @author S.Fenwick
10  *
11  * @version 1.0(March 2017)                                     */
12
13  public class TestClass{
14
15      private ASCIIDataFile data;
16
17      /* This constructor tests the ConBag implementations of the Bag interface. */
18
19      public TestClass(){
20
21          // data = new ASCIIDataFile();
22          Bag bag100; //uses constructor 1
23          Bag fullBag; //uses constructor 2
24          Bag stringBag; //uses constructor 3
25          String[] sBag = {"a", "b", "c", "d"};
26
27          bag100 = new ConBag();
28          fullBag = new ConBag(1);
29          sBag = new String[100];
30
31          stringBag = new ConBag(sBag);
32
33          //Testing NoItemException
34          try{
35              bag100.remove("red");
36          }
37          catch (NoItemException e ){
38              System.out.println("No Items to Withdraw.");
39          }
40
41          //Testing NoSpaceException
42          fullBag.add("red");
43          try{
44              fullBag.add("red");
45          }
46          catch(NoSpaceException e ){
47              System.out.println("No Space in Bag.");
48          }
49
50          //Testing method ADD
51          bag100.add("red");
52          bag100.add("red");
53          bag100.add("green");
54          bag100.add("red");
55          //Testing method CARDINALITY
56          System.out.println(bag100.cardinality());
57          //Testing method CONTAINS
58          System.out.println(bag100.contains("red"));
59          System.out.println(bag100.contains("green"));
60          System.out.println(bag100.contains("blue"));
61          //Testing method REMOVE
62          bag100.remove("red");
63          System.out.println("bag100 cardinality" + bag100.cardinality());
64          System.out.println(bag100.contains("red"));
65          //Testing method COUNT
66          bag100.add("red");
67          bag100.add("red");
68          System.out.println(bag100.count("blue"));
69          System.out.println(bag100.count("red"));
70          System.out.println(bag100.count("green"));

```

```
71     //Testing method DRAW
72     System.out.println(bag100.cardinality());
73     bag100.draw();
74     System.out.println(bag100.cardinality());
75     System.out.println(bag100.contains("red"));
76     System.out.println(bag100.contains("green"));
77     System.out.println(bag100.contains("blue"));
78
79 } //constructor
80
81
82 public static void main (String args[]){ TestClass t = new TestClass();}
83
84 } //TestClass
```