

Collection.java

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1 /*
2  * Package java.util
3  * Class Arrays
4  * This is a short program which tests all the available
   methods in the Arrays class
5  * and prints out the result on the console output.
6 */
7
8 import java.util.*;
9
10 public class Collection {
11
12     public static void main(String[] args){
13         List<Integer> intList = new ArrayList<Integer>();
14
15         //Using the method add() of the ArrayList class
16         //Works only for one element
17         intList.add(23);
18         intList.add(24);
19         intList.add(25);
20
21         //Using the addAll method of the Collections class
22         List<Integer> newList = new ArrayList<Integer>();
23         Collections.addAll(intList, 2,3,4);
24
25         //Using the toString() method from the List set of
   methods to print out the List
26         String s = intList.toString();
27         System.out.println("intList: " + s);
28
29         //Using the binarySearch method from the Collections
   class
30         //Sorting the List using the Sort() method in the
   Collections class
31         Collections.sort(intList);
32         System.out.println("Key Index = " +
   Collections.binarySearch(intList, 2));
33
34         //newIntList.add(2);
35         //newIntList.add(3);
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36         newList.add(13);
37
38         //Using the disjoint method of the Collections class
39         //It tells us if the two lists are disjoint or not.
40         System.out.println("Disjoint: " +
Collections.disjoint(newIntList, intList));
41
42         //Using the fill() method of the Collections class
43         newList.add(0);
44         newList.add(12);
45         System.out.println("newIntList: " + newList);
46         Collections.fill(newIntList, 5);
47         System.out.println("newIntList: " + newList);
48
49         //Using the method frequency() from the class
Collections
50         newList.add(2);
51         newList.add(23);
52         System.out.println("newIntList: " + (newIntList));
53         System.out.println("Frequency(5): " +
Collections.frequency(newIntList, 5));
54         System.out.println("Frequency(2): "
+Collections.frequency(newIntList, 2));
55
56         //Using the indexOfSubList() method from the
Collections method on a list
57         //There is also a method named lastIndexOfSubList()
58         List<Integer> theList = new ArrayList<Integer>();
59         theList.add(4);
60         theList.add(23);
61         theList.add(24);
62 //         theList.add(26);
63         System.out.println("intList: "+intList);
64         System.out.println("theList: "+theList);
65         System.out.println("indexOfSubList:
"+Collections.indexOfSubList(intList, theList));
66
67         //Using the max method of the Collections class
68         System.out.println("Max(intList):
"+Collections.max(intList));
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69         System.out.println("Max(newIntList):
"+Collections.max(newIntList));
70
71
72         //Using the min method of the Collections class
73         System.out.println("Min(intList):
"+Collections.min(intList));
74         System.out.println("Min(newIntList):
"+Collections.min(newIntList));
75
76         //Using the method of nCopies to create a list with n
repeated elements
77         List<String> names = Collections.nCopies(3, "Aqua");
78         System.out.println(names);
79
80         //Using the reverse() function from the Collections
class
81         System.out.println("Before reverse (intList):
"+intList);
82         Collections.reverse(intList);
83         System.out.println("After reverse (intList):
"+intList);
84
85         //Using the replaceAll() method from the Collections
class
86         Collections.replaceAll(intList, 25, 5);
87         System.out.println("Replace 25 by 5(intList):
"+intList);
88
89         //Using the rotate() method of the Collections class
90         //Rotations work in both directions, change the sign
91         System.out.println("Before rotation (intList):
"+intList);
92         Collections.rotate(intList, -2);
93         System.out.println("After rotate (intList):
"+intList);
94
95         //Using the shuffle() method from the Collections
class
96         Collections.shuffle(intList);
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97         System.out.println("Shuffled intList: "+intList);
98
99         //Using the swap() method from the Collecitons class
100        Collections.swap(intList, 0, intList.size()-1);
101        System.out.println("Swapped 0<->length intList:
    "+intList);
102    }
103
104 }
105
106
107
108
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110
111
112
```