

```
1
2 import java.util.Arrays;
3 public class MyArrays {
4
5     // Two arrays, for testing purposes. Used by the testing methods in this class.
6     private static final int[] a = { 2, 4, 2, 5};
7     private static final int[] b = { 3, 6, 9};
8
9     /**
10      * If every element in the array is greater than or equal to the previous element, returns true.
11      * Otherwise, returns false.
12      */
13     public static boolean isInIncreasingOrder(int[] arr) {
14         boolean isInIncreasingOrder = true;
15         for (int i = 0; i < arr.length; i++) {
16             if (i > 0 && arr[i] < arr[i - 1]) {
17                 isInIncreasingOrder = false;
18             }
19         }
20         return isInIncreasingOrder;
21     }
22
23     /**
24      * Returns an array whose elements consist of all the elements of arr1,
25      * followed by all the elements of arr2.
26      */
27     public static int[] concat(int[] arr1, int[] arr2) {
28         int[] both = Arrays.copyOf(arr1, arr1.length + arr2.length);
29         System.arraycopy(arr2, 0, both, arr1.length, arr2.length);
30         return both;
31     }
32
33     /** If the given array contains an element that appears more than once, returns true.
34      * Otherwise, returns false. */
35     public static boolean hasDuplicates(int[] arr) {
36         //// Replace the following statement with your code
37         boolean duplicates = false;
38         for (int firstCounter = 0; firstCounter < arr.length; firstCounter++) {
39             for (int secondCounter = firstCounter + 1; secondCounter < arr.length; secondCounter++) {
40                 if (secondCounter != firstCounter && arr[secondCounter] == arr[firstCounter]) {
41                     duplicates = true;
42                 }
43             }
44         }
45         return duplicates;
46     }
47
48     // Prints the given int array, and then prints an empty line.
49     public static void println(int[] arr) {
50         for (int i = 0; i < arr.length; i++) {
51             System.out.print(arr[i] + " ");
52         }
53         System.out.println();
54     }
55
56     public static void main(String[] args) {
57         System.out.print("Array a: "); println(a);
58         System.out.print("Array b: "); println(b);
59         //// Uncomment the test that you wish to execute
60         testIsInIncreasingOrder();
61         testConcat();
62         testHasDuplicates();
63     }
64
65     private static void testIsInIncreasingOrder() {
66         System.out.println();
67         System.out.println("Array a is " + ((isInIncreasingOrder(a)) ? "" : "not ") + "in order");
68         System.out.println("Array b is " + ((isInIncreasingOrder(b)) ? "" : "not ") + "in order");
69     }
70
71     private static void testConcat() {
72         System.out.println();
73         System.out.print("Concatenation of a and b: "); println(concat(a, b));
74     }
75
76     private static void testHasDuplicates() {
77         System.out.println();
78         System.out.println("Array a has " + ((hasDuplicates(a)) ? "" : "no ") + "duplicates");
79         System.out.println("Array b has " + ((hasDuplicates(b)) ? "" : "no ") + "duplicates");
80     }
81 }
82 }
```