

Array.java

```
1 package MergeSort;
2 import java.util.*;
3
4 public class Array {
5
6     public static void sort(int[] x, int lower, int upper)
7     {
8         int num1 = upper - lower;
9         if(num1 <=1)
10         {
11             return;
12         }
13         int num2 = lower + num1/2;
14
15         sort(x, lower, num2);
16         sort(x, num2, upper);
17
18         int[] num3 = new int[num1];
19         int y = lower, z = num2;
20         for(int w = 0; w < num1; w++)
21         {
22             if(y == num2)
23             {
24                 num3[w] = x[z++];
25             }
26             else if(z == upper)
27             {
28                 num3[w] = x[y++];
29             }
30             else if(x[z] < x[y])
31             {
32                 num3[w] = x[z++];
33             }
34             else
35             {
36                 num3[w] = x[y++];
37             }
38         }
39         for(int w=0; w<num1; w++)
40         {
41             x[lower + w] = num3[w];
42         }
43     }
44
45     public static void main(String args[])
46     {
47         Scanner sc = new Scanner(System.in);
48         int num1, y;
49         System.out.println("Please choose number of array elements: ");
50         num1 = sc.nextInt();
51         int xyz[] = new int[num1];
52         System.out.println("Please insert " + num1 + " numbers of elements: ");
53         for(y=0; y<num1; y++)
54         {
55             xyz[y] = sc.nextInt();
56         }
57         sort(xyz, 0, num1);
```

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```
58     System.out.println("Result of array after sorting: ");
59     for(y=0; y<num1; y++)
60     {
61         System.out.print(xyz[y] + " ");
62     }
63     System.out.println();
64 }
65 }
66
```