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CSCI260 – W03
Assignment #3

Code:

```
1  import java.util.*;
2
3  public class challenge1 {
4      private static void bubbleSort(ArrayList<Integer> intArray) {
5          Integer temp = 0;
6          for (int i = 0; i < intArray.size(); i++) {
7              for (int j = 1; j < (intArray.size() - i); j++)
8              {
9                  if (intArray.get(j - 1) > intArray.get(j))
10                 {
11                     temp = intArray.get(j - 1);
12                     intArray.set(j-1, intArray.get(j));
13                     intArray.set(j, temp);
14                 }
15             }
16         }
17     }
18
19     public static void main(String[] args) {
20         ArrayList<Integer> nums = new ArrayList<Integer>();
21         Scanner input = new Scanner(System.in);
22         while(true)
23         {
24             System.out.println(x:"Enter your integer (Type q to quit)");
25             String keyboard = input.next();
26             try {
27                 nums.add(Integer.parseInt(keyboard));
28             }
29             catch(NumberFormatException e)
30             {
31                 break;
32             }
33         }
34         input.close();
35         System.out.println();
36         System.out.println("Current Array: " + nums);
37         bubbleSort(nums);
38         System.out.println("Sorted Array: " + nums);
39     }
40 }
41
```

Terminal

Enter your integer (Type q to quit)

10

Enter your integer (Type q to quit)

9

Enter your integer (Type q to quit)

1

Enter your integer (Type q to quit)

0

Enter your integer (Type q to quit)

2

Enter your integer (Type q to quit)

6

Enter your integer (Type q to quit)

3

Enter your integer (Type q to quit)

900

Enter your integer (Type q to quit)

3

Enter your integer (Type q to quit)

1

Enter your integer (Type q to quit)

81

Enter your integer (Type q to quit)

q

Current Array: [10, 9, 1, 0, 2, 6, 3, 900, 3, 1, 81]

Sorted Array: [0, 1, 1, 2, 3, 3, 6, 9, 10, 81, 900]

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Code

```
1  package BubbleSort;
2  import java.util.Random;
3
4  public class challenge2 {
5      private static int[] createArray() {
6          int[] array = new int[25];
7          for (int i = 0; i < array.length; i++)
8          {
9              Random rand = new Random();
10             array[i] = rand.nextInt(bound:10000);
11         }
12         return array;
13     }
14
15     Run | Debug
16     public static void main(String[] args) {
17         int[] nums = createArray();
18
19         System.out.println(x:"Current Array: ");
20         for (int i = 0; i < nums.length; i++)
21         {
22             System.out.print(nums[i] + " ");
23         }
24
25         System.out.println(x:"\nSorted Array: ");
26         BubbleSort.bubbleSort(nums);
27         for (int i = 0; i < nums.length; i++)
28         {
29             System.out.print(nums[i] + " ");
30         }
31         System.out.println();
32     }
```

Terminal:

```
wifi-64-187-249-63:Assignment 3 navraj$  
Current Array:  
7548 8711 8838 2007 8257 7051 2015 6506 7208 9451 6650 5986 1572 9620 5787 7555 4115 2631 916 4213 1823 9027 8897 1929 2870  
Sorted Array:  
916 1572 1823 1929 2007 2015 2631 2870 4115 4213 5787 5986 6506 6650 7051 7208 7548 7555 8257 8711 8838 8897 9027 9451 9620  
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```