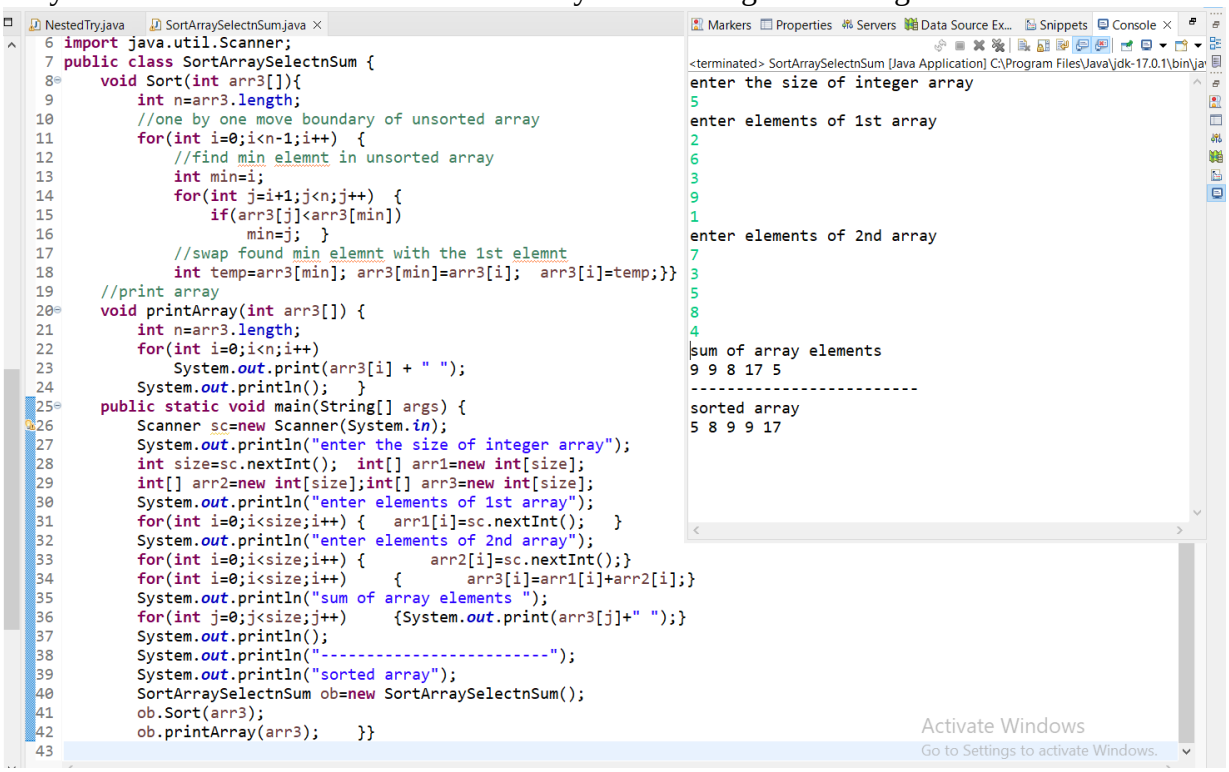
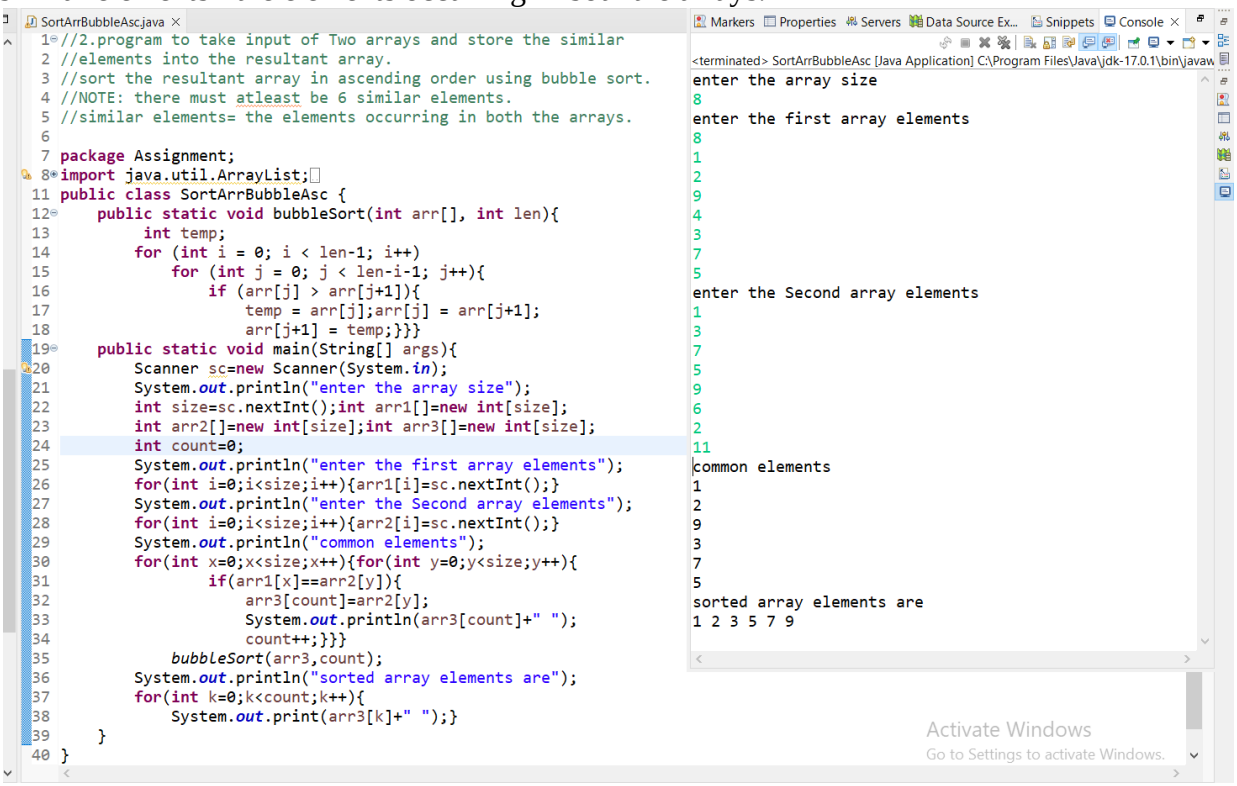
1. program to take input of two integer arrays from the user and to find the sum of both the arrays. Sort the elements of the resultant array in ascending order using selection sort.



```
import java.util.Scanner;
public class SortArraySelectnSum {
    void Sort(int arr3[]){
        int n=arr3.length;
        //one by one move boundary of unsorted array
        for(int i=0;i<n-1;i++)  {
            //find min elemnt in unsorted array
            int min=i;
            for(int j=i+1;j<n;j++)  {
                if(arr3[j]<arr3[min])
                    min=j;  }
            //swap found min elemnt with the 1st elemnt
            int temp=arr3[min]; arr3[min]=arr3[i];  arr3[i]=temp;}}
    //print array
    void printArray(int arr3[]) {
        int n=arr3.length;
        for(int i=0;i<n;i++)
            System.out.print(arr3[i] + " ");
        System.out.println();   }
    public static void main(String[] args) {
        Scanner sc=new Scanner(System.in);
        System.out.println("enter the size of integer array");
        int size=sc.nextInt();  int[] arr1=new int[size];
        int[] arr2=new int[size];int[] arr3=new int[size];
        System.out.println("enter elements of 1st array");
        for(int i=0;i<size;i++) {   arr1[i]=sc.nextInt();   }
        System.out.println("enter elements of 2nd array");
        for(int i=0;i<size;i++) {       arr2[i]=sc.nextInt();}
        for(int i=0;i<size;i++)     {       arr3[i]=arr1[i]+arr2[i];}
        System.out.println("sum of array elements ");
        for(int j=0;j<size;j++)     {System.out.print(arr3[j]+" ");}
        System.out.println();
        System.out.println("-------------------------");
        System.out.println("sorted array");
        SortArraySelectnSum ob=new SortArraySelectnSum();
        ob.Sort(arr3);
        ob.printArray(arr3);    }}
```

```
enter the size of integer array
5
enter elements of 1st array
2
6
3
9
1
enter elements of 2nd array
7
3
5
8
4
sum of array elements
9 9 8 17 5
-------------------------
sorted array
5 8 9 9 17
```

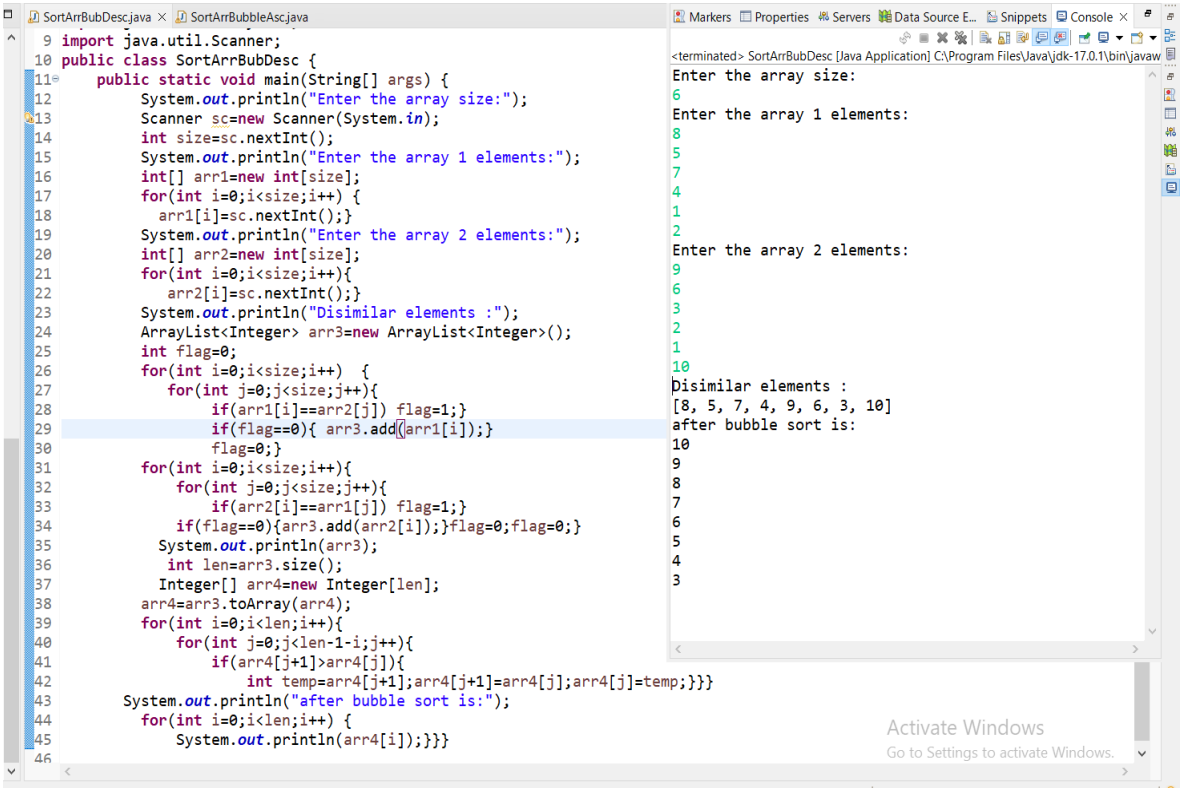
2.program to take input of Two arrays and store the similar elements into the resultant array.
sort the resultant array in ascending order using bubble sort.
NOTE: there must atleast be 6 similar elements.
similar elements= the elements occurring in both the arrays.



```
//2.program to take input of Two arrays and store the similar
//elements into the resultant array.
//sort the resultant array in ascending order using bubble sort.
//NOTE: there must atleast be 6 similar elements.
//similar elements= the elements occurring in both the arrays.

package Assignment;
import java.util.ArrayList;
public class SortArrBubbleAsc {
    public static void bubbleSort(int arr[], int len){
         int temp;
        for (int i = 0; i < len-1; i++)
            for (int j = 0; j < len-i-1; j++){
                if (arr[j] > arr[j+1]){
                    temp = arr[j];arr[j] = arr[j+1];
                    arr[j+1] = temp;}}}
    public static void main(String[] args){
        Scanner sc=new Scanner(System.in);
        System.out.println("enter the array size");
        int size=sc.nextInt();int arr1[]=new int[size];
        int arr2[]=new int[size];int arr3[]=new int[size];
        int count=0;
        System.out.println("enter the first array elements");
        for(int i=0;i<size;i++){arr1[i]=sc.nextInt();}
        System.out.println("enter the Second array elements");
        for(int i=0;i<size;i++){arr2[i]=sc.nextInt();}
        System.out.println("common elements");
        for(int x=0;x<size;x++){for(int y=0;y<size;y++){
                if(arr1[x]==arr2[y]){
                    arr3[count]=arr2[y];
                    System.out.println(arr3[count]+" ");
                    count++;}}}
            bubbleSort(arr3,count);
        System.out.println("sorted array elements are");
        for(int k=0;k<count;k++){
            System.out.print(arr3[k]+" ");}
    }
}
```

```
enter the array size
8
enter the first array elements
8
1
2
9
4
3
7
5
enter the Second array elements
1
3
7
5
9
6
2
11
common elements
1
2
9
3
7
5
sorted array elements are
1 2 3 5 7 9
```

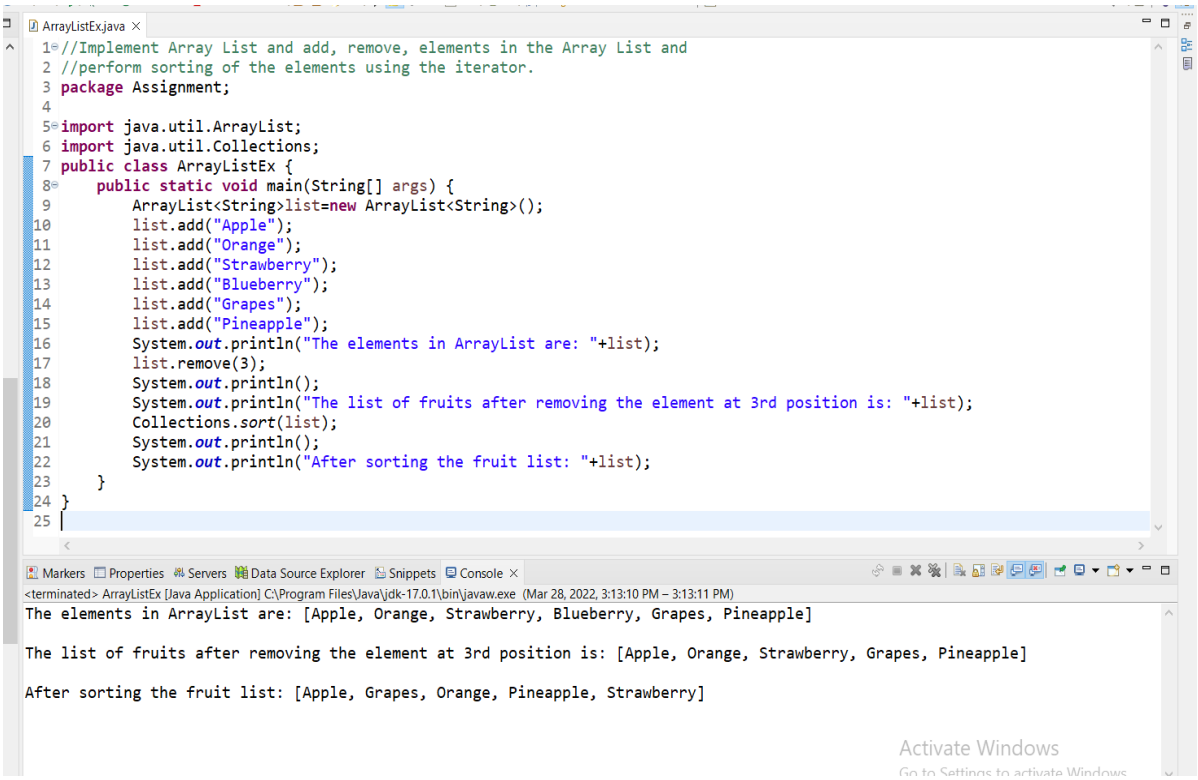
3.program to take input two arrays and store the dissimilar elements into a resultant array. sort the resultant array in a descending order using bubble sort.
dissimilar elements= the elements not occurring in both the arrays.(unique elements)



```java
import java.util.Scanner;
public class SortArrBubDesc {
    public static void main(String[] args) {
        System.out.println("Enter the array size:");
        Scanner sc=new Scanner(System.in);
        int size=sc.nextInt();
        System.out.println("Enter the array 1 elements:");
        int[] arr1=new int[size];
        for(int i=0;i<size;i++) {
          arr1[i]=sc.nextInt();}
        System.out.println("Enter the array 2 elements:");
        int[] arr2=new int[size];
        for(int i=0;i<size;i++){
           arr2[i]=sc.nextInt();}
        System.out.println("Disimilar elements :");
        ArrayList<Integer> arr3=new ArrayList<Integer>();
        int flag=0;
        for(int i=0;i<size;i++)  {
           for(int j=0;j<size;j++){
                if(arr1[i]==arr2[j]) flag=1;}
                if(flag==0){ arr3.add(arr1[i]);}
                flag=0;}
        for(int i=0;i<size;i++){
            for(int j=0;j<size;j++){
                if(arr2[i]==arr1[j]) flag=1;}
            if(flag==0){arr3.add(arr2[i]);}flag=0;flag=0;}
          System.out.println(arr3);
           int len=arr3.size();
          Integer[] arr4=new Integer[len];
        arr4=arr3.toArray(arr4);
        for(int i=0;i<len;i++){
            for(int j=0;j<len-1-i;j++){
                if(arr4[j+1]>arr4[j]){
                    int temp=arr4[j+1];arr4[j+1]=arr4[j];arr4[j]=temp;}}}
      System.out.println("after bubble sort is:");
        for(int i=0;i<len;i++) {
            System.out.println(arr4[i]);}}}
```

```
<terminated> SortArrBubDesc [Java Application] C:\Program Files\Java\jdk-17.0.1\bin\javaw
Enter the array size:
6
Enter the array 1 elements:
8
5
7
4
1
2
Enter the array 2 elements:
9
6
3
2
1
10
Disimilar elements :
[8, 5, 7, 4, 9, 6, 3, 10]
after bubble sort is:
10
9
8
7
6
5
4
3
```

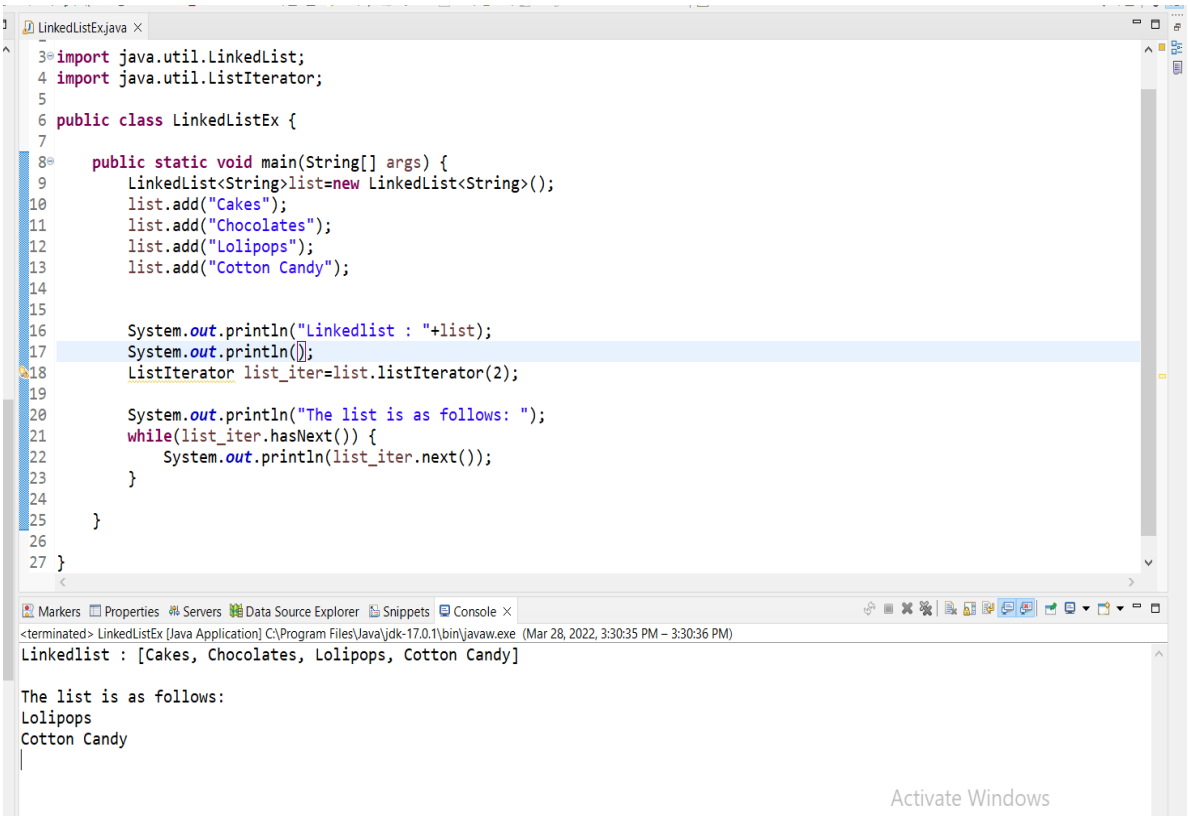
4. Implement Array List and add, remove, elements in the Array List and perform sorting of the elements using the iterator.



```java
//Implement Array List and add, remove, elements in the Array List and
//perform sorting of the elements using the iterator.
package Assignment;

import java.util.ArrayList;
import java.util.Collections;
public class ArrayListEx {
    public static void main(String[] args) {
        ArrayList<String>list=new ArrayList<String>();
        list.add("Apple");
        list.add("Orange");
        list.add("Strawberry");
        list.add("Blueberry");
        list.add("Grapes");
        list.add("Pineapple");
        System.out.println("The elements in ArrayList are: "+list);
        list.remove(3);
        System.out.println();
        System.out.println("The list of fruits after removing the element at 3rd position is: "+list);
        Collections.sort(list);
        System.out.println();
        System.out.println("After sorting the fruit list: "+list);
    }
}
```

```
<terminated> ArrayListEx [Java Application] C:\Program Files\Java\jdk-17.0.1\bin\javaw.exe (Mar 28, 2022, 3:13:10 PM – 3:13:11 PM)
The elements in ArrayList are: [Apple, Orange, Strawberry, Blueberry, Grapes, Pineapple]

The list of fruits after removing the element at 3rd position is: [Apple, Orange, Strawberry, Grapes, Pineapple]

After sorting the fruit list: [Apple, Grapes, Orange, Pineapple, Strawberry]
```

5. Implement LinkedList and add, remove, elements in the LinkedListand perform sorting of the elements using the iterator.



```
LinkedListEx.java
3 import java.util.LinkedList;
4 import java.util.ListIterator;
5
6 public class LinkedListEx {
7
8     public static void main(String[] args) {
9         LinkedList<String>list=new LinkedList<String>();
10        list.add("Cakes");
11        list.add("Chocolates");
12        list.add("Lolipops");
13        list.add("Cotton Candy");
14
15
16        System.out.println("Linkedlist : "+list);
17        System.out.println();
18        ListIterator list_iter=list.listIterator(2);
19
20        System.out.println("The list is as follows: ");
21        while(list_iter.hasNext()) {
22            System.out.println(list_iter.next());
23        }
24
25    }
26
27 }
```

```
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<terminated> LinkedListEx [Java Application] C:\Program Files\Java\jdk-17.0.1\bin\javaw.exe (Mar 28, 2022, 3:30:35 PM – 3:30:36 PM)
Linkedlist : [Cakes, Chocolates, Lolipops, Cotton Candy]

The list is as follows:
Lolipops
Cotton Candy
```