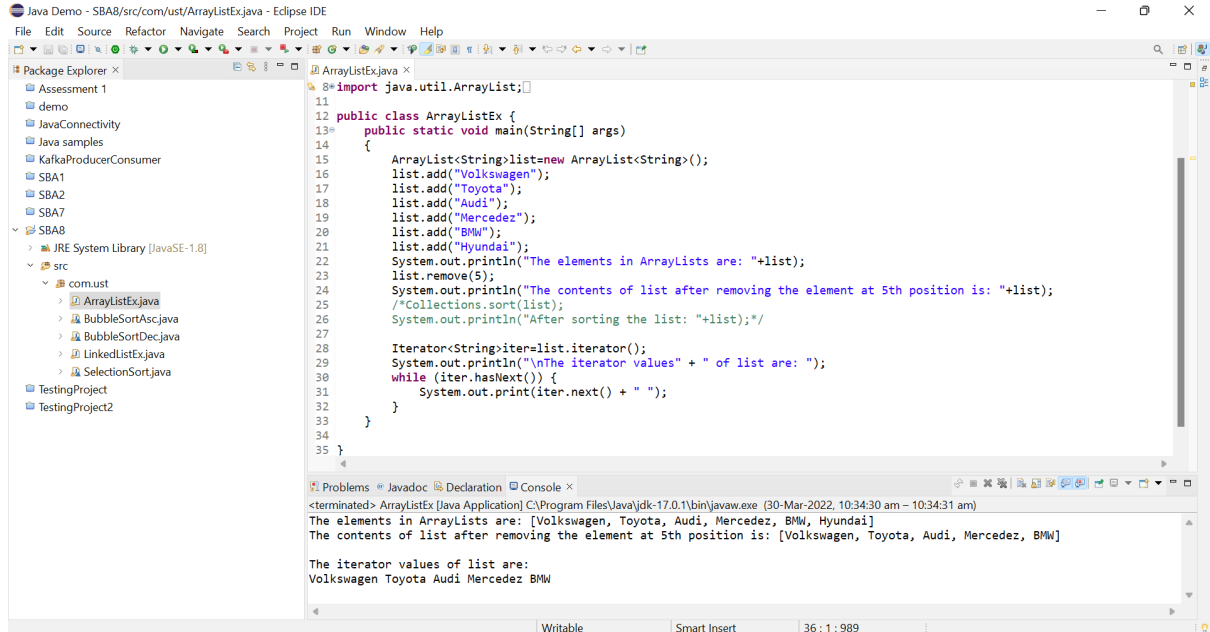


## SBA-8

SWETHA ANDE

UID:209821

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



```
8=import java.util.ArrayList;[]
11
12 public class ArrayListEx {
13     public static void main(String[] args)
14     {
15         ArrayList<String>list=new ArrayList<String>();
16         list.add("Volkswagen");
17         list.add("Toyota");
18         list.add("Audi");
19         list.add("Mercedes");
20         list.add("BMW");
21         list.add("Hyundai");
22         System.out.println("The elements in ArrayLists are: "+list);
23         list.remove(5);
24         System.out.println("The contents of list after removing the element at 5th position is: "+list);
25         /*Collections.sort(list);
26         System.out.println("After sorting the list: "+list);*/
27
28         Iterator<String>iter=list.iterator();
29         System.out.println("\nThe iterator values" + " of list are: ");
30         while (iter.hasNext()) {
31             System.out.print(iter.next() + " ");
32         }
33     }
34
35 }
```

Console Output:

```
<terminated> ArrayListEx [Java Application] C:\Program Files\Java\jdk-17.0.1\bin\javaw.exe (30-Mar-2022, 10:34:30 am - 10:34:31 am)
The elements in ArrayLists are: [Volkswagen, Toyota, Audi, Mercedes, BMW, Hyundai]
The contents of list after removing the element at 5th position is: [Volkswagen, Toyota, Audi, Mercedes, BMW]

The iterator values of list are:
Volkswagen Toyota Audi Mercedes BMW
```

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 at least be 6 similar elements.  
similar elements= the elements occurring in both the arrays.

```

7
8 package com.ust;
9
10 import java.util.Scanner;
11
12 class BubbleSortAsc
13 {
14     public static void bubbleSort(int arr[], int len)
15     {
16         int temp;
17         for (int i = 0; i < len-1; i++)
18             for (int j = 0; j < len-i-1; j++)
19             {
20                 if (arr[j] > arr[j+1])
21                 {
22                     temp = arr[j];
23                     arr[j] = arr[j+1];
24                     arr[j+1] = temp;
25                 }
26             }
27     }
28
29     public static void main(String[] args)
30     {
31         Scanner sc=new Scanner(System.in);
32         System.out.println("enter the array size");
33         int size=sc.nextInt();
34         int arr1[]=new int[size];
35         int arr2[]=new int[size];
36         int arr3[]=new int[size];
37         int count=0;
38         System.out.println("enter the first array elements");
39         for(int i=0;i<size;i++)
40         {
41
42

```

Problems | Javadoc | Declaration | Console x

```

<terminated> BubbleSortAsc (Java Application) C:\Program Files\Java\jdk-1
2
3
4
5
enter the Second array elements
2
4
6
8
10
And array elements are
2,4,

```

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)

```

1 /*program to take input two arrays and store the dissimilar elements into a resultant array.
2
3
4
5
6
7
8 package com.ust;
9
10 import java.util.*;
11
12 class BubbleSortDec
13 {
14     void bubbleSort(int[] arr3)
15     {
16         int n=arr3.length;
17         for(int i=0;i<n-1;i++)
18         {
19             for(int j=0;j<n-i-1;j++)
20             {
21                 if(arr3[j]>arr3[j+1])
22                 {
23                     int temp=arr3[j];
24                     arr3[j]=arr3[j+1];
25                     arr3[j+1]=temp;
26                 }
27             }
28         }
29     }
30     void printArray(int arr3[])
31     {
32         int n=arr3.length;
33         for(int i=0;i<n;i++)
34         {
35             System.out.print(arr3[i]+ " ");
36         }
37         System.out.println();
38     }

```

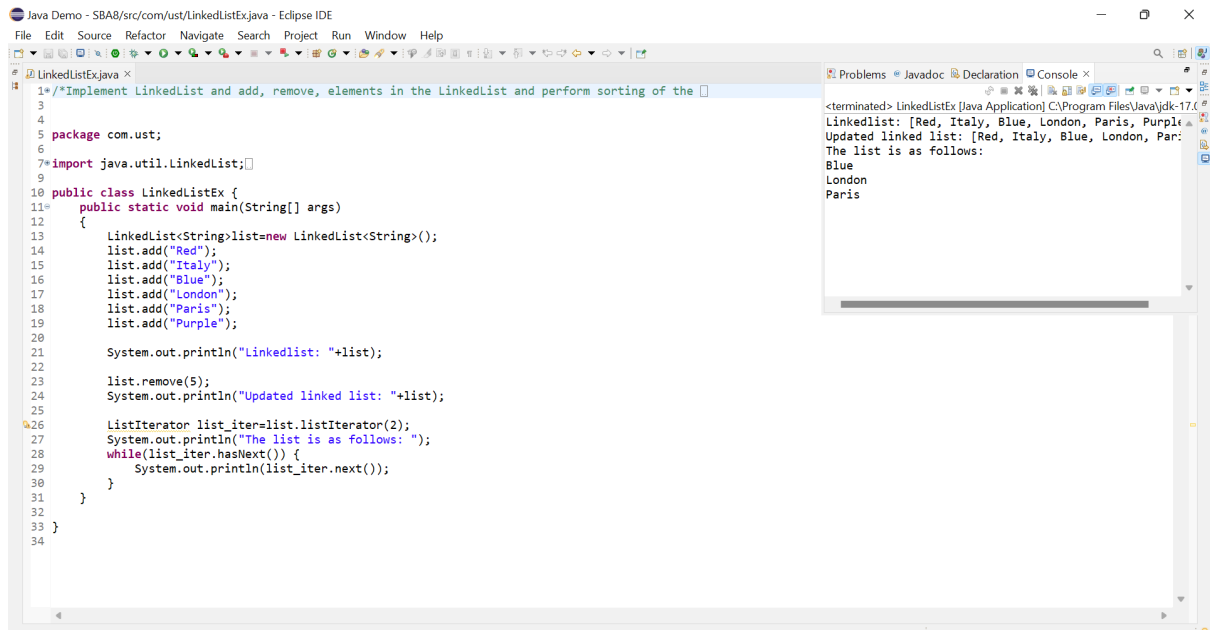
Problems | Javadoc | Declaration | Console x

```

<terminated> BubbleSortDec (Java Application) C:\Program Files\Java\jdk-
3
4
5
6
7
8
9
10
Sorted Array
1 2 3 4 5

```

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

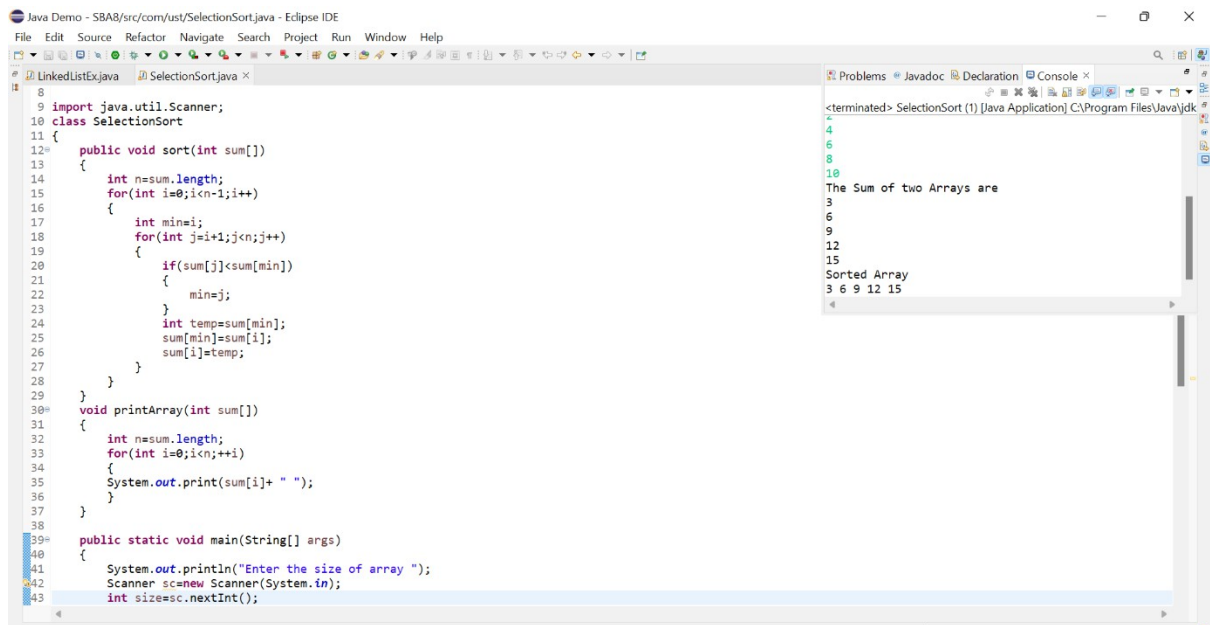


```
1/*Implement LinkedList and add, remove, elements in the LinkedList and perform sorting of the []
2
3
4
5 package com.ust;
6
7import java.util.LinkedList;
8
9
10 public class LinkedListEx {
11     public static void main(String[] args)
12     {
13         LinkedList<String>list=new LinkedList<String>();
14         list.add("Red");
15         list.add("Italy");
16         list.add("Blue");
17         list.add("London");
18         list.add("Paris");
19         list.add("Purple");
20
21         System.out.println("LinkedList: "+list);
22
23         list.remove(5);
24         System.out.println("Updated linked list: "+list);
25
26         ListIterator list_iter=list.listIterator(2);
27         System.out.println("The list is as follows: ");
28         while(list_iter.hasNext()) {
29             System.out.println(list_iter.next());
30         }
31     }
32 }
33
34
```

Console Output:

```
<terminated> LinkedListEx [Java Application] C:\Program Files\Java\jdk-17.0.2\bin\java.exe
LinkedList: [Red, Italy, Blue, London, Paris, Purple]
Updated linked list: [Red, Italy, Blue, London, Paris]
The list is as follows:
Blue
London
Paris
```

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.



```
8
9 import java.util.Scanner;
10 class SelectionSort
11 {
12     public void sort(int sum[])
13     {
14         int n=sum.length;
15         for(int i=0;i<n-1;i++)
16         {
17             int min=i;
18             for(int j=i+1;j<n;j++)
19             {
20                 if(sum[j]<sum[min])
21                 {
22                     min=j;
23                 }
24                 int temp=sum[min];
25                 sum[min]=sum[i];
26                 sum[i]=temp;
27             }
28         }
29     }
30     void printArray(int sum[])
31     {
32         int n=sum.length;
33         for(int i=0;i<n;i++)
34         {
35             System.out.print(sum[i]+ " ");
36         }
37     }
38
39     public static void main(String[] args)
40     {
41         System.out.println("Enter the size of array ");
42         Scanner sc=new Scanner(System.in);
43         int size=sc.nextInt();
44
45
```

Console Output:

```
<terminated> SelectionSort (1) [Java Application] C:\Program Files\Java\jdk-17.0.2\bin\java.exe
The Sum of two Arrays are
3
6
9
12
15
Sorted Array
3 6 9 12 15
```