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.

Program:

```
import java.io.*;
import java.util.Scanner;

public class Selection {
    public void sort(int[] sum)
    {
        int n=sum.length;
        for(int i=0; i<n-1; i++)
        {
            int min=i;
            for(int j=i+1; j<n; j++)
            {
                if(sum[j]<sum[min])
                {
                    min=j;
                }
                int temp=sum[min];
                sum[min]=sum[i];
                sum[i]=temp;
            }
        }
    }

    void printArray(int sum[])
    {
        int n=sum.length;
        for(int i=0; i<n; ++i)
        {
            System.out.print(sum[i]+" ");
        }
        System.out.println();
    }

public static void main(String[] args)
    {
        int i;
        System.out.print("Enter the size of array");
        Scanner sc =new Scanner(System.in);
```

```
        int size=sc.nextInt();
        int[] arr1=new int[size];
        int[] arr2=new int[size];
        int[] sum=new int[size];
        System.out.println("Enter the array one elements:");
        for(i=0; i<size; i++)
        {
                arr1[i]=sc.nextInt();
        }
        System.out.println("Enter the array two elements");
        for(i=0; i<size; i++)
        {
                arr2[i]=sc.nextInt();
        }
        for(i=0; i<size; i++)
        {
                sum[i]= arr1[i]+arr2[i];
        }
        System.out.println("The sum of arrays one and two is:");
        for(i=0; i<size; i++)
        {
                System.out.print(sum[i]+ " ");
         }
            System.out.println("");

            //printing sorted sum array

        Selection ob=new Selection();
        ob.sort(sum);
        System.out.println("Sorted Array");
        ob.printArray(sum);
    }
}
```

Output:

```
Enter the size of array
4
Enter the array one elements:

23
29
14
11
Enter the array two elements
34
12
43
10
The sum of arrays one and two is:
57 41 57 21
Sorted Array
21 41 57 57
```

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 at least be 6 similar elements.

similar elements= the elements occurring in both the arrays.

Program:

```
import java.util.Scanner;
public class BubbleSort
{
    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();
        }
        for(int x=0;x<size;x++)
        {
            for(int y=0;y<size;y++)
            {
                if(arr1[x]==arr2[y])
                {
                    arr3[count]=arr2[y];
                    count++;
                }
            }
        }
        bubbleSort(arr3,count);
        System.out.println("Similar Elements in about array are:");
        for(int k=0;k<count;k++)
        {
            System.out.print(arr3[k]+",");
        }
    }
}
```

Output:

```
enter the array size:
8
enter the first array elements:
12
19
25
37
51
90
5
41
enter the Second array elements:
51
90
19
5
41
12
45
89
Similar Elements in about array are:
5,12,19,41,51,90,
```

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)

Program:

```java
import java.util.*;

public class DissimilarSort {
    void bubbleSort(int[] arr3)
    {
        int n=arr3.length;
        for(int i=0;i<n-1;i++)
        {
            for(int j=0;j<n-i-1;j++)
            {
                if(arr3[j]>arr3[j+1])
                {
                    int temp=arr3[j];
                    arr3[j]=arr3[j+1];
                    arr3[j+1]=temp;
                }
            }
        }
    }
    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)
    {
        System.out.println("Enter the Size of Array : ");
        Scanner sc=new Scanner(System.in);
        int size = sc.nextInt();
        int arr1[]=new int[size];
        int arr2[]=new int[size];

        System.out.println("Enter the elements of Array 1:");
        for(int i=0;i<size;i++)
```

```
        {
            arr1[i]=sc.nextInt();
        }

        System.out.println("Enter the elements of Array 2:");
        for(int i=0;i<size;i++)
        {
            arr2[i]=sc.nextInt();
        }

         int arr3[]=new int[size];
        System.out.println("Dissimilar Elements are: ");
        for(int i=0;i<size;i++)
        {
            for(int j=0;j<size;j++)
            {
                if(arr1[i] != arr2[j])
                {
                    arr3[i]=arr1[i];
                    System.out.println(arr3[i]);
                }
            }
        }
        //Sorting//

        DissimilarSort ob=new DissimilarSort();
        ob.bubbleSort(arr3);
        System.out.println("Sorted Array");
        ob.printArray(arr3);

    }
}
```

Output:

```
Enter the Size of Array :
5
Enter the elements of Array 1:
23
12
90
67
34
Enter the elements of Array 2:
12
23
61
35
89
Dissimilar Elements are:
23
23
23
23
12
12
12
12
90
90
90
90
90
67
67
67
67
67
34
34
34
34
34
Sorted Array
12 23 34 67 90
```

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

Program:

```java
import java.util.ArrayList;
import java.util.Collections;

public class List {
    public static void main(String[] args)
    {
        ArrayList<String>list=new ArrayList<String>();
        list.add("Sonu");
        list.add("Meera");
        list.add("Melvin");
        list.add("Melvin");
        list.add("Alvin");
        list.add("Veena");
        System.out.println("The elements in ArrayLists are: "+list);
        list.remove(5);
        System.out.println("The contents of list after removing the element at 5th position is: "+list);
        Collections.sort(list);
        System.out.println("After sorting the list: "+list);
    }

}
```

Output:

```
The elements in ArrayLists are: [Sonu, Meera, Melvin, Melvin, Alvin, Veena]
The contents of list after removing the element at 5th position is: [Sonu, Meera, Melvin, Melvin, Al
After sorting the list: [Alvin, Meera, Melvin, Melvin, Sonu]
```

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

Program:

```java
import java.util.LinkedList;

public class LinkedList1 {
    public static void main(String[] args)
    {
        LinkedList<String>list=new LinkedList<String>();
        list.add("Vinu");
        list.add("Sneha");
        list.add("Jinsha");
        list.add("Melvin");
        list.add("Anju");

        System.out.println("Linkedlist: "+list);

        ListIterator list_iter=list.listIterator(2);
        System.out.println("The list is as follows: ");
        while(list_iter.hasNext()) {
            System.out.println(list_iter.next());
        }
    }

}
```

Output:

```
Linkedlist: [Ron, Sam, Arun, Loyal, Prestin]
The list is as follows:
Arun
Loyal
Prestin
```