```
//S Harshini-185001058
//1
import java.io.*;
import java.util.*;


class Array
{
   public static void main(String[] args)
                    throws IOException
   {
      Scanner in=new Scanner(System.in);
      int n = 10; // size of ArrayList
         String s;
      ArrayList<String> arrli = new ArrayList<String>(n); //declaring ArrayList with initial size n
         System.out.println("enter 10 elements");
      // Appending the new element at the end of the list
      for (int i=1; i<=n; i++)
      {
                  s=in.nextLine();
                  arrli.add(s);
         }
         arrli.add(2,"meet"); //insert element at a particular index

         System.out.println("\n"+arrli.indexOf("meet")); //index of meet

      // Printing elements
      System.out.println(arrli);

         for(int j=0;j<arrli.size();j++) //list elements starting with h
         {
                  if(arrli.get(j).charAt(0)=='h')
                           System.out.println(arrli.get(j));
         }
         for(int k=0;k<arrli.size();k++) //list words having substring "is"
         {
                  if(arrli.get(k).contains("is")==true)
                           System.out.println(arrli.get(k));

         }
         String temp1,temp2;
         for(int p=0;p<arrli.size()-1;p++) //sort elements
         {for(int q=p+1;q<arrli.size();q++)
```

```
        {
                if(arrli.get(p).compareTo(arrli.get(q))>0)
                {
                        temp1=arrli.get(p);
                        temp2=arrli.get(q);
                        arrli.set(q,temp1);
                        arrli.set(p,temp2);
                }
        }}

      // Remove element at index 3
      arrli.remove(3);

         arrli.set(0,"harshu"); //replace first word with harshu
         System.out.println(arrli);

         arrli.remove("harshu"); //remove harshu
      // Displaying ArrayList after deletion
      System.out.println(arrli);
          Set<String> st = new LinkedHashSet<String>(arrli);
         System.out.println(st); //remove duplicate elements
       //Printing elements one by one
      for (int i=0; i<arrli.size(); i++)
         System.out.print(arrli.get(i)+" ");

   }
}


/*
Sample input output

cs1058@u9:~/Desktop$ java Array
enter 10 elements
nice
to
you
the
weather
is
sooois
good
hii
```

```
hello

2
[nice, to, meet, you, the , weather, is, sooois, good , hii, hello]
hii
hello
is
sooois
[harshu, hello, hii, meet, nice, sooois, the , to, weather, you]
[hello, hii, meet, nice, sooois, the , to, weather, you]
[hello, hii, meet, nice, sooois, the , to, weather, you]
hello hii meet nice sooois the  to weather you

*/


//2

import java.io.*;
import java.util.*;


class Array1
{
   public static void main(String[] args)
                    throws IOException
   {
      Scanner in=new Scanner(System.in);// size of ArrayList
      int n = 5;
         int s;
      ArrayList<Integer> a1 = new ArrayList<Integer>(n);
         ArrayList<Integer> m = new ArrayList<Integer>(n);
         System.out.println("enter 5 elements array 1");
          for (int i=1; i<=n; i++)
      {
                    s=in.nextInt();
                    a1.add(s);
                    m.add(s);
         }
         System.out.println("enter 5 elements array 2");
         ArrayList<Integer> a2 = new ArrayList<Integer>(n);
          for (int i=1; i<=n; i++)
      {
```

```
                s=in.nextInt();
                a2.add(s);
            }
                 System.out.println(a1);
             System.out.println(a2);
                m.addAll(a2); //merge
            System.out.println("merged\n"+m);


//union
 Set<Integer> set = new HashSet<Integer>();

       set.addAll(a1);
       set.addAll(a2);
  System.out.println("union\n"+set);
//intersection
List<Integer> list = new ArrayList<Integer>();

       for (Integer t : a1) {
           if(a2.contains(t)) {
               list.add(t);
           }
       }
 System.out.println(" intersection\n"+list);


//compare
ArrayList<Integer> listThree = new ArrayList<>(a1);

      boolean isEqual = a2.equals(listThree);      //true
       System.out.println("compared\n"+isEqual);

   }
}


/*
Sample input/output
cs1058@u9:~/Desktop$ java Array1
enter 5 elements array 1
1
2
3
```

```
4
5
enter 5 elements array 2
4
5
6
7
8
[1, 2, 3, 4, 5]
[4, 5, 6, 7, 8]
merged
[1, 2, 3, 4, 5, 4, 5, 6, 7, 8]
union
[1, 2, 3, 4, 5, 6, 7, 8]
 intersection
[4, 5]
compared
false
*/
```