Assignment No:-42

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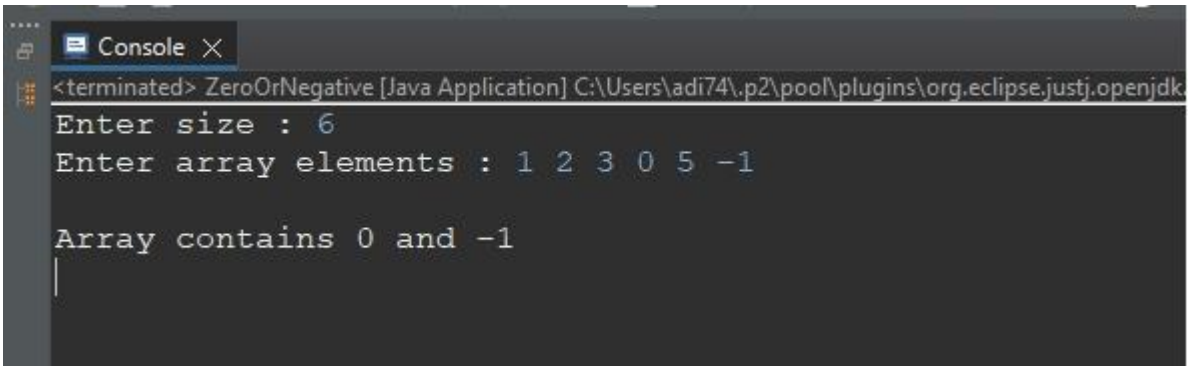
Q1.Write a Java program to check if an array of integers without 0 and -1.

```
package AssignmentNo43;

import java.util.Scanner;

public class ZeroOrNegative {

	public static boolean isZero(int a)
	{
		if(a==0)
			return true;
		else
			return false;
	}
	public static boolean isNegative(int a)
	{
		if(a==-1)
			return true;
		else
			return false;
	}
	public static void main(String[] args)
	{
		Scanner sc = new Scanner(System.in);
		System.out.print("Enter size : ");
		int s = sc.nextInt();
		System.out.print("Enter array elements : ");
		int a[] = new int[s];
		for(int i=0;i<a.length;i++)
			a[i] = sc.nextInt();

		int z=0;
		int neg = 0;
		for(int i=0;i<a.length;i++)
		{
```

```
                    if(isZero(a[i]))
                        z++;
                    else if(isNegative(a[i]))
                        neg++;
                }
                if(z>0 && neg >0)
                {
                    System.out.println("\nArray contains 0 and -1");
                }
                else if(z>0 && neg ==0)
                {
                    System.out.println("\nArray contains 0 only");
                }
                else if(neg > 0 && z==0)
                {
                    System.out.println("\nArray contains -1 only");
                }
                else
                {
                    System.out.println("\nArray do not contains 0 and -1");
                }
        }

}
```



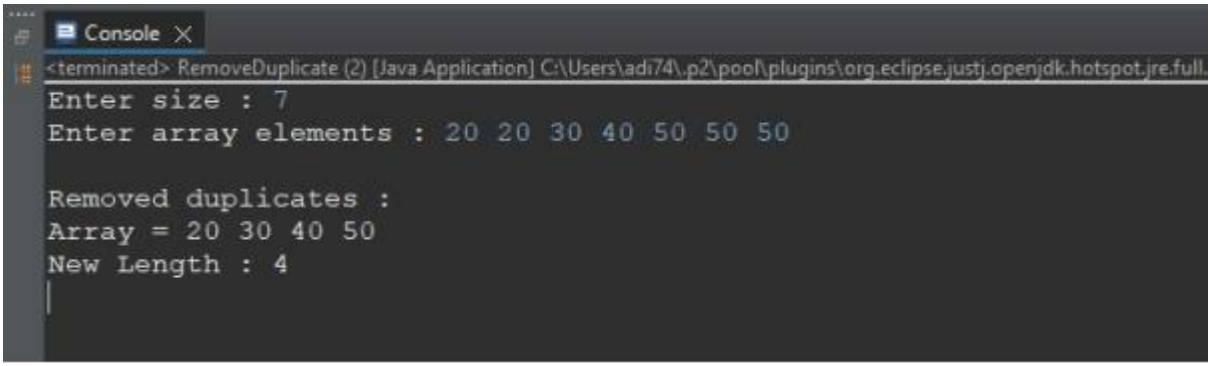
Q2. Write a Java program to remove the duplicate elements of a given array and print the new length of the array.

Sample array: [20, 20, 30, 40, 50, 50, 50]

After removing the duplicate elements the program should return 4 as the new length of the array.

```
package AssignmentNo43;
```

```java
import java.util.Scanner;

public class RemoveDuplicate
{

	public static int getLength(int a[])
	{
		int length=0;
		for(int i=0;i<a.length;i++)
		{
			for(int j=i+1;j<a.length;j++)
			{
				if(a[i] == a[j])
				{
					a[j] = -1;
				}
			}
		}
		System.out.print("\nRemoved duplicates :\nArray = ");
		for(int i=0;i<a.length;i++)
		{
			if(a[i] !=-1)
			{
				System.out.print(a[i]+" ");
				length++;
			}
		}
		return length;
	}
	public static void main(String[] args)
	{
		Scanner sc = new Scanner(System.in);
		System.out.print("Enter size : ");
		int s = sc.nextInt();
		System.out.print("Enter array elements : ");
		int a[] = new int[s];
		for(int i=0;i<a.length;i++)
			a[i] = sc.nextInt();

		System.out.println("\nNew Length : "+RemoveDuplicate.getLength(a));
	}

}
```



Q3.Write a Java program to find the sum of the two elements of a given array which is equal to a given integer.

Sample array: [1,2,4,5,6]

Target value: 6.

```
package AssignmentNo43;

import java.util.Scanner;

public class TargetSum
{

	public static void getPair(int a[], int t)
	{
		System.out.println("\nSum of two integers whose sum is "+t+" : ");
		for(int i=0;i<a.length;i++)
		{
			for(int j=i+1;j<a.length;j++)
			{
				if(a[i] + a[j] == t)
				{
					System.out.print("("+a[i]+","+a[j]+") ");
				}
			}
		}
	}
	public static void main(String[] args)
	{
		Scanner sc = new Scanner(System.in);
		System.out.print("Enter size : ");
		int s = sc.nextInt();
		System.out.print("Enter array elements : ");
		int a[] = new int[s];
		for(int i=0;i<a.length;i++)
			a[i] = sc.nextInt();
```

```
                System.out.print("Enter target sum : ");
                int t = sc.nextInt();

                TargetSum.getPair(a, t);
        }

}
```

```
<terminated> TargetSum [Java Application] C:\Users\adi74\.p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win32.x86_64_17
Enter size : 6
Enter array elements : 1 2 3 4 5 6
Enter target sum : 6

Sum of two integers whose sum is 6 :
(1,5) (2,4)
```

Q4.Write a Java program to print all the LEADERS in the array.

Note: An element is leader if it is greater than all the elements to its right side.

```
package AssignmentNo43;

import java.util.Scanner;

public class Leader
{

        public static void printLeader(int a[])
        {
                System.out.println("\nLeader element(s) from given array : ");
                for(int i=0;i<a.length;i++)
                {
                        int c=0;
                        for(int j=i+1;j<a.length;j++)
                        {
                                if(a[i]<a[j])
                                {
                                        c++;
                                        break;
                                }
                        }
                        if(c==0)
                        {
                                System.out.print(a[i]+" ");
                        }
                }
```

```
	}
	public static void main(String[] args)
	{
		Scanner sc = new Scanner(System.in);
		System.out.print("Enter size : ");
		int s = sc.nextInt();
		System.out.print("Enter array elements : ");
		int a[] = new int[s];
		for(int i=0;i<a.length;i++)
			a[i] = sc.nextInt();

		Leader.printLeader(a);

	}

}
```

```
<terminated> Leader [Java Application] C:\Users\adi74\.p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.
Enter size : 6
Enter array elements : 15 7 4 21 9 10

Leader element(s) from given array :
21 10
```

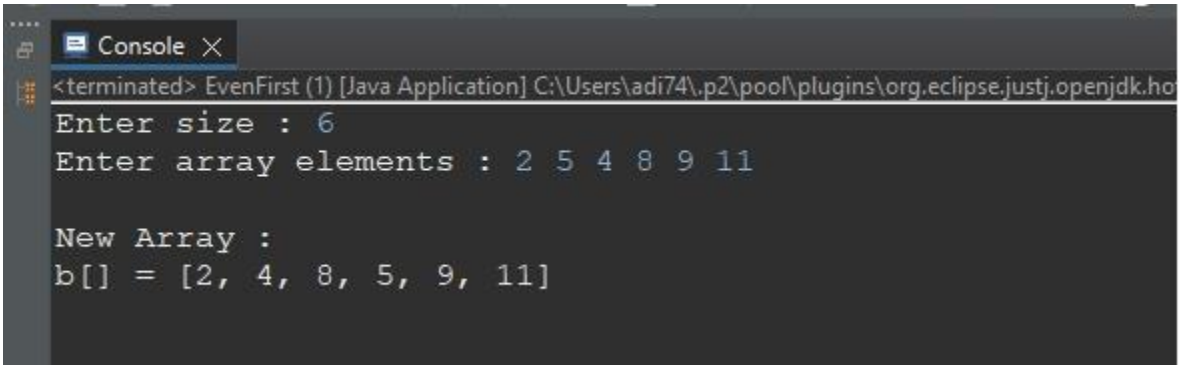
Q.5Write a Java program to check if an array of integers contains two specified elements 65 and 77.

```
package AssignmentNo43;

import java.util.Scanner;

public class Contains65 {

	public static boolean is65(int a)
	{
		if(a==65)
			return true;
		else
			return false;
	}
	public static boolean is77(int a)
	{
		if(a==77)
			return true;
		else
```

```
                return false;
        }
        public static void main(String[] args) {
                Scanner sc = new Scanner(System.in);
                System.out.print("Enter size : ");
                int s = sc.nextInt();
                System.out.print("Enter array elements : ");
                int a[] = new int[s];
                for(int i=0;i<a.length;i++)
                        a[i] = sc.nextInt();

                int six=0;
                int sev = 0;
                for(int i=0;i<a.length;i++)
                {
                        if(is65(a[i]))
                                six++;
                        else if(is77(a[i]))
                                sev++;
                }
                if(six>0 && sev >0)
                {
                        System.out.println("\nArray contains 65 and 77.");
                }
                else if(six>0 && sev ==0)
                {
                        System.out.println("\nArray contains 65 only.");
                }
                else if(sev > 0 && six==0)
                {
                        System.out.println("\nArray contains 77 only.");
                }
                else
                {
                        System.out.println("\nArray do not contains 65 and 77.");
                }
        }

}
```

Q.6Write a Java program to separate even and odd numbers of a given array of integers. Put all even numbers first, and then odd numbers.

```
package AssignmentNo43;

import java.util.Arrays;
import java.util.Scanner;

public class EvenFirst
{
	public static void sort(int a[])
	{
		int b[] = new int[a.length];
		int ind=0;
		for(int i=0;i<a.length;i++)
		{
			if(a[i]%2==0)
				b[ind++] = a[i];
		}
		for(int i=0;i<a.length;i++)
		{
			if(a[i]%2!=0)
				b[ind++] = a[i];
		}
		System.out.println("\nNew Array :\nb[] = "+Arrays.toString(b));
	}
	public static void main(String[] args)
	{
		Scanner sc = new Scanner(System.in);
		System.out.print("Enter size : ");
		int s = sc.nextInt();
		System.out.print("Enter array elements : ");
		int a[] = new int[s];
		for(int i=0;i<a.length;i++)
			a[i] = sc.nextInt();

		EvenFirst.sort(a);
	}
}
```



Q7.Write a java program to find prime number between an array of element.

```
package AssignmentNo43;

import java.util.Scanner;

public class PrimeNumbers
{

	public static boolean isPrime(int n)
	{
		int c=0;
		for(int i=1;i<=n;i++)
		{
			if(n%i==0)
				c++;
		}
		if(c==2)
			return true;
		else
			return false;
	}
	public static void main(String[] args)
	{
		Scanner sc = new Scanner(System.in);
		System.out.print("Enter size : ");
		int s = sc.nextInt();
		System.out.print("Enter array elements : ");
		int a[] = new int[s];
		for(int i=0;i<a.length;i++)
			a[i] = sc.nextInt();

		System.out.println("\nPrime numbers from array are : ");
		for(int i=0;i<a.length;i++)
		{
```

```
                        if(isPrime(a[i]))
                        {
                                System.out.print(a[i]+"  ");
                        }
                }
        }

}
```

```
<terminated> PrimeNumbers (1) [Java Application] C:\Users\adi74\.p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.jre.
Enter size : 7
Enter array elements : 2 3 5 9 8 10 4

Prime numbers from array are :
2  3  5
```

Q1.Given an array and a number K where K is smaller than the size of the array.

Find the K'th smallest element in the given array. Given that all array elements are distinct.

Examples:

Input: arr[] = {7, 10, 4, 3, 20, 15}, K = 3

Output: 7

```
package AssignmentNo43;

import java.util.Arrays;
import java.util.Scanner;

public class KthSmallest {

        public static void sort(int a[],int k)
        {
                for(int i=0;i<a.length;i++)
                {
                        for(int j=i+1;j<a.length;j++)
                        {
                                if(a[i]>a[j])
                                {
                                        int t = a[i];
                                        a[i] = a[j];
                                        a[j] = t;
                                }
```

```
                        }
                }
                System.out.println("\n"+k+"th smallest element is : "+a[k-1]);
        }
        public static void main(String[] args)
        {
                Scanner sc = new Scanner(System.in);
                System.out.print("Enter size : ");
                int s = sc.nextInt();
                System.out.print("Enter array elements : ");
                int a[] = new int[s];
                for(int i=0;i<a.length;i++)
                        a[i] = sc.nextInt();
                System.out.print("Enter value of k : ");
                int k = sc.nextInt();

                KthSmallest.sort(a, k);

        }

}
```

```
<terminated> KthSmallest (2) [Java Application] C:\Users\adi74\.p2\pool\plugins\org.eclipse.justj.openjdk
Enter size : 6
Enter array elements : 9 6 7 3 1 8
Enter value of k : 4

4th smallest element is : 7
```

Q2.Given an array of integers arr[], The task is to find the index of first repeating element in it i.e.

the element that occurs more than once and whose index of the first occurrence is the smallest.

```
package AssignmentNo43;

import java.util.Scanner;

public class FirstRepeating
{

        public static int getInd(int a[])
        {
                int ind =0;
                for(int i=0;i<a.length;i++)
                {
                        for(int j=i+1;j<a.length;j++)
```

```
                {
                        if(a[i] == a[j])
                        {
                                ind = i;
                                break;
                        }
                }
                if(ind !=0)
                        break;
        }
        return ind;
    }
    public static void main(String[] args)
    {
        Scanner sc = new Scanner(System.in);
        System.out.print("Enter size : ");
        int s = sc.nextInt();
        System.out.print("Enter array elements : ");
        int a[] = new int[s];
        for(int i=0;i<a.length;i++)
                a[i] = sc.nextInt();

        System.out.println("\nFirst repeating element index : "+FirstRepeating.getInd(a));
    }

}
```

```
<terminated> FirstRepeating [Java Application] C:\Users\adi74\.p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.v
Enter size : 6
Enter array elements : 1 4 6 3 4 3

First repeating element index : 1
```

Q.3 Find the majority element in the array. A majority element in an array A[] of size n is an element

that appears more than n/2 times (and hence there is at most one such element).

Examples :

Input : {3, 3, 4, 2, 4, 4, 2, 4, 4}

Output : 4

Explanation: The frequency of 4 is 5 which is greater than the half of the size of the array size.

```
package AssignmentNo43;

import java.util.Scanner;

public class MajorityElement
{
	public static void element(int a[])
	{
		System.out.println("\nMajority element : ");
		for(int i=0;i<a.length;i++)
		{
			int c=1;
			for(int j=i+1;j<a.length;j++)
			{
				if(a[i] == a[j])
					c++;
			}
			if(c > (a.length/2))
			{
				System.out.print(a[i]+" ");
				break;
			}
		}
	}
	public static void main(String[] args)
	{
		Scanner sc = new Scanner(System.in);
		System.out.print("Enter size : ");
		int s = sc.nextInt();
		System.out.print("Enter array elements : ");
		int a[] = new int[s];
		for(int i=0;i<a.length;i++)
			a[i] = sc.nextInt();

		MajorityElement.element(a);
	}

}
```

```
<terminated> MajorityElement [Java Application] C:\Users\adi74\.p2\pool\plugins\org.eclipse.justj.openjdk.hotsp
Enter size : 9
Enter array elements : 3 3 4 2 4 4 2 4 4

Majority element :
4
```

Q4.Given an array of N integers, and a number sum, the task is to find the number of pairs of integers in the array whose sum is equal to sum.

Examples:

Input: arr[] = {1, 5, 7, -1}, sum = 6

Output: 2

```
package AssignmentNo43;

import java.util.Scanner;

public class PairsCount
{
	public static void getPair(int a[], int t)
	{
		int c=0;
		for(int i=0;i<a.length;i++)
		{
			for(int j=i+1;j<a.length;j++)
			{
				if(a[i] + a[j] == t)
				{
					c++;
				}
			}
		}
		System.out.println("\nOutput : "+c);
	}
	public static void main(String[] args)
	{
		Scanner sc = new Scanner(System.in);
		System.out.print("Enter size : ");
		int s = sc.nextInt();
		System.out.print("Enter array elements : ");
		int a[] = new int[s];
		for(int i=0;i<a.length;i++)
			a[i] = sc.nextInt();
```

```
                System.out.print("Enter target sum : ");
                int t = sc.nextInt();

                PairsCount.getPair(a, t);
        }

}
```

```
Console
<terminated> PairsCount [Java Application] C:\Users\adi74\.p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.
Enter size : 4
Enter array elements : 1 5 7 -1
Enter target sum : 6

Output : 2
```

Q5.Given an array and a value, find if there is a triplet in array whose sum is equal to the given value.

If there is such a triplet present in array, then print the triplet and return true. Else return false.

Examples:

Input: array = {12, 3, 4, 1, 6, 9}, sum = 24;

Output: 12, 3, 9

```
package AssignmentNo43;

import java.util.Scanner;

public class TripletSum
{
        public static void getTriplet(int a[],int t)
        {
                System.out.println("\nOutput : ");
                for(int i=0;i<a.length;i++)
                {
                        for(int j=i+1;j<a.length;j++)
                        {
                                for(int k =j+1;k<a.length;k++)
                                {
                                        if(a[i]+a[j]+a[k] == t)
```

```
                                        {
                                                System.out.println(a[i]+" "+a[j]+" "+a[k]);
                                                break;
                                        }
                                }
                        }
                }
        }

        public static void main(String[] args)
        {
                Scanner sc = new Scanner(System.in);
                System.out.print("Enter size : ");
                int s = sc.nextInt();
                System.out.print("Enter array elements : ");
                int a[] = new int[s];
                for(int i=0;i<a.length;i++)
                        a[i] = sc.nextInt();
                System.out.print("Enter target sum : ");
                int t = sc.nextInt();

                TripletSum.getTriplet(a, t);
        }

}
```

```
<terminated> TripletSum [Java Application] C:\Users\adi74\.p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win32.x86_64_17.0.8.v20230
Enter size : 6
Enter array elements : 12 3 4 1 6 9
Enter target sum : 24

Output :
12 3 9
```

Q3.a[]={10,20,30,40,50}

b[]={1,2,3,4,5}

output array=c[]={10,5,20,4,30,3,40,2,50,1}

```
package AssignmentNo43;

import java.util.Arrays;
import java.util.Scanner;

public class AlternateMerge
```

```
{
	public static void merge(int a[],int b[])
	{
		int c[] = new int[a.length+b.length];
		int x=0,y=b.length-1;
		for(int i=0;i<c.length;i++)
		{
			if(i%2==0)
			{
				c[i] = a[x++];
			}
			else
			{
				c[i] = b[y--];
			}
		}
		System.out.println("\nMerged array : "+Arrays.toString(c));
	}
	public static void main(String[] args)
	{
		Scanner sc = new Scanner(System.in);
		System.out.print("Enter size : ");
		int s = sc.nextInt();
		System.out.print("Enter frist array elements : ");
		int a[] = new int[s];
		for(int i=0;i<a.length;i++)
			a[i] = sc.nextInt();
		System.out.print("\nEnter frist array elements : ");
		int b[] = new int[s];
		for(int i=0;i<a.length;i++)
			b[i] = sc.nextInt();

		AlternateMerge.merge(a, b);
	}

}
```

```
<terminated> AlternateMerge (1) [Java Application] C:\Users\adi74\.p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win32.
Enter size : 5
Enter frist array elements : 10 20 30 40 50

Enter frist array elements : 1 2 3 4 5

Merged array : [10, 5, 20, 4, 30, 3, 40, 2, 50, 1]
```

Q4.Wap sort half array in accending and half in decending order

input= int [] a={9,1,3,5,6,11,22,66,10,19}.

output={1,3,5,6,9,10,66,22,19,11,10},

```
package AssignmentNo43;

import java.util.Arrays;
import java.util.Scanner;

public class HalfAscending
{
	public static void sort(int a[])
	{
		Arrays.sort(a);
		for(int i=a.length/2;i<a.length;i++)
		{
			for(int j = i+1;j<a.length;j++)
			{
				if(a[i] < a[j])
				{
					int t = a[i];
					a[i] = a[j];
					a[j] = t;
				}
			}
		}
		System.out.println("\nNew Array : "+Arrays.toString(a));
	}
	public static void main(String[] args)
	{
		Scanner sc = new Scanner(System.in);
		System.out.print("Enter size : ");
		int s = sc.nextInt();
		System.out.print("Enter array elements : ");
		int a[] = new int[s];
		for(int i=0;i<a.length;i++)
			a[i] = sc.nextInt();

		HalfAscending.sort(a);
	}

}
```

```
<terminated> HalfAscending (1) [Java Application] C:\Users\adi74\.p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.jre
Enter size : 10
Enter array elements : 9 1 3 5 6 11 22 66 10 19

New Array : [1, 3, 5, 6, 9, 66, 22, 19, 11, 10]
```

Q5.Wap input an array now delete element from array, element is taken from user.

```
package AssignmentNo43;

import java.util.Scanner;

public class Delete {

	public static void delete(int a[],int d)
	{
		int ind=-1;
		for(int i=0;i<a.length;i++)
		{
			if(a[i] == d)
				ind = i;
		}
		for(int i=ind;i<a.length-1;i++)
		{
			a[i] = a[i+1];
		}
		System.out.println("\nElement deleted..");
		for(int i=0;i<a.length-1;i++)
		{
			System.out.print(a[i]+" ");
		}
	}
	public static void main(String[] args)
	{
		Scanner sc = new Scanner(System.in);
		System.out.print("Enter size : ");
		int s = sc.nextInt();
		System.out.print("Enter frist array elements : ");
		int a[] = new int[s];
		for(int i=0;i<a.length;i++)
			a[i] = sc.nextInt();

		System.out.println("Enter element to delete : ");
		int d = sc.nextInt();
```

```
                Delete.delete(a, d);
        }

}
```

```
<terminated> Delete [Java Application] C:\Users\adi74\.p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.jre.fu
Enter size : 7
Enter frist array elements : 4 5 6 7 8 3 2
Enter element to delete :
8

Element deleted..
4 5 6 7 3 2
```

Q5.Wap input an array now delete element from array, position is taken from user.

```
package AssignmentNo43;

import java.util.Scanner;

public class DeletePosition {

        public static void delete(int a[],int p)
        {
                int ind=p-1;
                for(int i=ind;i<a.length-1;i++)
                {
                        a[i] = a[i+1];
                }
                System.out.print("\nElement deleted at given position...\na[] = ");
                for(int i=0;i<a.length-1;i++)
                {
                        System.out.print(a[i]+" ");
                }
        }
        public static void main(String[] args)
        {
                Scanner sc = new Scanner(System.in);
                System.out.print("Enter size : ");
                int s = sc.nextInt();
                System.out.print("Enter frist array elements : ");
                int a[] = new int[s];
                for(int i=0;i<a.length;i++)
                        a[i] = sc.nextInt();
```

```
                System.out.println("Enter position to delete : ");
                int p = sc.nextInt();

                delete(a, p);
        }

}
```

```
<terminated> DeletePosition [Java Application] C:\Users\adi74\.p2\pool\plugins\org.eclipse.justj.openjdk.hots
Enter size : 5
Enter frist array elements : 2 5 7 8 4
Enter position to delete :
3

Element deleted at given position...
a[] = 2 5 8 4
```

Q6.Wap input an array and rotate it in anti clock wise by any no give by user.

```
package AssignmentNo43;

import java.util.Arrays;
import java.util.Scanner;

public class AntiClock
{
        public static void rotate(int a[],int n)
        {
                for(int i=1;i<=n;i++)
                {
                        int t = a[0];
                        for(int j=0;j<a.length-1;j++)
                        {
                                a[j] = a[j+1];
                        }
                        a[a.length-1] = t;
                }
                System.out.println("\nRotated array : "+Arrays.toString(a));
        }
        public static void main(String[] args)
        {
```

```
                Scanner sc = new Scanner(System.in);
                System.out.print("Enter size : ");
                int s = sc.nextInt();
                System.out.print("Enter frist array elements : ");
                int a[] = new int[s];
                for(int i=0;i<a.length;i++)
                        a[i] = sc.nextInt();

                System.out.print("Enter number of rotations : ");
                int n = sc.nextInt();

                AntiClock.rotate(a, n);
        }

}
```

```
<terminated> AntiClock [Java Application] C:\Users\adi74\.p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.jre.f
Enter size : 5
Enter frist array elements : 1 2 3 5 6
Enter number of rotations : 3

Rotated array : [5, 6, 1, 2, 3]
```

Q7.Wap input an array and rotate it in clock wise by any no give by user.

```
package AssignmentNo43;

import java.util.Arrays;
import java.util.Scanner;

public class ClockWise
{
        public static void rotate(int a[],int n)
        {
                for(int i=1;i<=n;i++)
                {
                        int t = a[a.length-1];
                        for(int j=a.length-1;j>0;j--)
                        {
                                a[j] = a[j-1];
                        }
                        a[0] = t;
                }
```

```
                System.out.println("\nRotated array : "+Arrays.toString(a));
        }
        public static void main(String[] args)
        {
                Scanner sc = new Scanner(System.in);
                System.out.print("Enter size : ");
                int s = sc.nextInt();
                System.out.print("Enter frist array elements : ");
                int a[] = new int[s];
                for(int i=0;i<a.length;i++)
                        a[i] = sc.nextInt();

                System.out.print("Enter number of rotations : ");
                int n = sc.nextInt();

                ClockWise.rotate(a, n);
        }
}
```

```
<terminated> ClockWise (2) [Java Application] C:\Users\adi74\.p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.j
Enter size : 5
Enter frist array elements : 1 2 3 4 5
Enter number of rotations : 3

Rotated array : [3, 4, 5, 1, 2]
```

Q8.Wap input an array and delete all duplicate element from array.

```
package AssignmentNo43;

import java.util.Scanner;

public class DeleteDuplicate
{
        public static void remove(int a[])
        {
                for(int i=0;i<a.length;i++)
                {
                        for(int j=i+1;j<a.length;j++)
                        {
                                if(a[i] == a[j])
                                        a[j] =-1;
```

```
                        }
                }
                System.out.println("\nRemoved duplicate elements : ");
                for(int i=0;i<a.length;i++)
                {
                        if(a[i]!=-1)
                                System.out.print(a[i]+" ");
                }
        }
        public static void main(String[] args)
        {
                Scanner sc = new Scanner(System.in);
                System.out.print("Enter size : ");
                int s = sc.nextInt();
                System.out.print("Enter frist array elements : ");
                int a[] = new int[s];
                for(int i=0;i<a.length;i++)
                        a[i] = sc.nextInt();

                DeleteDuplicate.remove(a);
        }

}
```

```
<terminated> DeleteDuplicate [Java Application] C:\Users\adi74\.p2\pool\plugins\org.eclipse.justj.openjdk.hots
Enter size : 6
Enter frist array elements : 1 2 4 2 1 7

Removed duplicate elements :
1 2 4 7
```

Q9. Write a Java program to find max number in an array.

```
package AssignmentNo43;

import java.util.Scanner;

public class MaxElement
{

        public static void main(String[] args)
        {
                Scanner sc = new Scanner(System.in);
```

```
                System.out.print("Enter size : ");
                int s = sc.nextInt();
                System.out.print("Enter frist array elements : ");
                int a[] = new int[s];
                for(int i=0;i<a.length;i++)
                        a[i] = sc.nextInt();

                int max=0;
                for(int i=0;i<a.length;i++)
                {
                        if(a[i] > max)
                                max = a[i];
                }
                System.out.println("\nMax element : "+max);
        }

}
```

```
<terminated> MaxElement (2) [Java Application] C:\Users\adi74\.p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win3
Enter size : 7
Enter frist array elements : 10 20 30 40 100 200 21

Max element : 200
```

Q10.Wap input an array now insert any element at any position ,

element and position is taken by user.

```
package AssignmentNo43;

import java.util.Arrays;
import java.util.Scanner;

public class Insert {

        public static void insert(int a[], int ele, int p)
        {
                int ind =p-1;
                for(int i=a.length-1;i>ind-1;i--)
                {
                        a[i] = a[i-1];
                }
                a[ind] = ele;
```

```
                System.out.println("\nAfter insertion : ");
                System.out.println(Arrays.toString(a));
        }
        public static void main(String[] args)
        {
                Scanner sc = new Scanner(System.in);
                System.out.print("Enter size : ");
                int s = sc.nextInt();
                System.out.print("Enter frist array elements : ");
                int a[] = new int[s+1];
                for(int i=0;i<a.length-1;i++)
                        a[i] = sc.nextInt();

                System.out.print("Enter element to insert : ");
                int ele = sc.nextInt();
                System.out.print("Enter position : ");
                int p = sc.nextInt();

                Insert.insert(a, ele, p);
        }

}
```

```
<terminated> Insert [Java Application] C:\Users\adi74\.p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.jre.
Enter size : 7
Enter frist array elements : 1 2 3 5 6 7 8
Enter element to insert : 4
Enter position : 4

After insertion :
[1, 2, 3, 4, 5, 6, 7, 8]
```