

ARRAYS PROGRAMS

1.FIND THE AVERAGE OF THE 5 ELEMENTS

```
package Arrays21;

public class Average {

    public static void main(String[] args) {

        int[] a= { 10,20,30,40,50};
        int sum=0;
        for(int i=0;i<a.length;i++)
        {
            sum+=a[i];
        }
        double avg=sum/a.length;
        System.out.println("average is "+avg);
    }
}
```

O/P

$10+20+30+40+50/5;$

$150/5=30$

Average is 30;

2. CHECCK THE USER ENTERD A NUMBER IS MATCHED IN GIVEN ARRAY.

```
package Arrays21;

import java.util.Scanner;

public class ChecknumAvilible {
```

```

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

            System.out.println("Enter a number");

            int n=scn.nextInt();

            int[] a= {10,20,30,40,50};

            boolean flag = false;
            for(int i=0;i<a.length;i++)
            {
                if(a[i]==n)
                {
                    flag = true;
                    break;
                }
            }
            if(flag==true)
                System.out.println("Matched");
            else
                System.out.println("Not Matched");
        }
    }

```

O/P

Enter a number

30

30 is Matched in array.

3.COUNT MATCHING ELEMENTS IN GIVEN ARRAY?

```

package Arrays21;

import java.util.Scanner;

public class CountMatchingIndex {

    public static void main(String[] args) {

        int count=0;

        Scanner scn=new Scanner(System.in);

        System.out.println("Enter a number");
    }
}

```

```
int n=scn.nextInt();  
int[] a= {10,20,30,20,40,20,20};  
for(int i=0;i<=a.length-1;i++)    {  
    if(a[i]==n)    {  
        count++;  
    }  
}  
System.out.println(count);  
}  
}
```

O/P

Enter a Number

20

Count is 4

4.FIND THE CUBES IN GIVEN ARRAY ?

```
package Arrays21;

public class Cube {

    public static void main(String[] args) {
        int[] a= {1,2,3,4,5};
        int cube=0;
        for(int i=0;i<=a.length-1;i++)
        {
            cube=a[i]*a[i]*a[i];
            //cube = (int) Math.pow(a[i], 3);
            System.out.println(cube);
        }
    }
}
```

O/P

```
1  1
2  8
3  27
4  64
5  125
```

5.CHECK THE HOW MANY EVEN NUMBERS AND ODD NUMBERS GIVEN ARRAY ?

```
package Arrays21;

import java.util.Scanner;

public class Even {

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

```
        }  
for(int i=0;i<=a.length-1;i++)  
{  
    if(a[i]%2==0)  
    {  
        System.out.println(a[i]+" even");  
    }  
    else  
    {  
        System.out.println(a[i]+"odd");  
    }  
}  
  
}
```

O/P

Enter a values

2

3

4

5

6

7

8

9

1

10

2 even

3odd

4 even

5odd

6 even

7odd

8 even

9odd

1odd

10 even

6. FIND THE EVEN INDEX SUM OF AN ARRAY ?

```
package Arrays21;
```

```
import java.util.Scanner;
```

```
public class EvenIndex {  
  
    public static void main(String[] args) {  
        Scanner scn=new Scanner(System.in);  
        System.out.println("Enter a Size");  
        int size=scn.nextInt();  
        int [] a=new int[size];  
        System.out.println("Enter a values");  
        int sum=0;  
        for(int i=0;i<size;i++)  
        {  
            a[i]=scn.nextInt();  
        }  
  
        for(int i=0;i<=a.length-1;i++)  
        {  
            if(i%2==0)  
            {  
                sum=sum+a[i];  
            }  
        }  
        System.out.println(sum);  
    }  
}
```

O/p

Enter a Size

3

Enter a values

10

20

30

40 sum

7. Print Maximum Element Of An Array?

```
package Arrays21;

public class MaxValueOfArray {

    public static void main(String[] args) {
        int[] a= { 10,20,50,60,150,70,100};

        int max=a[0];
        for(int i=1;i<=a.length-1;i++)
        {
            if(a[i]>max)  max=a[i];
        }
        System.out.println(" Max value is "+max);
    }
}
```

O/p
150

8. PRINT MINIMUM VALUE OF ARRAY?

```
package AllArraysProgramms;

public class Min {

    public static void main(String[] args) {
//        25. Find smallest element in a n array
        int[] a= { 50,30,20,10,40};
        int min=a[0];
        for(int i=0;i<a.length;i++)
        {
            if(min>a[i])
            {
                min=a[i];
            }
        }
        System.out.println(min);
    }
}
```

```
}
```

O/p
10

9.MERGE THE TWO ARRAYS?

```
package Arrays21;

import java.util.Arrays;

import java.util.Scanner;

public class MergeTwoArray {

//Merging the to ar

    public static void main(String[] args) { Scanner sc
        = new Scanner(System.in);
        System.out.println("Enetr the size of array");
        int size=sc.nextInt();

        int arr1[]=new int[size];

        System.out.println("Enetr the 1st array elements");

        for (int i = 0; i < arr1.length; i++)

        {

            arr1[i]=sc.nextInt();

        }

        System.out.println("Enetr the size of 2nd
        array"); int size2=sc.nextInt();
        int arr2[]=new int[size2];

        System.out.println("Enetr the 2nd array elements");

        for (int i = 0; i < arr2.length; i++)

        {

            arr2[i]=sc.nextInt();

        }
```



```

        int[] arr3=new
        int[arr1.length+arr2.length]; int ind=0;

        for (int i = 0; i < arr3.length; i++)
        {
            if(i<arr1.length)

                arr3[i]=arr1[i];

            else
            {
                arr3[i]=arr2[ind];

                ind++;
            }
        }

        System.out.println(Arrays.toString(arr3));
    }
}

```

Another Process

```

int[] a1= {10,30,50,70,90};
int[] a2= {20,40,60,80};
int[] a3=new int[a1.length+a2.length];
int k=0;

for(int i=0;i<a3.length;i++)
{
    if(i<a1.length)
        a3[i]=a1[i];

    else
    {

```

```

        a3[i]=a2[k];
        k++;
    }
}
for(int i=0;i<a3.length;i++)
{
    System.out.println(a3[i]); }
}
}

```

O/P

Enetr the size of array

5

Enetr the 1st array

elements 10 20 30 40 50

Enetr the size of 2nd

array 5

Enetr the 2nd array elements

60

70

80

90

100

[10, 20, 30, 40, 50, 60, 70, 80, 90, 100]

10.PRINT TWO ARRAYS ZIGZAG ?

```
package AllArraysProgramms;
```

```
import java.util.Arrays;
```

```

public class ZigZag {

    public static void main(String[] args) {
//      42. Merge two array elements in zigzag manner
        int[] a= { 10,30,50,70,90,1,6};
        int[] b= { 20,40,60,80,100};
        int[] c=new int[a.length+b.length];
        int j=0;
        int k=0;
        int i=0;
        while(i<c.length) {
            if(j<a.length)
            {
                c[i]=a[j];
                i++;
                j++;
            }

            if(k<b.length)
            {
                c[i++]=b[k];
                k++;
            }
        }

        for(int d=0;d<c.length;d++)
        {
            System.out.print(c[d]+" ");
        }
    }
}

```

O/P:- [10 20 30 40 50 60 70 80 90 100]

12.PRINT MULTIPLE OF 5 IN GIVEN ARRAY?

```

package Arrays21;

import java.util.Scanner;

public class Multi {

    public static void main(String[] args) {
        int[] a= {10,15,20,25,36,67};

        for(int i=0;i<a.length;i++)
        {
            if(a[i]%5==0)

```

```

        {
            System.out.println(a[i]+" Multiple by 5");
        }
    }
}

}

```

O/P

10 Multiple by 5

15 Multiple by 5

20 Multiple by 5

25 Multiple by 5

13.PRINT A CHARACTER IN LAST AND FIRST CHARACTER ?

```

package AllArraysProgramms;

public class PrintCharFirstAndLast {

    public static void main(String[] args) {
        char[] ch={'Y','A','S','H'};
        System.out.println(ch[0]);
        System.out.println(ch[ch.length-1]);
    }

}
}
}

```

O/P

First Index is Y.

Last index is H

14.PRINT THE OCCURANCE OF 2ND INDEX IN GIVEN ARRAY?

```

package Arrays21;

import java.util.Scanner;

```

```
public class Occurance2nd {  
    public static void main(String[] args) {  
  
        Scanner scn=new Scanner(System.in);  
  
        System.out.println("Enter a number");  
  
        int n=scn.nextInt();  
  
        int count=0;  
  
        int[] a= { 10,20,30,40,50,30};  
  
        int i=0;  
  
        boolean flag=true;  
  
        for(i=0;i<=a.length-1;i++) {  
  
            if(a[i]==n)  
  
            {  
  
                count++;  
  
            }  
  
            if(count==2)  
  
            {  
  
                flag=false;  
  
                break;  
  
            }  
        }  
        if(flag==false)  
  
        {  
  
            System.out.println(i);  
  
        }  
    }  
}
```

O/P

Enter a number

15.FACTORIAL OF A GIVEN ARRAY?

```
package AllArraysProgramms;

public class FactorialOfArray {

    public static void main(String[] args) {
        int[] a= {1,2,3,4,5,6};
        int fact=1;
        for(int i=0;i<a.length;i++)
        {
            fact*=a[i];
        }
        System.out.println(fact);
    }
}
```

O/P**FACTORIAL IS 720****16.Product of even index array elements**

```
package AllArraysProgramms;
public class ProdEvenIndexElements {
    public static void main(String[] args) {
        int[] a= {1,2,3,4,5};
        int prod=1;
        for(int i=0;i<a.length;i++)
        {
            if(i%2==0)
            {
                prod*=a[i];
            }
        }
        System.out.println(prod);
    }
}
```

O/P

Answer ius 15

16. PRINT REVERSE AN ARRAY?

```
package Arrays21;
import java.util.Scanner;

public class ReverseofArray {

    public static void main(String[] args) {

        int j=0;

        Scanner scn=new Scanner(System.in);

        System.out.println("Enter a values");

        int[] a=new int[5];

        for(int i=0;i<a.length;i++)

        {

            a[i]=scn.nextInt();
        }
        for(int i=a.length-1;i>=0;i--)

        {

            System.out.println(a[i]);

        }

    }

}
```

O/P

Enter a values

50

40

30

20

10

10

20
30
40
50

17 .PRINT REVERSE AN ARRAY USING SWAPING?

```
public class ReversearraySwap {  
    public static void main(String[] args) {  
        int[] a= {50,40,30,20,10};  
  
        int st=0;  
        int end=a.length-1;  
        while(st<end)  
        {  
            int temp=a[st];  
            a[st]=a[end];  
            a[end]=temp;  
            st++;  
            end--;  
        }  
        System.out.println(Arrays.toString(a));  
    }  
}
```

O/P

Enter a numbers

50 40 30 20 10

10 20 30 40 50 -----> Reverse an array

18.PRINT ALL SUM OF ODD NUMBERS GIVEN ARRAY?

```
package Arrays21;
```



```

public class Sumodd {
public static void main(String[] args) {
int sum=0;
int[] a= {1,3,5,6,7,8,9};
for(int i=0;i<=a.length-1;i++)
{
if(a[i]%2!=0)
{
sum=sum+a[i];
}
}
System.out.println("sum of odd numbers "+sum);
}
}

```

O/P

sum of odd numbers 25

19.PRINT GIVEN CHARACTER ARRAY IS PALLINDROME OR NOT ?

```

package Arrayrs23;
public class Charpalindrome {
    //character pallindrome
public static void main(String[] args) {
char[] a= {'M','A','L','A','Y','A','L','A','M'};
int i=0,j=a.length-1;
boolean flag=true;
while(i<j) {

```

```

if(a[i]!=a[j]) flag=false;

i++;

j--;
}

if(flag==false) System.out.println("not palindrome");

else System.out.println("Palindrome"); }

}

```

O/P

Given character is Pallindrome.

20.Print All the distinct Elements in given Two arrays Array (not common values Elements in Array)?

```

package Arrayrs23;

public class DistinctNotCommon {

public static void main(String[] args) {

int[] a1= {10,20,30,40,50,80};

int[] a2= {10,30,50,70};

for(int i=0;i<=a1.length-1;i++)

{

boolean flag=false;

for(int j=0;j<=a2.length-1;j++)

{

if(a1[i]==a2[j])

{

flag=true;

}

}

}

}

```

```

if(!flag)
{
System.out.println(a1[i]);
}
}

for(int i=0;i<=a2.length-1;i++)
{
boolean flag=false;
for(int j=0;j<=a1.length-1;j++)
{
if(a2[i]==a1[j])
{
flag=true;
}
}
}

```

o/p

```

20
40
80
70

```

21. Check and print the common elements present in between two array?

```

package AllArraysProgramms;
public class CommonElementsTwoArrays {
    public static void main(String[] args) {
        int[] a1= { 10,20,30,40,50};
        int[] a2= { 60,20,70,40,30};
        for(int i=0;i<a1.length;i++)
        {
            boolean flag=false;
            for(int j=0;j<a2.length;j++)
            {
                if(a1[i]==a2[j])
                {
                    flag=true;

```

```

        }
    }
    if(flag==true)
    {
        System.out.println(a1[i]);
    }
}
}
}

```

O/P

20

30

40

22.Print highest sum two elements in given Array?

```

package Arrayrs23;

public class HighestSumElement {

    public static void main(String[] args) {

        int[] a = {6, 5, 4, 3, 2, 1, 8, 9, 10};

        int sum = a[0] + a[1];

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

            for (int j = i + 1; j < a.length; j++) {

                if (a[i] + a[j] > sum) sum = a[i] + a[j];

            }

        }

        System.out.println(sum);

    }

}

```

O/P

Highest sum is 19

23. Check the two Arrays identical or not (INDEX AND VALUES ARE SAME THAT IS IDENTICAL OTHERWISE NOT IDENTICAL).

```
package AllArraysProgramms;

public class IdenticalOrNot {

    public static void main(String[] args){
        int[] a= { 10,20,30,40,50};
        int[] b= { 10,20,30,40,50};
        if(a.length==b.length)
        {
            boolean flag=true;
            for(int i=0;i<a.length;i++)
            {

                if(a[i]==b[i])
                {
                    flag=true;
                }
            }
        }
        else
        {
            flag=false;
            break;
        }
    }
    if(flag==true)
    {
        System.out.println("Identical");
    }
    else
    {
        System.out.println("Not Identical");
    }
    }
    else
    {
        System.out.println("Not Identical");
    }
    }
}
```

O/P

The given arrays are **Identical**

24. FIND THE 3RD MAXIMUM NUMBER IN GIVEN ARRAY?

```
package Arrayrs23;
```

```
import java.util.Arrays;

public class max3rd {

    public static void sort(int[] a) {
        int[] a= {10,30,20,68,70,90};
        Arrays.sort(a);

        for(int n:a)
        {

        }

        System.out.println(a[a.length-3]);
        Another one way
        sort(a);
        System.out.println(a[a.length-3]);
    }

    private static void sort(int[] a) {

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

            for(int j=0;j<a.length-1-i;j++)
            {
                if(a[j]>a[j+1])
                {
                    int temp=a[j];
                    a[j]=a[j+1];
                    a[j+1]=temp;
                }
            }
        }
    }
}
```

```
}
```

Another Way

```
package AllArraysProgramms;
```

```
import java.util.Arrays;
```

```
public class Find3RdHighestElements {
```

```
    public static void main(String[] args) {
```

```
        int[] a= {10,20,30,10,20,60,70,70,80,80};
```

```
        int max1=0;
```

```
        int max2=0;
```

```
        int max3=0;
```

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

```
        {
```

```
            if(a[i]>max1)
```

```
            {
```

```
                max3=max2;
```

```
                max2=max1;
```

```
                max1=a[i];
```

```
            }
```

```
            else if(a[i]>max2 && a[i]!=max1)
```

```
            {
```

```
                max3=max2;
```

```
                max2=a[i];
```

```
            }
```

```
            else if(a[i]>max3 && a[i]!=max1 && a[i]!=max3)
```

```
            {
```

```
                max3=a[i];
```

```
            }
```

```
        }
```

```
        System.out.println(max3+" min3 value ");
```

```
        System.out.println(max2+" min2 value");
```

```
        System.out.println(max1+" min1 value");
```

```
    }
```

```
}
```

O/P

```
60 min3 value
```

```
70 min2 value
```

```
80 min1 value
```

25.FIND 3RD MINIMUM NUMBER IN GIVEN ARRAY?

```
package Arrayrs23;

public class min3rd {

    public static void sort(int[] a) {

        int[] a= {10,30,20,68,70,90};
        Arrays.sort(a);

        for(int n:a)
        {

        }

        System.out.println(a[2]); //this is one way
    }
}
```

Another way

```
package AllArraysProgramms;

public class Find3rdMin {
//    27. Find third smallest element in a n array
    public static void main(String[] args) {
        int[] a= {10,50,60,30,20,8};
        for(int i=0;i<a.length;i++)
        {
            for(int j=0;j<=a.length-1-i;i++)
            {
                if(a[j]<a[j+1])
                {
                    int temp=a[j];
                    a[j]=a[j+1];
                    a[j+1]=temp;
                }
            }
        }
        System.out.println(a[a.length-2]);
    }
}
```

Another Way

```
package AllArraysProgramms;

public class Find3rdMin {
//    27. Find third smallest element in a n array
    public static void main(String[] args) {
```



```

int[] a= { 10,20,30,40,30,50,50,40,30};
int min1=Integer.MAX_VALUE;
int min2=0;
int min3=0;
for(int i=0;i<a.length;i++)
{
    if(a[i]<min1)
    {
        min3=min2;
        min2=min1;
        min1=a[i];
    }
    else if(a[i]<min2 && a[i]!=min1)
    {
        min3=min2;
        min2=a[i];
    }
    else if(a[i]<min3 && a[i]!=min1 && a[i]!=min2)
    {
        min3=a[i];
    }
}
System.out.println(min3+" min3 value");
System.out.println(min2+" min2 value");
System.out.println(min1+" min1 value");
}
}

```

O/P

30 min3 value

20 min2 value

10 min1 value

26. Print All Paires of two elements is having sum is 10?

```
package AllArraysProgramms;
```

```

public class PairesOfSum {
    public static void main(String[] args) {
        int[] a= {7,1,3,2,5,6,5,4};
        for(int i=0;i<a.length;i++)
        {
            for(int j=i+1;j<a.length;j++)
            {

```

O/p

```
package Arrays23;

import java.util.Scanner;

public class Palindromenum {

    public static void main(String[] args)
    {
        Scanner scn=new Scanner(System.in);
        System.out.println("Enter a size");
        int size=scn.nextInt();

        int [] a=new int[3];

        System.out.println("Enter the array elements");
        for(int i=0;i<size;i++)
        {
            a[i]=scn.nextInt();
        }

        for(int i=0;i<size;i++)
        {
            int n=a[i];
            int copy=n;
            int rev=0;
```

```

while(n>0)
{
    rev=rev*10+n%10;
    n/=10;
}
if(copy==rev)
{
    System.out.println(copy+"is a pallindrome");
}
else
{
    System.out.println(copy+"is not pallindrome");
}
}
}
}

```

O/P

Enter a size

3

Enter the array elements

121

123

124

121is a pallindrome

123is not pallindrome

124is not pallindrome

28.PRINT COMMON ELEMENTS OF TWO ARRAYS?

```
package Arrayrs23;
```

```

public class Samedata {
public static void main(String[] args) {
    int[] a1= {10,20,30,40,50};
    int[] a2= {10,30,50,70};
    for(int i=0;i<=a1.length-1;i++)
    {
        for(int j=0;j<=a2.length-1;j++)
        {
            if(a1[i]==a2[j])
            {
                System.out.println("the common elements "+a1[i]);
            }
        }
    }
}
}

```

O/P

the common elements 10

the common elements 30

the common elements 50

29.Print 2nd maximum number given Array?

```

package Arrayrs23;

public class Secondmax {
public static void main(String[] args) {
    int[] a= {10,100,90,54,67};
    int s1=a[0];
    int s2=a[0];
    for(int i=1;i<a.length;i++)

```

```

{
if(a[i]>s1)
{
s2=s1;
s1=a[i];
}
else if(a[i]>s2 || s1==s2)
{
s2=a[i];
}
}
System.out.println(s2);
}
}

```

O/P

2ND MAXIMUM NUMBER IS 90

30.Print The 2nd Minimum Number in Given Array?

```

package Arrayrs23;
public class Secondmin {
public static void main(String[] args) {
int[] a= {10,100,90,54,67};
int s1=a[0];
int s2=a[0];
for(int i=1;i<a.length;i++)
{
if(a[i]<s1)
{

```

```

s2=s1;
s1=a[i];
}
else if(a[i]<s2 || s1==s2)
{
s2=a[i];
}
}
System.out.println(s2);
}
}

```

O/P

2nd minimum is 57

31.WAJP TO REMOVE A PARTICULAR ELEMENT IN ARRAY?

```

package ArraysProgramm;

import java.util.Arrays;

public class RemoveElement {

    public static void main(String[] args)
    { int[] a= {10,20,30,40,50};
      int[] b=new int[a.length-1];
      int ind=2;
      int k=0;
      for(int i=0;i<a.length;i++)
    
```

```

    {
        if (i==ind)
        {
            continue;
        }
        b[k++]=a[i];

    }

    System.out.println(Arrays.toString(b));
}

}

```

O/P

[10, 20, 40, 50]

32.REMOVE DUPLICATES IN AN ARRAY?

package Patterns;

```

public class Remove {
    public static void main(String[] args) {
        int[] a= {1,2,3,1,2,1,3,1,2,2};
        for(int i=0;i<a.length;i++)
        {
            for(int j=i+1;j<a.length;j++)
            {
                if(a[i]==a[j])
                {
                    a[j]=Integer.MAX_VALUE;
                }
            }
        }
    }
}

```

```

    }

    for(int i=0;i<a.length;i++)

    {

        if(a[i]!=Integer.MAX_VALUE) {

            System.out.println(a[i]);

        }

    }

}

```

33. FIND DUPLICATES IN

ARRAY? package ArraysProgramm;

```
import java.util.HashSet;
```

```
import java.util.Set;
```

```
public class FetchDuplicate {
```



```

        public static void main(String[] args) {
int[] a= {1,2,3,1,2,4,5,3};
        Set s=new HashSet();
for(int n:a)
{
    if(s.contains(n)==false) {
s.add(n);
    }
    else
    {
        System.out.println(n); //Find duplicates
    }
}
System.out.println(s); //remove duplicates

    }
}

```

```

}

```

34. **WAJP Linear Search?**

```

package AllArraysProgramms;

```

```

public class LinearSearch {

```

```

    public static void main(String[] args) {
        int[] a= {50,40,30,20,10};
        int search=30;
        for(int i=0;i<a.length;i++)
        {
            if(search==a[i])
            {
                System.out.println(search+" Present in array");
            }
        }
    }
}

```

```

}

```

O/p

30 Present in array

35. WAJP Binary Search?

```
package AllArraysProgramms;
```

```
import java.util.Arrays;
```

```
import java.util.Scanner;
```

```
public class BinarySearch {
```

```
    public static void main(String[] args) {
        Scanner scn=new Scanner(System.in);
        System.out.println("Enter a Key");
        int key=scn.nextInt();
        int [] a= {10,30,40,50,60,20};
        Arrays.sort(a);
        int low=0,high=a.length-1;
        boolean flag=false;
        while(low<=high) {
            int mid=(low+high)/2;
            if(key==a[mid])
            {
                flag=true;
                break;
            }
            else if(key>a[mid])
            {
                low=mid+1;
                high=high; }
            else
            {
                high=mid-1;
                low=low; }}
        if(flag==true) {
            System.out.println("Key is Present at Index");
        }
        else
        {
            System.out.println("Key is Not Present at Index");
        }
    }
}
```

O/p

Enter a Key

20

Key is Present at Index

36. WAJP Copy One Array To Another Array?

```
package AllArraysProgramms;

import java.util.Arrays;

public class CopyOneArrayToAnotherArray {

    public static void main(String[] args) {
        int[] a= {10,20,30,40,50};
        int[] b=new int[a.length];
        for(int i=0;i<a.length;i++)
        {
            b[i]=a[i];
        }
        System.out.println(Arrays.toString(b));
    }
}
```

O/p

[10, 20, 30, 40, 50]

37. WAJP Count Duplicates?

```
package AllArraysProgramms;

import java.util.Arrays;

public class CountDuplicates {

    public static void main(String[] args) {
```

C

O/p

3

38. WAJP Insert an Element Particular Index?

```
package AllArraysProgramms;
```

```
import java.util.Arrays;
```

```
public class InsertAnElemet {
```

```

        public static void main(String[] args) {
int[] a= {10,20,40,50};
int[] b=new int[a.length+1];
int ind=2;
int num=30;
int j=0;
for(int i=0;i<a.length;i++)
{
    if(ind==i)
    {
        b[j]=num;
        j++;
    }
    b[j]=a[i];
    j++;
}
// System.out.println(Arrays.toString(b));
for(int i=0;i<b.length;i++)
{
    System.out.println(b[i]);

}
}

```

O/p

[10, 20, 100, 30, 40, 50]

39. WAJP Print Even Array Elements?

```
package AllArraysProgramms;
```

```

public class PrintEvenArrayElements {

    public static void main(String[] args) {
        //15. Print only even array elements
        int[] a= {10,20,36,37,49};
        for(int i=0;i<a.length;i++)
        {
            if(a[i]%2==0)
            {
                System.out.println(a[i]);
            }
        }
    }
}

```

```

        }
    }
}

```

O/p

10

20

36

40. WAJP Print Only Odd Array Elements?

```
package AllArraysProgramms;
```

```

public class PrintOnlyOddArrayElemets {

    public static void main(String[] args) {
//        16. Print only odd array elements
        int[] a= { 10,20,36,37,49};
        for(int i=0;i<a.length;i++)
        {
            if(a[i]%2!=0)
            {
                System.out.println(a[i]);
            }
        }
    }
}

```

O/p

37

49

41.WAJP Print Only Prime Array Element?

```
package AllArraysProgramms;
```

```

public class PrintOnlyPrimeElements {

    public static void main(String[] args) {
//        34. Print only the prime array elements
        int[] a= {2,4,3,6,5,7,9};
        for(int i=0;i<a.length;i++)
        {
            int count=0;
            for(int j=1;j<=a[i];j++)
            {

```

```

                if(a[i]%j==0)
                {
                    count++;
                }
            }
            if(count==2)
            {
                System.out.println(a[i]);
            }
        }
    }
}

```

O/p

2

3

5

7

42.WAJP Print Second Time Element Given Array?

```

package AllArraysProgramms;
import java.util.Scanner;
public class SecondTimeRepeat {
    public static void main(String[] args) {
//        28. Find multiples of a element present in array
        Scanner scn=new Scanner(System.in);
        System.out.println("Enter a Number");
        int n=scn.nextInt();
        int[] a= { 10,30,40,20,20};
        int count=0;
        for(int i=0;i<a.length;i++)
        {
            if(n==a[i])
            {
                count++;
            }
        }
        if(count==2)
        {
            System.out.println(n+" is Present in Multiple Times");
        }
        else
        {
            System.out.println(n+" Not Present Multiple Times");
        }
    }
}

```

O/p

Enter a Number

20

20 is Present in Multiple Times

43. WAJP To Bubble Sort?

```
package AllArraysProgramms;

import java.util.Arrays;

public class BubbleSort {

    public static void main(String[] args) {
        int[] a= {50,30,40,20,10};
        for(int i=0;i<a.length;i++)
        {
            for(int j=0;j<a.length-1-i;j++)
            {
                if(a[j]>a[j+1])
                {
                    int temp=a[j];
                    a[j]=a[j+1];
                    a[j+1]=temp;
                }
            }
        }
        System.out.println(Arrays.toString(a));
    }
}
```

O/p

[10, 20, 30, 40, 50]

44. WAJP To Selection Sort?

```
package AllArraysProgramms;

import java.util.Arrays;

public class SelectionSort {

    public static void main(String[] args) {
        int[] a= {50,40,30,20,10};
        for(int i=0;i<a.length;i++)
        {
```

```

        int ind=i;
        for(int j=i+1;j<a.length;j++)
        {
            if(a[j]<a[ind])
            {
                ind=j;
            }

            if(a[i]!=ind)
            {
                int temp=a[i];
                a[i]=a[ind];
                a[ind]=temp;
            }
        }
        System.out.println(Arrays.toString(a));
    }
}

```

O/p

[10, 20, 30, 40, 50]

45. WAJP Sort an Array WithOut Temp?

```
package AllArraysProgramms;
```

```
import java.util.Arrays;
```

```
public class SortingArrayWithOutTemp {

    public static void main(String[] args) {
        int[] a= {50,40,30,20,10};
        for(int i=0;i<a.length;i++)
        {
            for(int j=0;j<a.length-1-i;j++)
            {
                if(a[j]>a[j+1])
                {
                    a[j]=a[j]+a[j+1];
                    a[j+1]=a[j]-a[j+1];
                    a[j]=a[j]-a[j+1];
                }
            }
        }
        System.out.println(Arrays.toString(a));
    }
}

```

O/p

[10, 20, 30, 40, 50]

46. WAJP TO BY AND SALE ?

```
package ArraysProgramm;

public class ByyAndSale {

    public static void main(String[] args) {
        int[] a= {5,3,6,100};
        int min=Integer.MAX_VALUE;
        System.out.println(min);
        int max=0;
        for(int i=0;i<a.length;i++)
        {
            if(a[i]<min) min=a[i]; //5/3
            if(a[i]-min>max) max=a[i]-min; //3//97
        }
        System.out.println("max value is "+max);
    }
}
```

O/p

2147483647

max value is 97

47. WAJP TO Print array Elements First 0's and next 1's?

```
package ArraysProgramm;

import java.util.Arrays;

public class First0S {
    public static void main(String[] args) {
        int[] a= {1,0,0,1,0,0,1,1,0};
        int[] b=new int[a.length];
        // Arrays.sort(a); this is 1 way
        // for(int n:a) {
        // System.out.print(n+" ");
        int j=0;
        for(int i=0;i<a.length;i++)
        {
            if(a[i]==0)
            {
                b[j]=a[i];
                j++;
            }
        }
        for(int i=0;i<a.length;i++)
        {
```

```

        if(a[i]!=0)
        {
            b[j]=a[i];
            j++;
        }
    }
    for(int n:b)
    {
        System.out.print(n);
    }
}
}

```

O/p

000001111

48. WAJP To Left Rotation of an Array?

```
package ArraysProgramm;
```

```

public class LeftRotation {
    public static void main(String[] args) {
        int[] a= { 10,20,50,40,30};
        int[] b=new int[a.length];
        int n=2;
        int j=0;
        for(int i=n;i<a.length;i++)
        {
            b[j]=a[i];
            j++;
        }
        for(int i=0;i<n;i++)
        {
            b[j]=a[i];
            j++;
        }
        for(int c:b)
        {
            System.out.print(c+" ");
        }
    }
}

```

O/p

50 40 30 10 20

49.WAJP To Left Rotate an Element in the Given array?

```
package ArraysProgramm;
```

```

public class RotateElements {

    public static void main(String[] args) {
        int[] a= {10,20,40,70};
        int temp=a[0];

        for(int i=1;i<a.length;i++)
        {
            a[i-1]=a[i];
        }
        a[a.length-1]=temp;
        for(int n:a)
        {
            System.out.println(n);
        }
    }
}

```

O/p

20

40

70

10

49. WAJP To Print SubArray ?

```

package ArraysProgramm;

public class SubArray {

    public static void main(String[] args) {
        int[] a= {1,2,3,4};
        for(int i=0;i<a.length;i++)
        {
            for(int j=0;j<a.length-i;j++)
            {
                for(int k=i;k<=i+j;k++)
                {
                    System.out.print(a[k]);
                }
                System.out.println();
            }
        }
    }
}

```

O/p

1
12
123
1234
2
23
234
3
34
4

50. Print Only Prime Array Elements?

```
package AllArraysProgramms;

public class PrintOnlyPrimeElements {

    public static void main(String[] args)
    {
        int[] a= {2,4,3,6,5,7,9};
        for(int i=0;i<a.length;i++)
        {
            int count=0;
            for(int j=1;j<=a[i];j++)
            {
                if(a[i]%j==0)
                {
                    count++;
                }
            }
            if(count==2)
            {
                System.out.println(a[i]);
            }
        }
    }
}
```

51. WAP To Find Missing Elements in Array?

```
package Programms;

public class Missing_Elements_an_Array {
    public static void main(String[] args) {
        int[] a = {1,4,9};
        int i=1;
        int j=0;
        do
        {
            if(a[i] != a[j])
            {
                System.out.println("Missing Element is: " + a[j]);
            }
            i++;
            j++;
        }
        while(i < a.length);
    }
}
```

```

        if(i==a[j])
        {
            i++;
            j++;
        }
        while(i<a[j])
        {
            System.out.println(i);
            i++;
        }
    }
    while(j<a.length-1);
}
}

```

O/p

2
3
5
6
7
8

52 . Java Program to find next greater element in array in java?

```

package Programms;

public class NextGreaterNumber {

    public static void main(String[] args) {
        int[] a= {11,21,13,10,15,30,16};
        for(int i=0;i<a.length;i++)
        {
            int next=-1;
            for(int j=i+1;j<a.length;j++)
            {
                if(a[i]<a[j]) {
                    next=a[j];
                    break;
                }
            }
            System.out.println(a[i]+" ,"+next);
        }
    }
}

```

O/p
11 ,21
21 ,30
13 ,15
10 ,15
15 ,30
30 ,-1
16 ,-1

53.WAJP To Sorted names in array.

```
package Programms;

import java.util.Scanner;

public class SortNamesInArray {
    public static void main(String[] args) {
        Scanner scn=new Scanner(System.in);
        System.out.println("Enter a Size of names");
        int size=scn.nextInt();
        String[] n=new String[size];
        System.out.println("Enter a Names");
        String temp;
        for(int i=0;i<size;i++)
        {
            n[i]=scn.next();
        }
        for(int i=0;i<size;i++)
        {
            for(int j=i+1;j<size;j++)
            {
                if(n[i].compareTo(n[j])>0)
                {
                    temp=n[i];
                    n[i]=n[j];
                    n[j]=temp;
                }
            }
        }
        for(String name:n)
        {
            System.out.println("Sorted names =" + name);
        }
    }
}
```

O/P

Enter a Size of names

3

Enter a Names

XYZ

PQR

ABC

Sorted names =ABC

Sorted names =PQR

Sorted names =XYZ

54. Java Program to square a sorted array of Positive and Negative Numbers

```
package Programms;
```

```
public class SquareSorted {
```

```
    public static void main(String[] args) {
```

```
        //Java Program to square a sorted array of Positive and Negative Numbers
```

```
        int[] a= {-6,-1,2,4,5};
```

```
        int sq[] = squareSorted(a);
```

```
        for(int i=0;i<sq.length;i++)
```

```
        {
```

```
            System.out.println(sq[i]);
```

```
        }
```

```
    }
```

```
    private static int[] squareSorted(int[] a) {
```

```
        int sq[]=new int[a.length];
```

```
        int start=0;
```

```
        int end=a.length-1;
```

```
        int sqIndex=a.length-1;
```

```
        while(start<=end)
```

```
        {
```

```
            if(a[start]*a[start]>a[end]*a[end])
```

```
            {
```

```
                sq[sqIndex--]=a[start]*a[start];
```

```
                start++;
```

```
            }
```

```
            else
```

```
            {
```

```
                sq[sqIndex--]=a[end]*a[end];
```

```
                end--;
```

```
            }
```

```
        }
```

```
        return sq;
```

```
    }  
}  
O/P
```

1
4
16
25
36

55. Java Program to move all negative numbers to the start of array and positive numbers to end?

```
package Programms;
```

```
public class StartNegative28 {  
  
    public static void main(String[] args) {  
        int a[] = {-1,20,30,-3,40,-9};  
        int b[] = new int[a.length];  
        rearrange(a,b);  
        print(b);  
    }  
  
    private static void print(int[] b) {  
        for(int i:b)  
        {  
            System.out.print(i);  
            System.out.print(" ");  
        }  
    }  
  
    private static void rearrange(int[] a, int[] b) {  
        int j=0;  
        for(int i=0;i<a.length;i++)  
        {  
            if(a[i]<0)  
            {  
                b[j]=a[i];  
                j++;  
            }  
        }  
        for(int i=0;i<a.length;i++)  
        {
```



```

        if(a[i]>0)
        {
            b[j]=a[i];
            j++;
        }
    }
    print(b);
}

```

O/P

-1 -3 -9 20 30 40

56. Different ways to sum all elements in an array in java8

```

package Programms;

import java.util.Arrays;
import java.util.stream.IntStream;

public class SumDifferentWays {

    public static void main(String[] args) {
        int[] a= {10,20,30,40,50};
        int sum=Arrays.stream(a).sum();
        System.out.println(sum);

        System.out.println("-----");

        int sum1=IntStream.of(a).sum();
        System.out.println(sum1);
        System.out.println("-----");

        int sum2=Arrays.stream(a).reduce((x,y)->x+y).getAsInt();
        System.out.println(sum2);
        System.out.println("-----");

        int
sum3=Arrays.stream(a).reduce(Integer::sum).getAsInt();
        System.out.println(sum3);
        System.out.println("-----");

        long
sum4=Arrays.stream(a).summaryStatistics().getSum();
        System.out.println(sum4);
    }
}

```

```
}
```

O/P

150

150

150

150

150

57.

to find the first duplicate occurrence in an array.

```
package Programms;
```

```
public class FirstDuplicateOccurance {
    public static void main(String[] args)
    {
        Integer[] a= {1,2,3,4,1,2,7};
        for(int i=0;i<a.length;i++)
        {
            for(int j=i+1;j<a.length;j++)
            {
                if(a[i]==a[j])
                {
                    System.out.println(a[i]);
                    return;
                }
            }
        }
    }
}
```

58.WAJP To Find Majority of Elements in array.

```

package Programms;

import java.util.HashMap;
import java.util.Map;
public class MajarityElements {

    public static void main(String[] args) {
        int[] a= {1,2,3,4,5,2,3,3,3,3,3};
        System.out.println("Majarity Element is =
"+majarity(a,11));
    }
    static int majarity(int[] a,int size)
    {
        Map<Integer,Integer> map=new
HashMap<Integer,Integer>();
        for(int i:a)
        {
            Integer val=map.get(i);
            if(val==null)
            {
                map.put(i,1);
            }
            else
            {
                map.put(i, val+1);
            }
        }
        for (Map.Entry<Integer,Integer>
entry:map.entrySet())
        {
            if(entry.getValue()>size/2)
            {
                return entry.getKey();
            }
        }
        return -1;
    }

}

```

O/P

Majarity Element is = 3

59. Find common elements in 3 Arrays?

```

package ArraysNewProgramms;

public class Find_Common_Elements_3Arrays {

    public static void main(String[] args) {
        int[] a= {10,20,30,40,50};
        int[] b= {10,20,30,40,60,50};
        int[] c= {10,20,30,70,50};
        for(int i=0;i<a.length;i++)
        {
            for(int j=0;j<b.length;j++)
            {
                for(int k=0;k<c.length;k++)
                {
                    if(a[i]==b[j] && b[j]==c[k] && a[i]==c[k])
                    {
                        System.out.println(a[i]);
                    }
                }
            }
        }
    }
}

```

60.Find Longest Sub Array

```

package ArraysNewProgramms;

public class Longest_Sub_Array {
    public static void main(String[] args) {
        int[] a= {10,20,1,20,5,4,7,8,19,11};
        int len=findlength(a);
        System.out.println(len);
    }

    private static int findlength(int[] a) {
        if(a.length==0) {
            return 0;
        }
        int len=1;
        int maxLen=1;
        for(int i=1;i<a.length;i++)
        {
            if(a[i]>a[i-1])
            {
                len++;
            }
            else
            {

```

```

        len=1;
    }
    maxLen=Math.max(len, maxLen);
}
return maxLen;
}
}

```

O/p
4

61. Maximum Consecutive Ones in an Array of 0s and 1s

```

package ArraysNewProgramms;

public class MaxConsigativeOnes {

    public static void main(String[] args) {
        int[] a= {1,1,0,0,1,1,1,1,0};
        System.out.println(countConsecutiveOnes(a));
    }
    public static int countConsecutiveOnes(int[] a) {
        int count=0;
        int maxConsecutiveOne=0;
        for(int i=0;i<a.length;i++)
        {
            if(a[i]==1) {
                count++;
                maxConsecutiveOne=Math.max(count, maxConsecutiveOne);
            }
            else
            {
                count=0;
            }
        }
        return maxConsecutiveOne;
    }
}

```

61. WAJP To Find Maximum and Minimum between Difference?

```

package ArraysNewProgramms;

public class Max_Differnce {

    public static void main(String[] args) {
        int[] a= {10,60,30,20};
        int min=a[0];
        int max=a[0];
        for(int i=0;i<a.length;i++)

```

```

        {
            if(a[i]<min)
            {
                min=a[i];
            }
            if(a[i]>max)
            {
                max=a[i];
            }
        }
        System.out.println(min);
        System.out.println(max);
        System.out.println("max difference is "+ (max-min));
    }
}

```

62. Find Maximum Sub Array?

```

package ArraysNewProgramms;

public class Max_Sub_Array {

    public static void main(String[] args) {
        int[] a= { 1,2,-5,4,3,8,5};
        int maxSum=a[0];
        int sum =a[0];
        for(int i=0;i<a.length;i++)
        {
            if(sum<0)
            {
                sum=a[i];
            }
            else
            {
                sum=sum+a[i];
            }
            maxSum=Math.max(sum, maxSum);
        }
        System.out.println(maxSum);
    }
}

```

O/p
20

63. Product of an array Except It Self?

```

package ArraysNewProgramms;

```

```

import java.util.Arrays;

```

```

public class ProductOfAnArrayExceptItSelf {

    public static void main(String[] args) {
        int[] a= {4,2,1,7};
        int prod=1;
        int[] arr=new int[a.length];
        for(int i=0;i<a.length;i++)
        {
            prod*=a[i];
        }
        for(int i=0;i<a.length;i++) {
            arr[i]=prod/a[i];
        }
        System.out.println(Arrays.toString(arr));

    }

}

```

O/p

[14 , 28 , 56 , 8]

64. Wajp Reverse GroupOfArrays?

```

package ArraysNewProgramms;

```

```

import java.util.Arrays;

```

```

public class ReverseGroupOfArrays {

    public static void main(String[] args) {
        int[] a= {1,2,3,4,5,6,7,8,9};
        int k=5;
        for(int i=0;i<a.length;i=i+k) {
            int start=i;
            int end=Math.min(i+k-1, a.length-1);
            while(start<=end) {
                int temp=a[start];
                a[start]=a[end];
                a[end]=temp;
                start++;
                end--;
            }
        }
        for(int n:a) {
            System.out.print(n+" ");
        }
    }

}

```

O/p

5 4 3 2 1 9 8 7 6

65. Wajp Search Sorted and Rotaed array?

```
package ArraysNewProgramms;
```

```
import java.util.Arrays;
```

```
public class SearchSortedAndRotatedArray {
```

```
    public static void main(String[] args) {
```

```
        int[] a= {40,50,10,20,30,77,8,9,0};
```

```
        int[] b=new int[a.length];
```

```
        int n=4;
```

```
        int target=0;
```

```
        int j=0;
```

```
        for(int i=a.length-n;i<a.length;i++)
```

```
        {
```

```
            b[j]=a[i];
```

```
            j++;
```

```
        }
```

```
        for(int i=0;i<a.length-n;i++)
```

```
        {
```

```
            b[j]=a[i];
```

```
            j++;
```

```
        }
```

```
//        System.out.println(Arrays.toString(a));
```

```
        for(int i=0;i<b.length;i++) {
```

```
            System.out.println(b[i]+" ");
```

```
            if(a[i]==target)
```

```
            {
```

```
                System.out.println("Target Present");
```

```
            }
```

```
        }
```

```
    }
```

```
}
```

O/p

77

8

9

0

40

50

10

20

30

Target Present

66. Find TripLet?

```
package ArraysNewProgramms;
```

```
public class TripLetGivenSumisEqualToKnew {

    public static void main(String[] args) {
        int[] a= {1,2,3,4,6,8,7,9};
        int n=13;
        boolean result=findTriplet(a,n);
        if(result) {
            System.out.println("Exists");
        }
        else
        {
            System.out.println("Not Exists");
        }
    }

    public static boolean findTriplet(int[] a,int n) {
        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]==n)
                    {
                        return true;
                    }
                }
            }
        }
        return false;
    }
}
```

O/p

Exists

67. Find TripLetZeroSum?

```
package ArraysNewProgramms;
```

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

```

import java.util.Arrays;
import java.util.List;

public class TripLetZeroSum {

    public static void main(String[] args) {
        int[] a= {-1,0,1,2,-1,-4};
        List<List<Integer>> result=threeSum(a);
        result.forEach(values->{
            System.out.println(values);
        });
    }

    public static List<List<Integer>> threeSum(int[] a){
        List<List<Integer>> result=new ArrayList<>();
        Arrays.sort(a);
        for(int i=0;i<a.length;i++)
        {
            int start=i+1;
            int end=a.length-1;

            if(i>0 && a[i]==a[i-1])
            {
                continue;
            }
            while(start<end)
            {
                if(end<a.length-1 && a[end]==a[end+1])
                {
                    end--;
                    continue;
                }
                if(a[i]+a[start]+a[end]==0) {
                    List<Integer>
val=Arrays.asList(a[i],a[start],a[end]);
                    result.add(val);
                    start++;
                    end--;
                }
                else if(a[i]+a[start]+a[end]<0) {
                    start++;
                }
                else
                {
                    end--;
                }
            }
        }
        return result;
    }
}

```

```
}
```

O/p

[-1, -1, 2]

[-1, 0, 1]

68.WAJP To Insertion Sort?

```
package com.jsp.Insertion;

import java.util.Arrays;

public class InsertionSort {
    public static void main(String[] args) {
        int [] a= {5,6,7,8,3,2,1};
        sort(a);
        for(int n:a)System.out.print(n+" ");
        System.out.println();
    }
    public static void sort(int [] a)
    {
        for(int i=1;i<a.length;i++)
        {
            int key=a[i];
            int j=i-1;
            while(j>-1 && a[j]>key)
            {
                a[j+1]=a[j];
                j--;
            }
            a[j+1]=key;
        }
    }
}
```

69. WAJP TO Insert an Element at particular index?

```
package Arrayrs23;

import java.util.Arrays;

public class InsertIndex An Element {

    public static void main(String[] args) {
        int[] n= {1,2,3,5,6};
        int[] n1=new int[n.length+1];
```

```

        int ind=3;
        int j=0;
        int num=4;
        for(int i=0;i<=n.length-1;i++)
        {
            if(ind==i)
            {
                n1[j]=num;
                j++;

            }
            n1[j]=n[i];
            j++;
        }
        for(int i=0;i<=n1.length-1;i++)
        {
            System.out.println(n1[i]);
        }
        System.out.println(Arrays.toString(n1));
        System.out.println(Arrays.toString(n1));
    }
}

```

70.WAJP To Check Monotonic Array or Not?

```

package AllArraysProgramms;

public class Monotonic_Array {

    static boolean check(int arr[])
    {
        boolean inc = true;
        boolean dec = true;

        // Loop to check if array is increasing
        for (int i = 0; i < arr.length - 1; i++) {

            // To check if
            // array is not increasing
            if (arr[i] > arr[i + 1]) {
                inc = false;
            }
        }

        // Loop to check if array is decreasing
        for (int i = 0; i < arr.length - 1; i++) {

            // To check if

```

```

        // array is not decreasing
        if (arr[i] < arr[i + 1]) {
            dec = false;
        }
    }

    // Pick one whether inc or dec
    return inc || dec;
}

// Driver code
public static void main (String[] args) {
    int arr[] = { 1, 2, 3, 3 };

    // Function call
    boolean ans = check(arr);
    if (ans == true)
        System.out.print("Monotonic Array...");
    else
        System.out.print("Not a Monotonic Array...");
}
}

```

o/p

Monotonic Array...

71.WAJP To print subarray k sum?

```
package Programms;
```

```

public class Sub_Array_K_Sum {

    public static void main(String[] args) {
        int[] a = {1,2,1,4};
        int k =4;
        for(int i=0;i<a.length;i++)
        {
            int sum = 0;
            for(int j = i;j<a.length;j++)
            {
                sum+=a[j];
                if(sum == k)
                {
                    System.out.println(i+" "+j);
                    break;
                }
                if(sum>k) {

```

```

        break;
    }

    }

}

}

}

```

72.WAJP To Left Rotate an element?

```

package AllArraysProgramms;

import java.util.Arrays;

public class LeftRoation {

    public static void main(String[] args) {
        int[] a = {10,20,30,40};
        int temp = a[0];
        int i;
        for( i=1;i<a.length;i++)
        {
            a[i-1] = a[i];
        }
        a[a.length-1]=temp;
        System.out.println(Arrays.toString(a));
    }

}

```

O/P

[20, 30, 40, 10]

73.WAJP To Left Nth Rotate an element?

```

package AllArraysProgramms;

import java.util.Arrays;

public class LeftNthRotation {

    public static void main(String[] args) {
        int[] a = {10,20,30,40,50};
        int[] b = new int[a.length];
        int k = 2;
        int j=0;
        for(int i = k;i<a.length;i++)
        {

```

```

        b[j] = a[i];
        j++;
    }
    for (int i=0; i<k; i++)
    {
        b[j] = a[i];
        j++;
    }
    System.out.println(Arrays.toString(b));
}
}

```

O/P

[30, 40, 50, 10, 20]

74.WAJP To Right Rotate an element?

```

package AllArraysProgramms;

import java.util.Arrays;

public class RightRotation {

    public static void main(String[] args) {
        int[] a = {10,20,30,40,50};

        int temp = a[a.length-1];

        for (int i=a.length-2; i>=0; i--)
        {
            a[i+1] = a[i];
        }
        a[0] = temp;
        System.out.println(Arrays.toString(a));
    }
}

```

O/P

[50, 10, 20, 30, 40]

75.WAJP To Right Nth Rotate an element?

```

package AllArraysProgramms;

import java.util.Arrays;

public class RightNthRotation {

```

```
public static void main(String[] args) {  
    int[] a = {10,20,30,40,50};  
    int[] b = new int[a.length];  
    int k = 3;  
    int j=0;  
    for(int i=k;i<a.length;i++)  
    {  
        b[j] = a[i];  
        j++;  
    }  
    for(int i=0;i<k;i++)  
    {  
        b[j] = a[i];  
        j++;  
    }  
    System.out.println(Arrays.toString(b));  
}
```

O/P

[40, 50, 10, 20, 30]