**ARRAY\_PROGRAM 28**

**1) Print the Sum & Average of array elements.**

import java.util.\*; public class Main

{

public static void main(String[] args) { Scanner sc=new Scanner(System.in); int size,i,sum=0;

System.out.println("Enter size of array"); size=sc.nextInt(); int [] a=new int[size];

System.out.println("Enter "+size+" Elements"); for(i=0;i<size;i++){

a[i]=sc.nextInt(); sum+=a[i];

}

System.out.println("Array elements are"); for(i=0;i<size;i++){

System.out.print(a[i]+"\t");

}

double avg=(double)sum/size;

System.out.println("\nSum="+sum+"\n"+"Average="+avg);

}

}

**O/P:**

Enter size of array

5

Enter 5 Elements

13

98

45

82

53

Array elements are

13 98 45 82 53

Sum=291

Average=58.2

**2) Find Max & Min in an array.**

import java.util.\*; public class Main

{

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

int size,i,max,min;

System.out.println("Enter size of array"); size=sc.nextInt(); int [] a=new int[size];

System.out.println("Enter "+size+" Elements"); for(i=0;i<size;i++){

a[i]=sc.nextInt();

}

System.out.println("Array elements are"); for(i=0;i<size;i++){

System.out.print(a[i]+"\t");

}

max=min=a[0];

for(i=1;i<size;i++){

if(a[i]>max){

max=a[i];

} if(a[i]<min){

min=a[i];

}

}

System.out.println("\nMax="+max+"\n"+"Min="+min);

}

}

**O/P:**

Enter size of array

5

Enter 5 Elements

234

546 21

879

35

Array elements are

234 546 21 879 35

Max=879

Min=21

**3) To find prime numbers in an array.**

import java.util.\*; public class Main

{

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

int size,i,flag=0,p,j;

System.out.println("Enter size of array"); size=sc.nextInt(); int [] a=new int[size];

System.out.println("Enter "+size+" Elements"); for(i=0;i<size;i++){

a[i]=sc.nextInt();

}

System.out.println("Array elements are"); for(i=0;i<size;i++){

System.out.print(a[i]+"\t");

}

System.out.println("\nPrime numbers are"); for(i=0;i<size;i++){

p=a[i]; flag=0; for(j=2;j<=(p/2);j++){

if(p%j==0){ flag=1; break;

}

} if(flag==0)

System.out.print(a[i]+" ");

}

}

}

**O/P:**

Enter size of array

5

Enter 5 Elements

11 342 56 786

13

Array elements are

11 342 56 786 13

Prime numbers are

11 13

**4) Find pronic numbers in an array.**

import java.util.\*; public class Main

{

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

int size,i,flag=0,p,j;

System.out.println("Enter size of array"); size=sc.nextInt(); int [] a=new int[size];

System.out.println("Enter "+size+" Elements"); for(i=0;i<size;i++){

a[i]=sc.nextInt();

}

System.out.println("Array elements are"); for(i=0;i<size;i++){

System.out.print(a[i]+"\t");

}

System.out.println("\nPronic numbers are"); for(i=0;i<size;i++){

p=a[i]; flag=0; for(j=1;j<=a[i];j++){

if(a[i]==j\*(j+1)){

flag=1; break;

}

} if(flag==1)

System.out.print(a[i]+" ");

}

}

}

**O/P:**

Enter size of array

5

Enter 5 Elements

6

45

42

12

67

Array elements are

6 45 42 12 67

Pronic numbers are

6 42 12

**5) Find perfect numbers in an array.**

import java.util.\*; public class Main

{

public static void main(String[] args) { Scanner sc=new Scanner(System.in); int size,i,sum,p,j;

System.out.println("Enter size of array"); size=sc.nextInt(); int [] a=new int[size];

System.out.println("Enter "+size+" Elements"); for(i=0;i<size;i++){

a[i]=sc.nextInt();

}

System.out.println("Array elements are"); for(i=0;i<size;i++){

System.out.print(a[i]+"\t");

}

System.out.println("\nPerfect numbers are"); for(i=0;i<size;i++){

p=a[i];

sum=0;

for(j=1;j<a[i];j++){

if(p%j==0){

sum+=j;

}

}

if(a[i]==sum)

System.out.print(a[i]+" ");

}

}

}

**O/P:**

Enter size of array

5

Enter 5 Elements

28

4

543

496

14

Array elements are

28 4 543 496 14

Perfect numbers are

28 496

**6) Find palindrome numbers in an array.** import java.util.\*; public class Main

{

public static void main(String[] args) { Scanner sc=new Scanner(System.in); int size,i,sum,temp,digit;

System.out.println("Enter size of array"); size=sc.nextInt(); int [] a=new int[size];

System.out.println("Enter "+size+" Elements"); for(i=0;i<size;i++){

a[i]=sc.nextInt();

}

System.out.println("Array elements are"); for(i=0;i<size;i++){

System.out.print(a[i]+"\t");

}

System.out.println("\nPerfect numbers are"); for(i=0;i<size;i++){

temp=a[i]; sum=0; while(temp>0){

digit=temp%10; sum=(sum\*10)+digit; temp/=10;

}

if(a[i]==sum)

System.out.print(a[i]+"\t");

}

}

}

**O/P:**

Enter size of array

11 5

Enter 5 Elements

11

65

101

673

121

Array elements are

11 65 101 673 121

Perfect numbers are

11 101 121

**7) Find armstrong numbers in an array.**

import java.util.\*; public class Main

{

public static void main(String[] args) { Scanner sc=new Scanner(System.in); int size,i,sum,temp,digit;

System.out.println("Enter size of array"); size=sc.nextInt(); int [] a=new int[size];

System.out.println("Enter "+size+" Elements"); for(i=0;i<size;i++){

a[i]=sc.nextInt();

}

System.out.println("Array elements are"); for(i=0;i<size;i++){

System.out.print(a[i]+"\t");

}

System.out.println("\nArmstrong numbers are"); for(i=0;i<size;i++){

temp=a[i]; sum=0; while(temp>0){

digit=temp%10; sum=sum+digit\*digit\*digit; temp/=10;

}

if(a[i]==sum)

System.out.print(a[i]+"\t");

}

}

}

**O/P:**

Enter size of array

5

Enter 5 Elements

12

7

544

153

365

Array elements are

12 7 544 153 365

Armstrong numbers are

153

**8) Find Strong numbers in an array.**

import java.util.\*; public class Main

{

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

int size,i,sum,temp,digit,fact,j; System.out.println("Enter size of array"); size=sc.nextInt(); int [] a=new int[size];

System.out.println("Enter "+size+" Elements"); for(i=0;i<size;i++){

a[i]=sc.nextInt();

}

System.out.println("Array elements are"); for(i=0;i<size;i++){

System.out.print(a[i]+"\t");

}

System.out.println("\nStrong numbers are"); for(i=0;i<size;i++){

temp=a[i]; sum=0;

while(temp>0){ digit=temp%10; temp/=10; fact=1; while(digit>0){

fact=fact\*digit; digit--;

}

sum=sum+fact;

}

if(a[i]==sum)

System.out.print(a[i]+"\t");

}

}

}

**O/P:**

Enter size of array

5

Enter 5 Elements

145

67 2

98

13245

Array elements are

145 67 2 98 13245

Strong numbers are

145 2

**9) Disarium numbers in an array.** import java.util.\*; public class Main

{

public static void main(String[] args) { Scanner sc=new Scanner(System.in); int size,i,sum,temp,digit,count,t,j,mul; System.out.println("Enter size of array"); size=sc.nextInt(); int [] a=new int[size];

System.out.println("Enter "+size+" Elements"); for(i=0;i<size;i++){

a[i]=sc.nextInt();

}

System.out.println("Array elements are"); for(i=0;i<size;i++){

System.out.print(a[i]+"\t");

}

System.out.println("\nDisarium numbers are"); for(i=0;i<size;i++){

temp=t=a[i]; sum=0; count=0; while(temp>0){ count++; temp/=10;

}

while (t > 0) {

digit = t % 10; t /= 10; mul = 1; for (j = 1; j <= count; j++) { mul \*= digit;

}

count--;

sum += mul;

}

if(a[i]==sum)

System.out.print(a[i]+"\t");

}

}

}

**O/P:**

Enter size of array

5

Enter 5 Elements

135

34 5

34

67

Array elements are

135 34 5 34 67

Disarium numbers are

135 5

**10) Find Magic numbers in an array.**

import java.util.\*; public class Main

{

public static void main(String[] args) { Scanner sc=new Scanner(System.in); int size,i,sum,temp,digit,count,t,j,mul; System.out.println("Enter size of array"); size=sc.nextInt(); int [] a=new int[size];

System.out.println("Enter "+size+" Elements"); for(i=0;i<size;i++){

a[i]=sc.nextInt();

}

System.out.println("Array elements are"); for(i=0;i<size;i++){

System.out.print(a[i]+"\t");

}

System.out.println("\nMagic numbers are");

for(i=0;i<size;i++){

temp=a[i]; sum=0; while(temp>0){ digit=temp%10; sum+=digit; temp/=10;

}

while (sum > 9) {

temp = sum; sum = 0; while (temp > 0) { digit = temp % 10; temp /= 10; sum += digit;

}

}

if(sum==1)

System.out.print(a[i]+"\t");

}

}

}

**O/P:**

Enter size of array

5

Enter 5 Elements

75

55

10

2345

76543

Array elements are

75 55 10 2345 76543

Magic numbers are

55 10

**11) Prime Palindrome in an array.**

import java.util.\*; public class Main

{

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

int size,i,sum,flag,temp,digit,j; System.out.println("Enter size of array"); size=sc.nextInt();

int [] a=new int[size];

System.out.println("Enter "+size+" Elements"); for(i=0;i<size;i++){

a[i]=sc.nextInt();

}

System.out.println("Array elements are"); for(i=0;i<size;i++){

System.out.print(a[i]+"\t");

}

System.out.println("\nPrime Palindrome numbers are"); for(i=0;i<size;i++){

temp=a[i]; sum=0;

flag=0; for(j=2;j<=(temp/2);j++){

if(temp%j==0){

flag=1; break;

}

}

while(temp>0){

digit=temp%10; sum=(sum\*10)+digit; temp/=10;

}

if(flag==0 && a[i]==sum)

System.out.print(a[i]+"\t");

}

}

}

**O/P:**

Enter size of array

5

Enter 5 Elements

11

4

101 54

897

Array elements are

11 4 101 54 897

Prime Palindrome numbers are

11 101

**12) Find Xylem or Phloem numbers in an array.**

import java.util.\*; public class Main

{

public static void main(String[] args) { Scanner sc=new Scanner(System.in); int size,i,sum,temp,firstLast,middleSum,t; System.out.println("Enter size of array"); size=sc.nextInt(); int [] a=new int[size];

System.out.println("Enter "+size+" Elements"); for(i=0;i<size;i++){

a[i]=sc.nextInt();

}

System.out.println("Array elements are"); for(i=0;i<size;i++){

System.out.print(a[i]+"\t");

}

System.out.println("\nXylem or Phloem numbers are"); for(i=0;i<size;i++){

temp=a[i]; firstLast=middleSum=0;

while(temp>0){

if(temp==a[i] || temp<10){

firstLast+=temp%10;

}

else{

middleSum+=temp%10;

}

temp/=10;

}

if(firstLast==middleSum)

System.out.print(a[i]+"\t");

}

}

}

**O/P:**

Enter size of array

5

Enter 5 Elements

12341

2345

789

345

4321

Array elements are

12341 2345 789 345 4321

Xylem or Phloem numbers are 2345 4321

**13) Find even & odd numbers in an array.**

import java.util.\*; public class Main

{

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

int size,i;

System.out.println("Enter size of array"); size=sc.nextInt(); int [] a=new int[size];

System.out.println("Enter "+size+" Elements"); for(i=0;i<size;i++){

a[i]=sc.nextInt();

}

System.out.println("Even numbers"); for(i=0;i<size;i++){

if(a[i]%2==0){

System.out.print(a[i]+"\t"); }

}

System.out.println("\nOdd numbers"); for(i=0;i<size;i++){

if(a[i]%2==1){

System.out.print(a[i]+"\t"); }

}

}

}

**O/P:**

Enter size of array

7

Enter 7 Elements

56

342

980

56 67

43

11

78

Even numbers

56 342 980 78

Odd numbers

67 43 11

**14) Accept arrays from user & print alternate numbers.** import java.util.\*; public class Main

{

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

int size,i;

System.out.println("Enter size of array"); size=sc.nextInt(); int [] a=new int[size];

System.out.println("Enter "+size+" Elements"); for(i=0;i<size;i++){

a[i]=sc.nextInt();

}

System.out.println("Alternate numbers"); for(i=0;i<size;i=i+2){ System.out.print(a[i]+"\t");

}

}

}

**O/P:**

Enter size of array

6

Enter 6 Elements

10

20

30

40

50

60

Alternate numbers

10 30 50

**15) Swapping array elements (Enter array size even)**

**I/P: 10 20 30 40**

**O/P:20 10 40 30** import java.util.\*; public class Main

{

public static void main(String[] args) { Scanner sc=new Scanner(System.in); int size,i,temp;

System.out.println("Enter size of array"); size=sc.nextInt(); int [] a=new int[size]; if(size%2==0){

System.out.println("Enter "+size+" Elements"); for(i=0;i<size;i++){

a[i]=sc.nextInt();

}

System.out.println("Array elements are"); for(i=0;i<size;i++){

System.out.print(a[i]+"\t");

}

System.out.println("\nSwapping elements"); for(i=0;i<size;i=i+2){

temp=a[i]; a[i]=a[i+1]; a[i+1]=temp;

System.out.print(a[i]+" "+a[i+1]+" ");

}

}

else{

System.out.println("Please Enter even number");

}

}

}

**O/P:**

Enter size of array

6

Enter 6 Elements

10

20

30

40

50

60

Array elements are

10 20 30 40 50 60

Swapping elements 20 10 40 30 60 50

**16) Linear Search** import java.util.\*; public class Main

{

public static void main(String[] args) { Scanner sc=new Scanner(System.in); int size,i,search,flag=0;

System.out.println("Enter size of array"); size=sc.nextInt(); int [] a=new int[size];

System.out.println("Enter "+size+" Elements"); for(i=0;i<size;i++){

a[i]=sc.nextInt();

}

System.out.println("Enter element to be searched"); search=sc.nextInt(); for(i=0;i<size;i++){

if(search==a[i]){

flag=1;

System.out.println("Element Found"); break;

}

} if(flag==0){

System.out.println("Element Not Found");

}

}

}

**O/P:**

Enter size of array

4

Enter 4 Elements

10

20

30

40

Enter element to be searched

30

Element Found

**17) Binary Search**

import java.util.Scanner;

public class Main {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

System.out.print("Enter the size of the array: "); int size = sc.nextInt();

int[] array = new int[size];

System.out.println("Enter the elements of the array in sorted order:"); for (int i = 0; i < size; i++) {

array[i] = sc.nextInt();

}

System.out.print("Enter the target element: "); int target = sc.nextInt();

int left = 0; int right = array.length - 1; int result = -1;

while (left <= right) {

int mid = left + (right - left) / 2;

if (array[mid] == target) {

result = mid; break;

}

if (array[mid] < target) {

left = mid + 1;

} else { right = mid - 1;

}

}

if (result == -1) {

System.out.println("Element not Found");

} else {

System.out.println("Element Found");

}

}

}

**O/P:**

Enter the size of the array: 5

Enter the elements of the array in sorted order:

12

34

56

78

91

Enter the target element: 34 Element Found

**18) Reverse given array** import java.util.\*; public class Main

{

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

int size,i;

System.out.println("Enter size of array"); size=sc.nextInt(); int [] a=new int[size];

System.out.println("Enter "+size+" Elements"); for(i=0;i<size;i++){

a[i]=sc.nextInt();

}

System.out.println("Reversed array"); for(i=size-1;i>0;i--){ System.out.print(a[i]+"\t");

}

}

}

**O/P:**

Enter size of array

5

Enter 5 Elements

10

56

23

89

48

Reversed array

48 89 23 56

**19) Selection Sort**

import java.util.\*; public class Main

{

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

int size,i,j;

System.out.println("Enter size of array"); size=sc.nextInt(); int [] a=new int[size];

System.out.println("Enter "+size+" Elements"); for(i=0;i<size;i++){

a[i]=sc.nextInt();

}

int temp; for(i=0;i<size-1;i++){

for(j=i+1;j<size;j++){ if(a[i]>a[j]){

temp=a[i]; a[i]=a[j]; a[j]=temp;

}

}

}

System.out.println("Array elements in Ascending order:"); for(i=0;i<size;i++){

System.out.print(a[i]+" ");

}

}

}

O/P:

Enter size of array

5

Enter 5 Elements

76

43

98

324

54

Array elements in Ascending order: 43 54 76 98 324

**20) Bubble Sort** import java.util.\*; public class Main {

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

int size,i,j;

System.out.println("Enter size of array"); size=sc.nextInt(); int [] a=new int[size];

System.out.println("Enter "+size+" Elements"); for(i=0;i<size;i++){

a[i]=sc.nextInt();

}

int temp; for(i=1;i<size;i++){ for(j=0;j<size-1;j++){

if(a[j]>a[j+1]){ temp=a[j]; a[j]=a[j+1]; a[j+1]=temp;

}

}

}

System.out.println("Array elements in Ascending order:"); for(i=0;i<size;i++){

System.out.print(a[i]+" ");

}

}

}

**O/P:**

Enter size of array

5

Enter 5 Elements

12

45

32

89

34

Array elements in Ascending order: 12 32 34 45 89

**21) Sort array elements in Descending order**

import java.util.\*; public class Main

{

public static void main(String[] args) {

Scanner sc=new Scanner(System.in);

int size,i,j;

System.out.println("Enter size of array"); size=sc.nextInt(); int [] a=new int[size];

System.out.println("Enter "+size+" Elements"); for(i=0;i<size;i++){

a[i]=sc.nextInt();

}

int temp; for(i=0;i<size-1;i++){

for(j=i+1;j<size;j++){ if(a[i]<a[j]){

temp=a[i]; a[i]=a[j]; a[j]=temp;

}

}

}

System.out.println("Array elements in Ascending order:"); for(i=0;i<size;i++){

System.out.print(a[i]+" ");

}

}

}

**O/P:**

Enter size of array

5

Enter 5 Elements

34

98

86

65

34

Array elements in Ascending order:

98 86 65 34 34

**3rd largest number in an array.**

int temp; for(i=0;i<size-1;i++){

for(j=i+1;j<size;j++){

if(a[i]<a[j]){

temp=a[i]; a[i]=a[j]; a[j]=temp;

}

}

}

System.out.println("Descending order:"); for(i=0;i<size;i++){

System.out.print(a[i]+"\t");

}

System.out.println("\n3rd largest number is: "+a[2]);

}

}

**O/P:**

Enter size of array

5

Enter 5 Elements

54

23

56

89

45

Descending order:

89 56 54 45 23

3rd largest number is: 54

**2nd largest number in an array.**

int temp; for(i=0;i<size-1;i++){

for(j=i+1;j<size;j++){ if(a[i]<a[j]){

temp=a[i]; a[i]=a[j]; a[j]=temp;

}

}

}

System.out.println("Descending order:"); for(i=0;i<size;i++){

System.out.print(a[i]+"\t");

}

System.out.println("\n2nd largest number is: "+a[1]);

}

}

**O/P:**

Enter size of array

5

Enter 5 Elements

56

43

98

67

23

Descending order:

98 67 56 43 23

2nd largest number is: 67

**largest number in an array.**

int temp; for(i=0;i<size-1;i++){

for(j=i+1;j<size;j++){

if(a[i]<a[j]){

temp=a[i]; a[i]=a[j]; a[j]=temp;

}

}

}

System.out.println("Descending order:"); for(i=0;i<size;i++){

System.out.print(a[i]+"\t");

}

System.out.println("\nLargest number is: "+a[0]);

}

}

**O/P:**

Enter size of array

5

Enter 5 Elements

98

65

32

12

45

Descending order:

98 65 45 32 12

3rd largest number is: 98

**2nd smallest number in an array.**

int temp; for(i=0;i<size-1;i++){

for(j=i+1;j<size;j++){ if(a[i]>a[j]){

temp=a[i]; a[i]=a[j]; a[j]=temp;

}

}

}

System.out.println("Ascending order:"); for(i=0;i<size;i++){

System.out.print(a[i]+"\t");

}

System.out.println("\n2nd smallest number is: "+a[1]);

}

}

**O/P:**

Enter size of array

5

Enter 5 Elements

45

23

78

54

12

Ascending order:

12 23 45 54 78

2nd smallest number is: 23

**26)Java Program to copy all elements of one array into another** int [] b=new int[size];

System.out.println("Enter "+size+" Elements"); for(i=0;i<size;i++){

a[i]=sc.nextInt(); b[i]=a[i];

}

System.out.println("Array elements are:"); for(i=0;i<size;i++){

System.out.print(a[i]+"\t");

}

System.out.println("\nCopied Array elements are:"); for(i=0;i<size;i++){

System.out.print(b[i]+"\t");

}

}

}

**O/P:**

Enter size of array

5

Enter 5 Elements

1

4

2

7

3

Array elements are:

1 4 2 7 3

Copied Array elements are:

1 4 2 7 3

**27) Java Program to find the frequency of each element in the array**

**I/P: 2 10 5 2 1 5**

**O/P:**

**2=2**

**10=1**

**5=2**

**1=1**

import java.util.\*; public class Main

{

public static void main(String[] args) {

Scanner sc=new Scanner(System.in);

int size,i,j;

System.out.println("Enter size of array"); size=sc.nextInt(); int [] a=new int[size]; int [] b=new int[size];

System.out.println("Enter "+size+" Elements"); for(i=0;i<size;i++){

a[i]=sc.nextInt();

} for(i=0;i<size;i++){

int count=1; if(a[i]==-1){

continue;

} for(j=i+1;j<size;j++){ if(a[i]==a[j]){ count++; a[j]=-1;

}

}

System.out.println("Frequency of "+a[i]+" is:"+count);

}

}

}

**O/P:**

Enter size of array

6

Enter 6 Elements

2

5

10

2

1

5

Frequency of 2 is:2

Frequency of 5 is:2

Frequency of 10 is:1

Frequency of 1 is:1

28) Java Program to left rotate the elements of an array

I/P: 10 12 3 5 6

O/P: 3 5 6 10 12

**Java program to remove number from array which contains Zero elements;** import java.util.\*; public class Main

{

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

int size,i,j,temp,digit;

System.out.println("Enter size of array"); size=sc.nextInt(); int [] a=new int[size];

System.out.println("Enter "+size+" Elements"); for(i=0;i<size;i++){ a[i]=sc.nextInt();

} int flag; int count=0; for(i=0;i<size;i++){

temp=a[i]; flag=0; if(temp==0){

flag=1;

}

while(temp>0){ digit=temp%10;

if(digit==0){

flag=1; break;

}

temp/=10;

} if(flag==0){

a[count++]=a[i];

}

}

size=count;

System.out.println("Array after removing zero"); for(i=0;i<size;i++){

System.out.print(a[i]+"\t");

}

}

}

**O/P:**

Enter size of array

5

Enter 5 Elements

2

0

3

20

0

Array after removing zero

2 3

**27) Java program to separate Zero from the given Array elements.** import java.util.\*; public class Main

{

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

int size,i,j,temp,digit;

System.out.println("Enter size of array"); size=sc.nextInt(); int [] a=new int[size];

System.out.println("Enter "+size+" Elements"); for(i=0;i<size;i++){

a[i]=sc.nextInt();

} int flag; int count=0; for(i=0;i<size;i++){

temp=a[i]; flag=0; if(temp==0){

flag=1;

} if(flag==0){

a[count++]=a[i];

}

}

size=count;

System.out.println("Array after removing zero"); for(i=0;i<size;i++){

System.out.print(a[i]+"\t");

}

}

}

**O/P:**

Enter size of array

5

Enter 5 Elements

10 0

20 0

40

Array after removing zero

10 20 40

28) import java.util.\*; public class Main

{

public static void main(String[] args) { Scanner sc=new Scanner(System.in); int size,i,max,temp,j=0,secondMax=0; System.out.println("Enter size of array"); size=sc.nextInt(); int [] a=new int[size];

System.out.println("Enter "+size+" Elements"); for(i=0;i<size;i++){

a[i]=sc.nextInt();

}

max=a[0];

for(i=1;i<size;i++){

if(a[i]>max){

max=a[i];

j=i;

}

}

temp=a[0]; a[0]=a[j]; a[j]=temp; for(i=1;i<size;i++){

if(a[i]>max){

secondMax=a[i];

}

}

System.out.println("Max="+max);

System.out.println("second Max="+secondMax);

}

}