

## Array Notes OF Raghu Sir :-

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## Q1 WAP TO READ THE ARRAY ELEMENT FROM USER AND DISPLAY ?

```
package RahguSircode.Notes;
import java.util.Scanner;
class Array1
{
    public static void main(String[] args)
    {
        Scanner sc=new Scanner(System.in);
        System.out.println("Enter the size of Array");
        int n=sc.nextInt();
        int a[]=new int [n];
        System.out.println("Enter the "+n+" element");
        for (int i = 0; i < a.length; i++)
        {
            a[i]=sc.nextInt();
        }
        System.out.println("The element you enter in Array");
        for (int i = 0; i < a.length; i++)
        {
            System.out.println("The index no "+i+"====>" +a[i]);
        }
    }
}
```

## Q2.WAP TO MERGE ARRAY ELEMENT ?

```
package RahguSircode.Notes;
import java.util.Scanner;
class Merge
{
    static int [] merge(int a[],int b[])
    {
        int c[]=new int[a.length+b.length];
        for (int i = 0; i < a.length; i++)
        {
            c[i]=a[i];
        }
        for (int i = 0; i < b.length; i++)
        {
            c[i+a.length]=b[i];
        }
        return c;
    }
    public static void main(String[] args)
    {
        Scanner sc=new Scanner(System.in);
        System.out.println("Enter first 1 Array size");
        int n=sc.nextInt();
        int a[]=new int [n];
        System.out.println("Enter the "+n+" element in First Element");
        for (int i = 0; i < a.length; i++)
        {

```

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```
        a[i]=sc.nextInt();
    }
    System.out.println("Enter the 2 Array size");
    int m=sc.nextInt();
    int b[]=new int[m];
    System.out.println("Enter the "+m+" element in Second Element");
    for (int i = 0; i < a.length; i++)
    {
        b[i]=sc.nextInt();
    }
    int c[]=merge(a,b);
    System.out.println("After merge");
    System.out.print("[");
    for (int i = 0; i < c.length; i++)
    {
        if(i<c.length-1)
            System.out.print(c[i]+"," );
        else
            System.out.print(c[i]);
    }
    System.out.println("]");
}
}
```

### Q3.WAP TO MERGE THE ARRAY IN ZIG-ZAG ORDER?

```
package RahguSircode.Notes;
import java.util.Scanner;
class Zigzag
{
    static int [] zigZag(int a[],int b[])
    {
        int c[]=new int[a.length+b.length];
        int i=0,j=0;
        while (i<a.length&&i<b.length)
        {
            c[j++]=a[i];
            c[j++]=b[i++];
        }
        while (i<b.length)
        {
            c[j++]=b[i++];
        }
        while(i<a.length)
        {
            c[j++]=a[i++];
        }
        return c;
    }
    public static void main(String[] args)
    {
        Scanner sc=new Scanner(System.in);
```

```
System.out.println("Enter first 1 Array size");
int n=sc.nextInt();
int a[]=new int [n];
System.out.println("Enter the "+n+" element in First Element");
for (int i = 0; i < a.length; i++)
{
    a[i]=sc.nextInt();
}
System.out.println("Enter the 2 Array size");
int m=sc.nextInt();
int b[]=new int[m];
System.out.println("Enter the "+m+" element in Second Element");
for (int i = 0; i < a.length; i++)
{
    b[i]=sc.nextInt();
}
int c[]=zigZag(a,b);
System.out.println("After zig-zag");
System.out.print("[");
for (int i = 0; i < c.length; i++)
{
    if(i<c.length-1)
        System.out.print(c[i]+",");
    else
        System.out.print(c[i]);
}
System.out.println("]");
}
}
```

#### Q.4 WAP TO RETURN SUM ?

```
package RahguSircode.Notes;
import java.util.Scanner;
public class Sum
{
    static int sum(int a[])
    {
        int sum=0;
        for (int i = 0; i < a.length; i++)
        {
            sum=sum+a[i];
        }
        return sum;
    }
    public static void main(String[] args)
    {
        Scanner sc=new Scanner(System.in);
        System.out.println("Enter Array size");
        int n=sc.nextInt();
        int a[]=new int [n];
        System.out.println("Enter the "+n+" element in First Element");
        for (int i = 0; i < a.length; i++)
        {
            a[i]=sc.nextInt();
        }
    }
}
```

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```
    }  
    int c=sum(a);  
    System.out.println("Sum is "+c);  
}  
}
```

## Q.5 WAP TO INSERT THE ELEMENT IN A ARRAY AT SPECIFIED INDEX ?

```
package RahguSircode.Notes;  
import java.util.Scanner;  
public class Insertele  
{  
    static int[] insertel(int a[],int ele,int in)  
    {  
        if(in < 0||in>a.length)  
        {  
            System.out.println("Index not in Range");  
            return a;  
        }  
        int n[]=new int [a.length+1];  
        n[in] = ele;  
        for (int i = 0; i < a.length; i++)  
        {  
            if(i<in)  
                n[i]=a[i];  
            else  
                n[i+1]=a[i];  
        }  
        return n;  
    }  
    public static void main(String[] args)  
    {  
        Scanner sc=new Scanner(System.in);  
        System.out.println("Enter Array size");  
        int n=sc.nextInt();  
        int a[]=new int [n];  
        System.out.println("Enter the "+n+" element in First Element");  
        for (int i = 0; i < a.length; i++)  
        {  
            a[i]=sc.nextInt();  
        }  
        System.out.println("Enter the Element which you want to insert");  
        int m=sc.nextInt();  
        System.out.println("Enter the Index postion");  
        int o=sc.nextInt();  
        int c[]=insertel(a,m,o);  
        System.out.println("After Insert the element");  
        System.out.print("[");  
        for (int i = 0; i < c.length; i++)  
        {  
            if(i<c.length-1)  
                System.out.print(c[i]+",");  
            else  
                System.out.print(c[i]);  
        }  
    }  
}
```

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```
        System.out.println("]");
    }
}
```

## Q.6 WAP TO DELETE THE ELEMENT FROM THE ARRAY ?

```
package RahguSircode.Notes;
import java.util.Scanner;
public class Delete
{
    static int[] delArray(int a[],int in)
    {
        if(in<0||in>a.length)
        {
            System.out.println("Index is out of Range");
            return a;
        }
        int n[]=new int [a.length-1];
        for (int i = 0; i < n.length; i++)
        {
            if(i<in)
                n[i]=a[i];
            else
                n[i]=a[i+1];
        }
        return n;
    }
    public static void main(String[] args)
    {
        Scanner sc=new Scanner(System.in);
        System.out.println("Enter Array size");
        int n=sc.nextInt();
        int a[]=new int [n];
        System.out.println("Enter the "+n+" element in First Element");
        for (int i = 0; i < a.length; i++)
        {
            a[i]=sc.nextInt();
        }
        System.out.println("Enter the index from which you want to Del the element");
        int m=sc.nextInt();
        int c[]=delArray(a,m);
        System.out.println("After Delete the Element");
        System.out.print("[");
        for (int i = 0; i < c.length; i++)
        {
            if(i<c.length-1)
                System.out.print(c[i]+",");
            else
                System.out.print(c[i]);
        }
        System.out.print("]");
    }
}
```

## Q7.WAP MERGE TWO SORT ARRAY ELEMENT IN A SORTED FROMAT ?

```
package RahguSircode.Notes;
import java.util.Scanner;
public class SortArray
{
    static int [] sortArray(int a[],int b[])
    {
        int c[]=new int [a.length+b.length];
        int i=0,j=0,k=0;
        while(i<a.length&&j<b.length)
        {
            c[k++]=a[i]<b[j]?a[i++]:b[j++];
        }
        while (i<a.length)
        {
            c[k++]=a[i++];
        }
        while (j<b.length)
        {
            c[k++]=b[j++];
        }
        return c;
    }
    public static void main(String[] args)
    {
        Scanner sc=new Scanner(System.in);
        System.out.println("Enter first 1 Array size");
        int n=sc.nextInt();
        int a[]=new int [n];
        System.out.println("Enter the "+n+" element in First Element");
        for (int i = 0; i < a.length; i++)
        {
            a[i]=sc.nextInt();
        }
        System.out.println("Enter the 2 Array size");
        int m=sc.nextInt();
        int b[]=new int [m];
        System.out.println("Enter the "+m+" element in Second Element");
        for (int i = 0; i < b.length; i++)
        {
            b[i]=sc.nextInt();
        }
        int c[]=sortArray(a,b);
        System.out.println("After sorting And merge the Element of Array");
        System.out.print("[");
        for (int i = 0; i < c.length; i++)
        {
            if(i<c.length-1)
                System.out.print(c[i]+",");
            else
                System.out.print(c[i]);
        }
    }
}
```

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```
        System.out.print("]");  
    }  
}
```

#### Q8.WAP TO FIND NUMBER OF EVEN AND ODD ?

```
package RahguSircode.Notes;  
import java.util.Scanner;  
public class Eoinarray  
{  
  
    static int[] evenOdd(int a[])  
    {  
        int c[] = {0,0};  
        for (int i = 0; i < a.length; i++)  
        {  
            if(a[i]%2==0)  
            {  
                c[0]++;  
            }  
            else  
                c[1]++;  
        }  
        return c;  
    }  
    public static void main(String[] args)  
    {  
        Scanner sc=new Scanner(System.in);  
        System.out.println("Enter the size of Array");  
        int n=sc.nextInt();  
        int a[]=new int [n];  
        System.out.println("Enter "+n+" Element");  
        for (int i = 0; i < a.length; i++)  
        {  
            a[i]=sc.nextInt();  
        }  
        int c[]=evenOdd(a);  
        for (int i = 0; i < c.length; i++)  
        {  
        }  
        System.out.println("Even "+c[0]);  
        System.out.println("Odd "+c[1]);  
    }  
}
```

#### Q9. WAP TO DISPLAY THE PAIR OF ELEMENT ,SUM IS EQUAL TO N ?

```
package RahguSircode.Notes;  
import java.util.Scanner;  
public class Pair  
{
```



```
static void disPair(int a[],int b)
{
    for (int i = 0; i < a.length; i++)
    {
        for (int j = i+1; j < a.length; j++)
        {
            if(a[i]+a[j]==b)
            {
                System.out.println(a[i]+","+a[j]);
            }
        }
    }
}

public static void main(String[] args)
{
    Scanner sc=new Scanner(System.in);
    System.out.println("Enter the size of Array");
    int n=sc.nextInt();
    int a[]=new int [n];
    System.out.println("Enter "+n+" Element");
    for (int i = 0; i < a.length; i++)
    {
        a[i]=sc.nextInt();
    }
    System.out.println("Enter the number ");
    int b=sc.nextInt();
    disPair(a,b);
}
}
```

#### Q 10. WAP TO FIND INTERSECTION OF ARRAY ?

```
package RahguSircode.Notes;
import java.util.Scanner;
public class Intersection
{
    static int [] insection(int a[],int b[])
    {
        int k=0;
        int c[]=new int [a.length+b.length];
        for (int i = 0; i < a.length; i++)
        {
            for (int j = 0; j < b.length; j++)
            {
                if(a[i]==b[j])
                {
                    c[k++]=a[i];
                    break;
                }
            }
        }
        int n[]=new int [k];
        for (int i = 0; i < k; i++)
    }
```

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```
    {
        n[i]=c[i];
    }
    return n;
}
public static void main(String[] args)
{
    Scanner sc=new Scanner(System.in);
    System.out.println("Enter first 1 Array size");
    int n=sc.nextInt();
    int a[]=new int [n];
    System.out.println("Enter the "+n+" element in First Element");
    for (int i = 0; i < a.length; i++)
    {
        a[i]=sc.nextInt();
    }
    System.out.println("Enter the 2 Array size");
    int m=sc.nextInt();
    int b[]=new int[m];
    System.out.println("Enter the "+m+" element in Second Element");
    for (int i = 0; i < b.length; i++)
    {
        b[i]=sc.nextInt();
    }
    int c[]=insection(a,b);
    System.out.println("After insection");
    System.out.print("[");
    for (int i = 0; i < c.length; i++)
    {
        if(i<c.length-1)
            System.out.print(c[i]+",");
        else
            System.out.print(c[i]);
    }
    System.out.print("]");
}
}
```

#### Q11. WAP TO FIND THE UNION OF ARRAY ?

```
package RahguSircode.Notes;
import java.util.Scanner;
public class Union
{
    static int [] unionArray(int a[],int b[])
    {
        int c[]=new int[a.length+b.length];
        for (int i = 0; i < a.length; i++)
        {
            c[i]=a[i];
        }
        int k=a.length;
        for (int i = 0; i < b.length; i++)
```

```
{
    boolean rs=true;
    for (int j = 0; j < b.length; j++)
    {
        if(b[j]==a[j])
        {
            rs=false;
            break;
        }
    }
    if(rs)
        c[k++]=b[j];
}
int n[]=new int[k];
for (int i = 0; i < k; i++)
{
    n[i]=c[i];
}
return n;
}
public static void main(String[] args)
{
    Scanner sc=new Scanner(System.in);
    System.out.println("Enter first 1 Array size");
    int n=sc.nextInt();
    int a[]=new int [n];
    System.out.println("Enter the "+n+" element in First Element");
    for (int i = 0; i < a.length; i++)
    {
        a[i]=sc.nextInt();
    }
    System.out.println("Enter the 2 Array size");
    int m=sc.nextInt();
    int b[]=new int[m];
    System.out.println("Enter the "+m+" element in Second Element");
    for (int i = 0; i < b.length; i++)
    {
        b[i]=sc.nextInt();
    }
    int c[] =unionArray(a,b);
    System.out.println("After Union");
    System.out.print("[");
    for (int i = 0; i < c.length; i++)
    {
        if(i<c.length-1)
            System.out.print(c[i]+",");
        else
            System.out.print(c[i]);
    }
    System.out.print("]");
}
}
```

## Q 12 WAP TO ADD ARRAY OF A ELEMENT AND ARRAY OF B ELEMENT TOGETHER FROM A GIVEN INDEX ?

```
package RahguSircode.Notes;
import java.util.Scanner;
public class Addelemnt
{
    static int [] addEle(int a[],int b[],int in)
    {
        if(in<0||in>a.length)
        {
            System.out.println("index is out of Range");
            return a;
        }
        int n[]=new int [a.length+b.length];
        for (int i = 0; i < b.length; i++)
        {
            n[in+i]=b[i];
        }
        for (int i = 0; i < a.length; i++)
        {
            if(i<in)
                n[i]=a[i];
            else
                n[i+b.length]=a[i];
        }
        return n;
    }
    public static void main(String[] args)
    {
        Scanner sc=new Scanner(System.in);
        System.out.println("Enter first 1 Array size");
        int n=sc.nextInt();
        int a[]=new int [n];
        System.out.println("Enter the "+n+" element in First Element");
        for (int i = 0; i < a.length; i++)
        {
            a[i]=sc.nextInt();
        }
        System.out.println("Enter the 2 Array size");
        int m=sc.nextInt();
        int b[]=new int [m];
        System.out.println("Enter the "+m+" element in Second Element");
        for (int i = 0; i < b.length; i++)
        {
            b[i]=sc.nextInt();
        }
        System.out.println("Enter the index from which you want to insert the array");
        int o=sc.nextInt();
        int c[]= addEle(a,b,o);
        System.out.println("After the merge the array");
        System.out.print("[");
        for (int i = 0; i < c.length; i++)
```

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```
        {
            if(i<c.length-1)
                System.out.print(c[i]+",");
            else
                System.out.print(c[i]);
        }
        System.out.print("]");
    }
}
```

### Q.13 WAP TO COUNT THE NO OF OCCURRENCE OF EACH ELEMENT IN THE ARRAY ?

```
package RahguSircode.Notes;
import java.util.Scanner;
public class Count
{
    static void count(int a[])
    {
        int n=a.length;
        for (int i = 0; i < n; i++)
        {
            int count=1;
            for (int j = i+1; j < n; j++)
            {
                if(a[i]==a[j])
                {
                    a[j]=a[n-1];
                    count++;
                    n--;
                    j--;
                }
            }
            System.out.println(a[i]+"====>"+count);
        }
    }
    public static void main(String[] args)
    {
        Scanner sc=new Scanner(System.in);
        System.out.println("Enter first 1 Array size");
        int n=sc.nextInt();
        int a[]=new int [n];
        System.out.println("Enter the "+n+" element in First Element");
        for (int i = 0; i < a.length; i++)
        {
            a[i]=sc.nextInt();
        }
        count(a);
    }
}
```

### Q.14 WAP TO FIND THE FREQUENCY OF EVEN AND ODD NUMBER IN A MATRIX AND SUM OF EVEN AND ODD NUMBER ?

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```
package RahguSircode.Notes;
import java.util.Arrays;
import java.util.Scanner;
public class Matrixtr
{
    static void freq(int ar[][], int m, int n)
    {
        int even = 0, odd = 0, sum1=0, sum2=0;

        for (int i = 0; i < m; i++)
        {
            for (int j = 0; j < n; j++)
            {
                if ((ar[i][j] % 2) == 0)
                {
                    even++;
                    sum1=sum1+ar[i][j];
                }

                else if ((ar[i][j] % 2) != 0)
                {
                    odd++;
                    sum2=sum2+ar[i][j];
                }
            }
        }
        System.out.println("The sum of even no:- "+sum1);
        System.out.println("The sum of odd no:- "+sum2);
        System.out.println("Frequency of odd number = " + odd);
        System.out.println("Frequency of even number = " + even);
    }
    public static void main(String[] args)
    {
        int m = 3, n = 3;
        int array[][] = {{1, 2, 3}, {4, 5, 6}, {7, 8, 9}};

        freq(array, m, n);
        System.out.println(Arrays.deepToString(array));
    }
}
```

### Q 15 WAP TO CALCULATE SUM AND AVERAGE OF N INTERGERS VALUES ?

```
package RahguSircode.Notes;
import java.util.Scanner;
public class SumAverge
{
    static void sumAv(int a[])
    {
        int sum=0;
        for (int i = 0; i < a.length; i++)
        {
            sum=sum+a[i];
        }
    }
}
```

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```
        //System.out.println(i+1+"====>" +a[i]);
    }
    System.out.println(sum);
    System.out.println("Averge is "+sum/(double)a.length);
}
public static void main(String[] args)
{
    Scanner sc=new Scanner(System.in);
    System.out.println("Enter Array size");
    int n=sc.nextInt();
    int a[]=new int [n];
    System.out.println("Enter the "+n+" element in First Element");
    for (int i = 0; i < a.length; i++)
    {
        a[i]=sc.nextInt();
    }
    sumAv(a);
}
}
```

#### Q 16 WAP TO COUNT THE NEGATIVE AND POSTIVE VALUE IN ARRAYS ?

```
package RahguSircode.newprog;
import java.util.Scanner;
public class Arraynp
{
    static int[] countNP(int ar[])
    {
        int count []= {0,0};
        for (int i = 0; i < ar.length; i++)
        {
            if(ar[i]>0)
            {
                count[0]++;
            }
            else
                count[1]++;
        }
        System.out.println("There is only "+count[0]+"Postive value which is ");
        System.out.println("There is only "+count[1]+"Negative value which is ");
        return count;
    }
    public static void main(String[] args)
    {
        Scanner sc=new Scanner(System.in);
        System.out.println("Enter the size of Array");
        int n=sc.nextInt();
        int a[]=new int [n];
        System.out.println("Enter "+n+" Element");
        for (int i = 0; i < a.length; i++)
```

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

### Q.17 WAP TO FIND THE BIGGEST ELEMENT IN ARRAY ?

```
package RahguSircode.Notes;
import java.util.Scanner;
public class Biggestele
{
    static int biggestArr(int arr[])
    {
        int big=arr[0];
        for (int i = 1; i < arr.length; i++)
        {
            if(arr[i]>big)
                big=arr[i];
        }
        return big;
    }
    public static void main(String[] args)
    {
        Scanner sc=new Scanner(System.in);
        System.out.println("Enter Array size");
        int n=sc.nextInt();
        int a[]=new int [n];
        System.out.println("Enter the "+n+" element in First Element");
        for (int i = 0; i < a.length; i++)
        {
            a[i]=sc.nextInt();
        }
        int c=biggestArr(a);
        System.out.println("Biggest is "+c);
    }
}
```

### Q.18 WAP TO FIND THE swipe the to nearest element with each other ?

```
package RahguSircode.Notes;
import java.util.Scanner;
public class swipenextelem
{
    public static void swipele(int a[])
    {
        try {
            for (int i = 0; i < a.length; i=i+2)
            {
                int t=a[i];
                a[i]=a[i+1] ;
                a[i+1]=t;
            }
        }
    }
}
```



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```
    }  
    }  
    catch (Exception e)  
    {  
        System.out.println("Exception executed enter total number should  
be even");  
    }  
    for (int i = 0; i < a.length; i++)  
    {  
        System.out.print(a[i]+" ");  
    }  
}  
public static void main(String[] args)  
{  
    Scanner sc=new Scanner(System.in);  
    System.out.println("Enter the size of Array");  
    int n=sc.nextInt();  
    int a[]=new int [n];  
    System.out.println("Enter "+n+" Element");  
    for (int i = 0; i < a.length; i++)  
    {  
        a[i]=sc.nextInt();  
    }  
    swipele(a);  
}  
}
```

#### Q.19 WAP TO FIND THE HIGHEST SUM OF TWO CONTINUOUS NUMBER ?

```
package RahguSircode.Notes;  
import java.util.Scanner;  
public class higestsum  
{  
    public static void high(int a[])  
    {  
        int big =a[0]+a[1];  
        int in=0;  
        for (int i = 1; i < a.length-1; i++)  
        {  
            if (big<a[i]+a[i+1])  
            {  
                big=a[i]+a[i+1];  
                in=i;  
            }  
        }  
        System.out.print("highest sum of contiouns number is "+big+"====>");  
        System.out.println(a[in]+","+a[in+1]);  
    }  
    public static void main(String[] args)  
    {  
        Scanner sc=new Scanner(System.in);
```

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```
System.out.println("Enter the size of Array");
int n=sc.nextInt();
int a[]=new int [n];
System.out.println("Enter "+n+" Element");
for (int i = 0; i < a.length; i++)
{
    a[i]=sc.nextInt();
}
high(a);
}
```

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