Array Notes OF Raghu Sir :-

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

```java
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 ?

```java
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];
```

```java
            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[]=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?

```java
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;
        }
```

```java
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 ?

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

Q.5 WAP TO INSERT THE ELEMENT IN A ARRAY AT SPECIFED 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]);
        }
        System.out.println("]");
    }
}
```

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

```java
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 SHORTED FROMAT ?

```java
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]);
        }
        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 ?

```java
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 ?

```java
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;
                }
```

```java
                }
        }
        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[]=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 ?

```java
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];
```

```java
            }
            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[i]==a[j])
                            {
                                    rs=false;
                                    break;
                            }
                    }
                    if(rs)
                            c[k++]=b[i];
            }
            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 ?

```java
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("[");
```

```java
        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.13 WAP TO COUNT THE NO OF OCCURRENCE OF EACH ELEMENT IN THE ARRAY ?

```java
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 ?

```java
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 ND AVERAGE OF N INTERGERS VALUES ?

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

```java
        for (int i = 0; i < a.length; i++)
        {
                sum=sum+a[i];
                //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 ?

```java
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++)
            {
                    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("Bigggest is "+c);
        }
}
```

MADE BY :- Amrit Agrawal