EXTRA PROGRAMS (LAB 1):

1.Accept an array of size n from the user. Find the sum of even indices (i.e., 0,2,4....)
and sum of odd indices (1,3,5....) and print the same

```
import java.util.*;
class ArraySum{
public static void main(String args[]){
  int n,i;
  int arr[]=new int[20];

  Scanner in = new Scanner(System.in);
  System.out.println("Enter the size of ur array:\n");
  n=in.nextInt();
  System.out.println("Enter the value of the arrays:\n");
  for( i =0;i<n;i++){
        arr[i]= in.nextInt();


         }
  int odd_sum=0,even_sum=0;
     for( i =0;i<n;i++){
            if (i%2==0){
                  even_sum += arr[i];       }
            else
                  odd_sum += arr[i];
         }
    System.out.println("The sum of even indices is :\n" + even_sum);

    System.out.println("The sum of even indices is :\n" + odd_sum);

    }
```

```
Enter the size of ur array:

4
Enter the value of the arrays:

1
3
6
2
The sum of even indices is :
7
The sum of even indices is :
5
```

}

2.Accept an array of n integers. Find the number of positive numbers, negative numbers and zeros.

```
import java.util.*;
class ArrayCount{
public static void main(String args[]){
  int n,i;
  int arr[]=new int[20];

  Scanner in = new Scanner(System.in);
  System.out.println("Enter the size of ur array:\n");
  n=in.nextInt();
  System.out.println("Enter the value of the arrays:\n");
  for( i =0;i<n;i++){
        arr[i]= in.nextInt();

         }
  int zero=0,negative=0,positive=0;
     for( i =0;i<n;i++){
            if (arr[i]==0){
                  zero++;       }
            else if (arr[i]<0)
                  negative++;
           else
               positive++;
         }

    System.out.println("The number of zeroes in the array are:\n" + zero);
        System.out.println("The number of positive numbers in the array are:\n" + positive);
        System.out.println("The number of negative numbers in the array are:\n" + negative);

    }
}
```

```
Enter the size of ur array:

6
Enter the value of the arrays:

1
-1
0
-34
4
5
The number of zeroes in the array are:
1
The number of positive numbers in the array are:
3
The number of negative numbers in the array are:
2
```

3. Consider a super market bill. Accept a double array holding rate per item of say x items and an int array showing the quantity purchased by a customer. Calculate the total bill amount and the final bill amount after giving discounts as per the following slabs.
If the total bill amount >=10000, discount=5%
If the total bill amount >=7500 and <10000, discount=3%
If the total bill amount >=5000, discount=2%

```
import java.util.*;
class Bill{
public static void main(String args[]){
  int n,i;
  double item[]=new double[20];
  int count[]=new int[20];


  Scanner in = new Scanner(System.in);
  System.out.println("Enter the number of items bought :\n");
  n=in.nextInt();
  System.out.println("Enter the cost of each item and the quantity of eachh item:\n");
  for( i =0;i<n;i++){
           item[i]= in.nextDouble();
         count[i]= in.nextInt();

                   }
double    total=0.00;
  for( i =0;i<n;i++){
           total += item[i]*count[i];

}

  if(total>=10000 ){
     System.out.println("Total    discount is 5%"    );
        total = total-(total*0.05);}
   else if(total<=10000 && total>=7500){
  System.out.println("Total    discount is 3%"    );
        total = total-(total*0.03);
}
     else {
  System.out.println("Total    discount is 2%"    );
        total = total-(total*0.02);}

System.out.println("Total amount after    discount is " + total );

   }
}
```

```
Enter the number of items bought :

3
Enter the cost of each item and the quantity of eachh item:

1000
1
10000
1
500
2
Total  discount is 5%
Total amount after  discount is 11400.0
Enter the number of items bought :

2
Enter the cost of each item and the quantity of eachh item:

7500
1
1000
2
Total  discount is 3%
Total amount after  discount is 9215.0
Enter the number of items bought :

3
Enter the cost of each item and the quantity of eachh item:

500
1
3000
1
100
2
Total  discount is 2%
Total amount after  discount is 3626.0
```

4. Accept an array A of n elements. Create two new arrays where the first one say B that holds all the odd numbers from array A and the second say C holds the even numbers from array A. Display the sum, average, max and min of array C.

```
import java.util.*;
class ArraySplit{
public static void main(String args[]){
  int n,i,odd=0,even=0;
  int arr[]=new int[20];
  int b[]=new int[20];
int c[]=new int[20];

  Scanner in = new Scanner(System.in);
  System.out.println("Enter the size of ur array:\n");
  n=in.nextInt();
  System.out.println("Enter the value of the arrays:\n");
  for( i =0;i<n;i++){
        arr[i]= in.nextInt();


          }
     for( i =0;i<n;i++){
            if (arr[i]%2==0){
                      c[even]=arr[i];
                           even++;
                             }

             else{
               b[odd]=arr[i];
                     odd++;
                 }

            }

   double sum=0,max=c[0],avg;
   double min=c[0];
              for( i =0;i<even;i++){
                      sum+=c[i];
                      }

                for( i =0;i<even;i++){
                         if(max<c[i])
                                max=c[i];
                      }
              for( i =0;i<even;i++){
                         if(c[i]<min)
                                min=c[i];
                      }
                avg= sum/even;

                    System.out.println("The odd numbers of the array are:\n");

                        for( i =0;i<odd;i++){
                           System.out.println(b[i]);
                      }
             System.out.println("The even numbers of the array are:\n");
```

```
                for( i =0;i<even;i++){
                    System.out.println(c[i]);
                }


            System.out.println("The Sum    of even array is:\n" + sum);
            System.out.println("The Avg of even array    is:\n" + avg);
            System.out.println("The max value of even array    is:\n" + max);
            System.out.println("The min value    of even array    is:\n" + min);

    }
}
```

```
Enter the size of ur array:

4
Enter the value of the arrays:

1
2
3
4
The odd numbers of the array are:

1
3
The even numbers of the array are:

2
4
The Sum  of even array is:
6.0
The Avg of even array  is:
3.0
The max value of even array  is:
4.0
The min value  of even array  is:
2.0
```