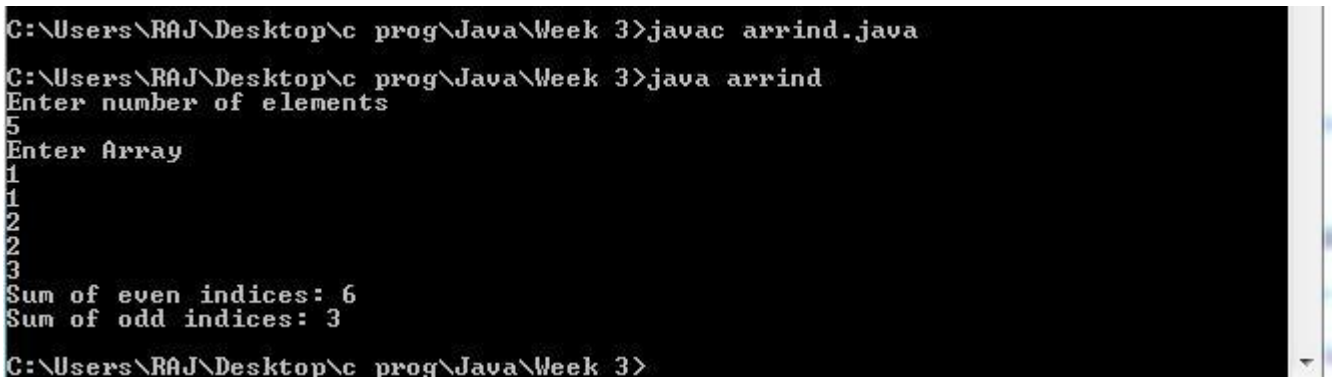
Week 3/Lab 1

Extra Programs

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 arrind
{
  public static void main(String[] args)
  {
        int n,sumodd=0,sumev=0;
        Scanner in= new Scanner(System.in);
        System.out.println("Enter number of elements");
        n=in.nextInt();
        int arr[]=new int[n];
        System.out.println("Enter Array");
        for(int i=0;i<n;i++)
        {
          arr[i]=in.nextInt();
          if(i%2==0)
                sumev+=arr[i];
          else
                sumodd+=arr[i];
        }
        System.out.println("Sum of even indices: "+sumev+"\nSum of odd indices: "+sumodd);
  }
}
```

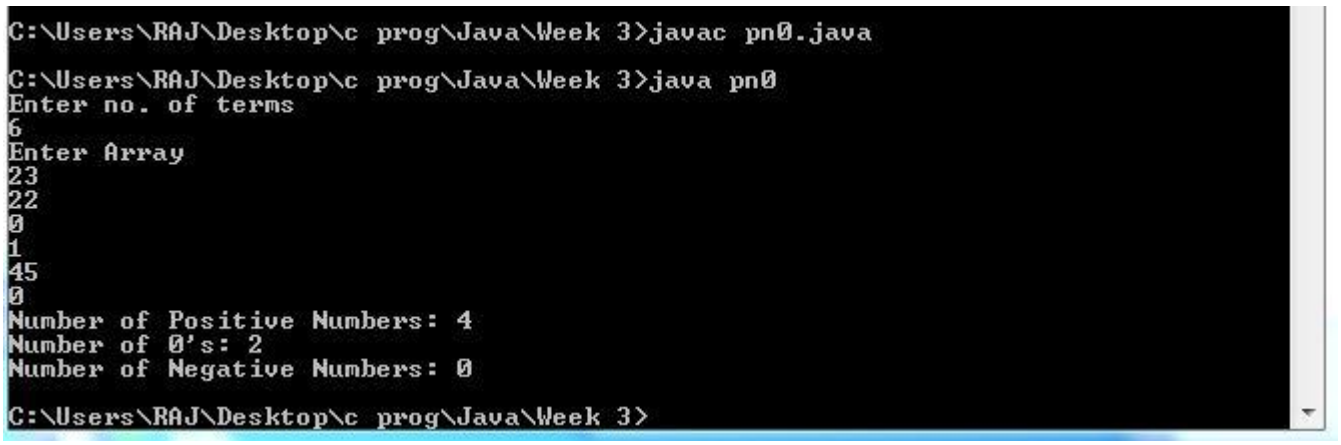


2. Accept an array of n integers. Find the number of positive numbers, negative numbers and zeros.

```
import java.util.*;


class pn0
{
  public static void main(String[] args)
  {
        int n,cp=0,cn=0,c0=0;
        Scanner in=new Scanner(System.in);
        System.out.println("Enter no. of terms");
        n=in.nextInt();
        int arr[]=new int[n];
        System.out.println("Enter Array");
        for(int i=0;i<n;i++)
        {
              arr[i]=in.nextInt();
              if(arr[i]>0)
                cp++;
              else if(arr[i]<0)
                cn++;
              else
```

```
                c0++;
        }
        System.out.println("Number of Positive Numbers: "+cp+"\nNumber of 0's: "+c0+"\nNumber of Negative Numbers: "+cn);
  }
}
```



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.Scanner;

public class bill
{
  public static void main(String[] args)
  {
        int n;
```

```
        Scanner in=new Scanner(System.in);
        double subtotal=0,rate[] = new double[10];
        double total;
        int quantity[] = new int[10];
        System.out.println("Enter the No.of items");
                n=in.nextInt();
        for(int i=0;i<n;i++)
        {
                System.out.println("Enter the rate of the item");
                rate[i] = in.nextDouble();
                System.out.println("Enter the quantity of the item");
                quantity[i] = in.nextInt();
        }
        for(int i=0;i<n;i++)
                 subtotal=subtotal+(rate[i]*quantity[i]);
        System.out.println("Sub-total: "+subtotal);
        if(subtotal>=10000)
                total=subtotal-(0.05*subtotal);
        else if(subtotal>=7500)
                 total=subtotal-(0.03*subtotal);
        else if(subtotal>=5000)
                 total=subtotal-(0.02*subtotal);
        else
                total=subtotal;
        System.out.println("Total: "+total);
  }
}
```

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 threearravmm
{
  public static void main(String[] args)
  {
        int n,max,min,j=0,k=0;
        float avg=0;
        Scanner in=new Scanner(System.in);
        System.out.println("Enter No. Of elements");
        n=in.nextInt();
        int a[]=new int[n];
        int b[]=new int[n];
        int c[]=new int[n];
        System.out.println("Enter Array");
        for(int i=0;i<n;i++)
        {
```

```
            a[i]=in.nextInt();
            if(a[i]%2==0)
                  c[k++]=a[i];
            else
                  b[j++]=a[i];
          }
          int sum;;
          max=min=sum=c[0];
          for(int i=1;i<k;i++)
          {
            sum+=c[i];
          if(max<c[i])
                  max=c[i];
            if(min>c[i])
                  min=c[i];
          }
        avg=sum/(float)k;
          System.out.println("\nEven Numbers\nAverage: "+avg+"\nMax: "+max+"\nMin: "+min);
  }
}
```