WEEK 3-EXTRA PROGRAMS

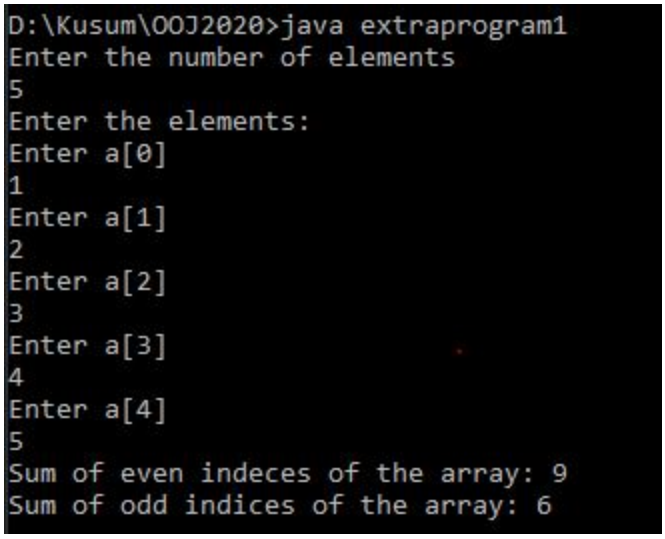
1.Accept an array of size n from the user. Find the sum of even indices (i.e., 0,2,4....) and sum of odd indices (1,3,5....) and print the same

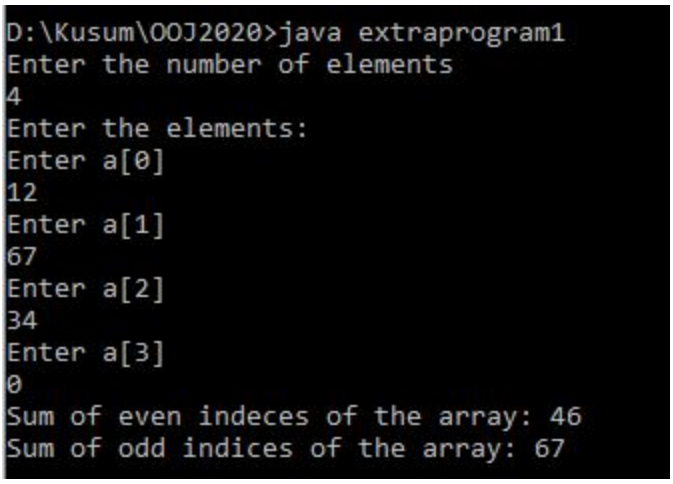
SOURCE CODE:

```
import java.util.*;
 class extraprogram1{
  public static void main(String args[])
  {
        Scanner ss=new Scanner(System.in);
     int a[],n,even = 0, odd = 0;
        System.out.println("Enter the number of elements");
        n=ss.nextInt();
        a=new int[n];
     System.out.println("Enter the elements:");
                for(int i=0;i<n;i++)
                {
                        System.out.println("Enter a["+i+"]");
                        a[i]=ss.nextInt();
                }
      for (int i = 0; i < n; i++) {
        if (i % 2 == 0)
           even += a[i];
        else
           odd += a[i];
     }

     System.out.println("Sum of even indeces of the array: " + even);
     System.out.println("Sum of odd indices of the array: " + odd);
  }
 }
```

OUTPUT:





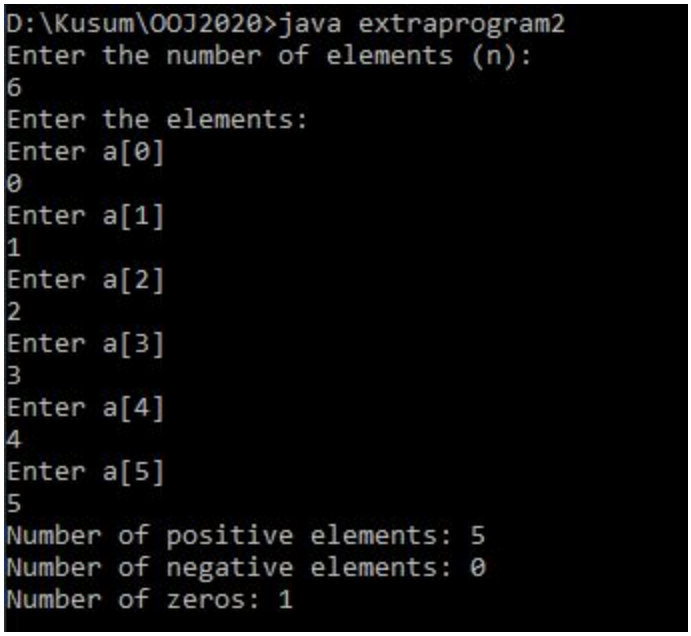
2.Accept an array of n integers. Find the number of positive numbers, negative numbers and zeros.

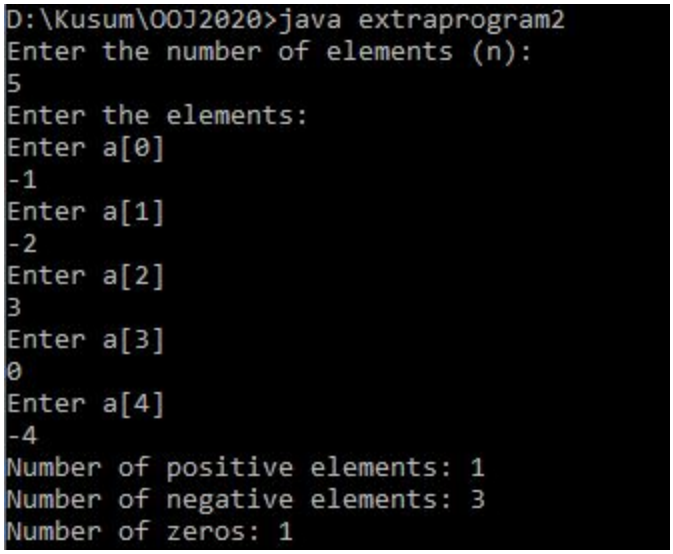
SOURCE CODE:

```
import java.util.*;
class extraprogram2 {
	public static void main(String ss[]) {
		int l=0,p=0,z=0;
		int a[];
		Scanner s = new Scanner(System.in);
		System.out.println("Enter the number of elements (n):");
		int n = s.nextInt();
		System.out.println("Enter the elements:");
```

```
                a = new int[n];
                for(int i=0;i<n;i++)
                {
                        System.out.println("Enter a["+i+"]");
                        a[i]=s.nextInt();
                }
                for(int i=0;i<n;i++)
                {
                        if(a[i]<0)
                        {
                                l++;
                        }
                        else if(a[i]>0)
                        {
                                p++;
                        }
                        else
                        {
                                z++;
                        }
                }
                System.out.println("Number of positive elements: "+p);
                System.out.println("Number of negative elements: "+l);
                System.out.println("Number of zeros: "+z);
        }
}
```

OUTPUT:





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%
SOURCE CODE:

```
import java.util.Scanner;
public class extraprogram3 {
   public static void main(String[] args){
```

```
        Scanner sc = new Scanner(System.in);


        System.out.println("Enter the number of items:");
        int n = sc.nextInt();
        double indTot, tot = 0;
        double[] rpi = new double[n];
        int[] quant = new int[n];
        for(int i = 0; i<n; i++){
            System.out.println("enter quantity of purchase and rate per item for item"+(i+1));
            int q = sc.nextInt();
            double r = sc.nextDouble();
            quant[i] = q;
            rpi[i] = r;
        }
        for(int i = 0; i<n; i++){
            indTot = quant[i] * rpi[i] ;
            tot += indTot;
        }
        if (tot >= 10000) {
            System.out.println("Discount = 5%. Total bill = " + tot + " Discounted bill = " + (tot -
tot * 0.05));
        }

        else if (tot >= 7500) {
            System.out.println("Discount = 3%. Total bill = " + tot + " Discounted bill = " + (tot -
tot * 0.03));
        }
         else if (tot >= 5000) {
            System.out.println("Discount = 2%. Total bill = " + tot + " Discounted bill = " + (tot -
tot * 0.02));
        }
        else{
            System.out.println(" No discount. Total bill = " + tot );
        }

    }
}
```

OUTPUT:

```
D:\Kusum\OOJ2020>java extraprogram3
Enter the number of items:
2
enter quantity of purchase and rate per item for item1
12
250
enter quantity of purchase and rate per item for item2
9
1500
Discount = 5%. Total bill = 16500.0 Discounted bill = 15675.0
```

```
D:\Kusum\OOJ2020>java extraprogram3
Enter the number of items:
3
enter quantity of purchase and rate per item for item1
2
15.5
enter quantity of purchase and rate per item for item2
4
7
enter quantity of purchase and rate per item for item3
8
2.3
 No discount. Total bill = 77.4
```

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

SOURCE CODE:

```
import java.util.*;
class extraprogram4 {
	public static void main(String ss[]) {
		int a[],b[],c[],n1=0,n2=0,sum=0,min,max;
		double avg;
		Scanner s = new Scanner(System.in);
		System.out.println("Enter the number of elements (n):");
		int n = s.nextInt();
		System.out.println("Enter the elements:");
		a = new int[n];
		b = new int[n];
		c = new int[n];
		for(int i=0;i<n;i++)
		{
			System.out.println("Enter a["+i+"]");
			a[i]=s.nextInt();
```

```
            }
            for(int i=0;i<n;i++)
            {
                if(a[i]%2 != 0)
                {
                    b[n1]=a[i];
                    n1++;
                }
                else if(a[i]%2 == 0)
                {
                    c[n2]=a[i];
                    n2++;
                }
            }
            max=c[0];
            min=c[0];
            for(int i=0;i<n2;i++)
            {
                sum=sum+c[i];
                if(c[i]>max)
                    max=c[i];
                else if(c[i]<min)
                    min=c[i];
            }
            avg =(double)sum/n2;
            System.out.println("Sum of even elements:"+ sum);
            System.out.println("Average of even elements:"+ avg);
            System.out.println("Maximum of even elements:"+ max);
            System.out.println("Minimum of even elements:"+ min);
        }
}
```

OUTPUT:

```
D:\Kusum\OOJ2020>java extraprogram4
Enter the number of elements (n):
6
Enter the elements:
Enter a[0]
1
Enter a[1]
2
Enter a[2]
3
Enter a[3]
4
Enter a[4]
5
Enter a[5]
6
Sum of even elements:12
Average of even elements:4.0
Maximum of even elements:6
Minimum of even elements:2
```

```
D:\Kusum\OOJ2020>java extraprogram4
Enter the number of elements (n):
5
Enter the elements:
Enter a[0]
0
Enter a[1]
3
Enter a[2]
5
Enter a[3]
4
Enter a[4]
8
Sum of even elements:12
Average of even elements:4.0
Maximum of even elements:8
Minimum of even elements:0
```