

## LAB 1 Extra Problem 1

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

```

CODE: import java.io.*;
import java.util.*;

public class EvenOdd
{
    public static void findSum(int sum[], int n)
    {
        int evenSum = 0;
        int oddSum = 0;
        for (int i = 0; i < n; i++)
        {
            if (i % 2 == 0)
            {
                evenSum = evenSum + sum[i];
            }
            else
            {
                oddSum = oddSum + sum[i];
            }
        }
        System.out.println("Sum of the values at all even indices is: " + evenSum);
        System.out.println("Sum of the values at all odd indices is: " + oddSum);
    }

    public static void main(String[] args)
    {

```

```

Scanner sc = new Scanner(System.in);
System.out.println("Please enter the number of terms:");
int n = sc.nextInt();
int sum = 0;
for (int i = 0; i < n; i++)
{
    System.out.println("Please enter the " + (i + 1) + " term:");
    sum += sc.nextInt();
}
findsum(sum, n);
}
}

```



## CAB! Extra Program 2

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

```

import java.io.*;
import java.util.*;

public class count_pos_neg_zero
{
    public static void count(int arr[], int n)
    {
        int cntz = 0;
        int cntn = 0;
        int cntp = 0;
        for (int i = 0; i < n; i++)
        {
            if (arr[i] == 0)
            {
                cntz++;
            }
            else if (arr[i] < 0)
            {
                cntn++;
            }
            else if (arr[i] > 0)
            {
                cntp++;
            }
        }
        System.out.println("Count of zeros is: " + cntz);
        System.out.println("Count of negative numbers is: " + cntn);
    }
}

```

```
System.out.println("Count of positive numbers is: " + cntp);
}
```

```
public static void main (String[] args)
```

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

```
    System.out.println("Enter the number of terms");
```

```
    int n = sc.nextInt();
```

```
    int arr[] = new int[n];
```

```
    for (int i = 0; i < n; i++)
```

```
    {
```

```
        System.out.println("Please enter the " + (i+1) + " term");
```

```
        arr[i] = sc.nextInt();
```

```
    }
```

```
    count(arr, n);
```

```
}
```

```
}
```



### LAB Extra Program - 3

3) Consider a supermarket Bill. Keep a double array holding rate per item of say 20 items and an int array showing the quantity purchased by customer. Calculate the total bill amount and the final bill amount after giving discount as per the following table:

If the total bill amount  $\geq 10000$ , discount = 5%

If the total bill amount  $\geq 7500$  and  $< 10000$ , discount = 3%

If the total bill amount  $\geq 2500$ , discount = 2%

CODE: import java.io.\*;

import java.util.\*;

public class SuperMarket

{

public static void main(String[] args)

{

double totalprice = 0;

double finalprice = 0;

Scanner sc = new Scanner(System.in);

System.out.println("Please enter the number of items");

int n = sc.nextInt();

double rate[] = new double[n];

int qty[] = new int[n];

for (int i = 0; i < n; i++)

{

System.out.println("Please enter the rate of item

+ (i + 1) + ": ");

rate[i] = sc.nextDouble();

```

System.out.println("Please enter the quantity of
item" + (i+1) + ":");

```

```

qty[i] = sc.nextInt();
totalprice = totalprice + (rate[i]*qty[i]);

```

```

}
if (totalprice >= 10000)

```

```

{
    finalprice = totalprice - (0.05 * totalprice);

```

```

System.out.println("THE FINAL BILL AMOUNT IS:" +
    finalprice);

```

```

System.out.println("# x x x");

```

```

}

```

```

else if (totalprice >= 7500 && totalprice < 10000)

```

```

{
    finalprice = totalprice - (0.03 * totalprice);

```

```

System.out.println("THE FINAL BILL AMOUNT IS:" +
    finalprice);

```

```

}

```

```

else if (totalprice >= 5000 && totalprice < 7500)

```

```

{
    finalprice = totalprice - (0.02 * totalprice);

```

```

System.out.println("THE FINAL BILL AMOUNT IS:" +
    finalprice);

```

```

}

```

```

else

```

```

{

```

```

    finalprice = totalprice;

```

```

System.out.println("SORRY YOU ARE NOT ELIGIBLE FOR DISCOUNT");

```

```

System.out.println("THE FINAL BILL AMOUNT IS:" + finalprice);

```

```

} } }

```



## LAB Program Extra - 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 second say C holds the even numbers from array A. Display sum, average, max and min of array C.

```

CODE: import java.io.*;
import java.util.*;

public class EvenOddTerm
{
    public static void main (String[] args)
    {
        Scanner sc = new Scanner (System.in);
        System.out.println ("Please enter the number of
        terms:");
        int n = sc.nextInt();
        int a[] = new int [n];
        int b[] = new int [n];
        int c[] = new int [n];
        for (int i = 0; i < n; i++)
        {
            System.out.println ("Please enter the " + (i+1) + "
            term:");
            a[i] = sc.nextInt();
        }
        int j = 0;
        int x = 0;
    }
}

```

```

int sum = 0;
for (int i = 0; i < n; i++)
{
    if (a[i] % 2 == 0)
    {
        c[j] = a[i];
        j++;
    }
    else
    {
        b[x] = a[i];
        x++;
    }
}
int max = c[0];
int min = c[0];
for (int i = 0; i < j; i++)
{
    sum = sum + c[i];
    if (c[i] > max)
    {
        max = c[i];
    }
    else if (c[i] < min)
    {
        min = c[i];
    }
}
avg = sum / j;
System.out.println("Sum is: " + sum);
System.out.println("the average is: " + avg);
System.out.println("the max is: " + max);
System.out.println("the min is: " + min);
??

```