LAB 1: PRACTICE PROGRAMS

1.) PROGRAM – 1

INPUT:

C:\Users\91944\OneDrive\Desktop\OOJLAB\Lab_1\OddEven.java - Sublime Text (UNREGISTERED)

File Edit Selection Find View Goto Tools Project Preferences Help

OddEven.java | count.java | Bill.java | Compute.java

```java
import java.util.*;
import java.util.Scanner;

class OddEven
{
    public static void main(String[] args)
    {
        int n, i, osum, esum;
        osum = esum = 0;
        Scanner ss = new Scanner(System.in);
        System.out.println("Enter the size of the array :");
        n = ss.nextInt();
        int arr[] = new int[n];
        System.out.println("---Enter the elements of the array---");
        for(i = 0; i < n; i++)
        {
            System.out.print("Enter the element at index "+ i +" of the array : ");
            arr[i] = ss.nextInt();
        }
        for(i = 0; i < n; i++)
        {
            if ((i % 2) == 0)
                esum += arr[i];
            else
                osum += arr[i];
        }
        System.out.println("\nThe Sum of numbers at EVEN indicies : "+esum);
        System.out.println("The Sum of numbers at ODD indicies : "+osum);
    }
}
```

OUTPUT:

Command Prompt

```
C:\Users\91944\OneDrive\Desktop\OOJLAB\Lab_1>javac OddEven.java

C:\Users\91944\OneDrive\Desktop\OOJLAB\Lab_1>java OddEven
Enter the size of the array :
5
---Enter the elements of the array---
Enter the element at index 0 of the array : 10
Enter the element at index 1 of the array : 20
Enter the element at index 2 of the array : 30
Enter the element at index 3 of the array : 40
Enter the element at index 4 of the array : 50

The Sum of numbers at EVEN indicies : 90
The Sum of numbers at ODD indicies : 60

C:\Users\91944\OneDrive\Desktop\OOJLAB\Lab_1>
```

2.) PROGRAM – 2

INPUT :

C:\Users\91944\OneDrive\Desktop\OOJLAB\Lab_1\count.java - Sublime Text (UNREGISTERED)

File Edit Selection Find View Goto Tools Project Preferences Help

OddEven.java | count.java | Bill.java | Compute.java

```java
import java.util.*;
import java.util.Scanner;

class count
{
    public static void main(String[] args)
    {
        int n, i, pctr, nctr, zctr;
        pctr = nctr = zctr = 0;
        Scanner ss = new Scanner(System.in);
        System.out.println("Enter the size of the array :");
        n = ss.nextInt();
        int arr[] = new int[n];
        System.out.println("---Enter the elements of the array---");
        for(i = 0; i < n; i++)
        {
            System.out.print("Enter the element "+(i + 1)+" of the array : ");
            arr[i] = ss.nextInt();
        }

        for(i = 0; i < n; i++)
        {
            if (arr[i] > 0)
                pctr++;
            else if (arr[i] < 0)
                nctr++;
            else
                zctr++;
        }

        System.out.println("\nThe number of POSITIVE numbers in the array is : "+ pctr);
        System.out.println("The number of NEGATIVE numbers in the array is : "+ nctr);
        System.out.println("The number of ZEROs in the array is : "+ zctr);
    }
}
```

OUTPUT:

Command Prompt

```
C:\Users\91944\OneDrive\Desktop\OOJLAB\Lab_1>javac count.java

C:\Users\91944\OneDrive\Desktop\OOJLAB\Lab_1>java count
Enter the size of the array :
5
---Enter the elements of the array---
Enter the element 1 of the array : 4
Enter the element 2 of the array : 10
Enter the element 3 of the array : -39
Enter the element 4 of the array : 0
Enter the element 5 of the array : -1

The number of POSITIVE numbers in the array is : 2
The number of NEGATIVE numbers in the array is : 2
The number of ZEROs in the array is : 1

C:\Users\91944\OneDrive\Desktop\OOJLAB\Lab_1>
```

3.) PROGRAM – 3

INPUT:

C:\Users\91944\OneDrive\Desktop\OOJLAB\Lab_1\Bill.java - Sublime Text (UNREGISTERED)

File Edit Selection Find View Goto Tools Project Preferences Help

OddEven.java | count.java | Bill.java | Compute.java

```
import java.util.*;
import java.util.Scanner;

class Bill
{
    public static void main(String[] args)
    {
        int n, i;
        System.out.println("<----WELCOME TO SUPERMARKET BILLING SYSTEM---->\n");
        Scanner ss = new Scanner(System.in);
        System.out.println("Enter the number of DISTINCT ITEMS purchased!");
        n = ss.nextInt();
        double tot, dis, net;
        tot = net = 0;
        double cost[] = new double[n];
        int num[] = new int[n];
        for(i = 0; i < n; i++)
        {
            System.out.print("\nEnter the cost per item of ITEM "+(i +1)+" : ");
            cost[i] = ss.nextDouble();
            System.out.print("Enter the quantity of ITEM "+(i +1)+" purchased : ");
            num[i] = ss.nextInt();
        }
        for(i = 0; i < n; i++)
        {
            tot += ((double)cost[i] *  num[i]);
        }
        if (tot >= 10000)
            dis = 0.05;
        else if (tot >= 7500 && tot < 10000)
            dis = 0.03;
        else if (tot >= 5000 && tot < 7500)
            dis = 0.02;
        else
            dis = 0;
        net = tot - (tot * dis);
        System.out.println("\n<---------------YOUR BILL--------------->");
        System.out.println("\nTOTAL AMOUNT (Before Discount) : "+tot);
        System.out.println("\nFINAL AMOUNT TO BE PAID (After Discount) : "+net);
        System.out.println("\n<--------------------------------------->");
    }
}
```

OUTPUT:

Command Prompt

```
C:\Users\91944\OneDrive\Desktop\OOJLAB\Lab_1>javac Bill.java

C:\Users\91944\OneDrive\Desktop\OOJLAB\Lab_1>java Bill
<----WELCOME TO SUPERMARKET BILLING SYSTEM---->

Enter the number of DISTINCT ITEMS purchased!
3

Enter the cost per item of ITEM 1 : 500
Enter the quantity of ITEM 1 purchased : 10

Enter the cost per item of ITEM 2 : 1000
Enter the quantity of ITEM 2 purchased : 2

Enter the cost per item of ITEM 3 : 250
Enter the quantity of ITEM 3 purchased : 10

<---------------YOUR BILL--------------->

TOTAL AMOUNT (Before Discount) : 9500.0

FINAL AMOUNT TO BE PAID (After Discount) : 9215.0

<--------------------------------------->
```

4.) PROGRAM – 4

INPUT:

C:\Users\91944\OneDrive\Desktop\OOJLAB\Lab_1\Compute.java - Sublime Text (UNREGISTERED)

File Edit Selection Find View Goto Tools Project Preferences Help

OddEven.java | count.java | Bill.java | Compute.java

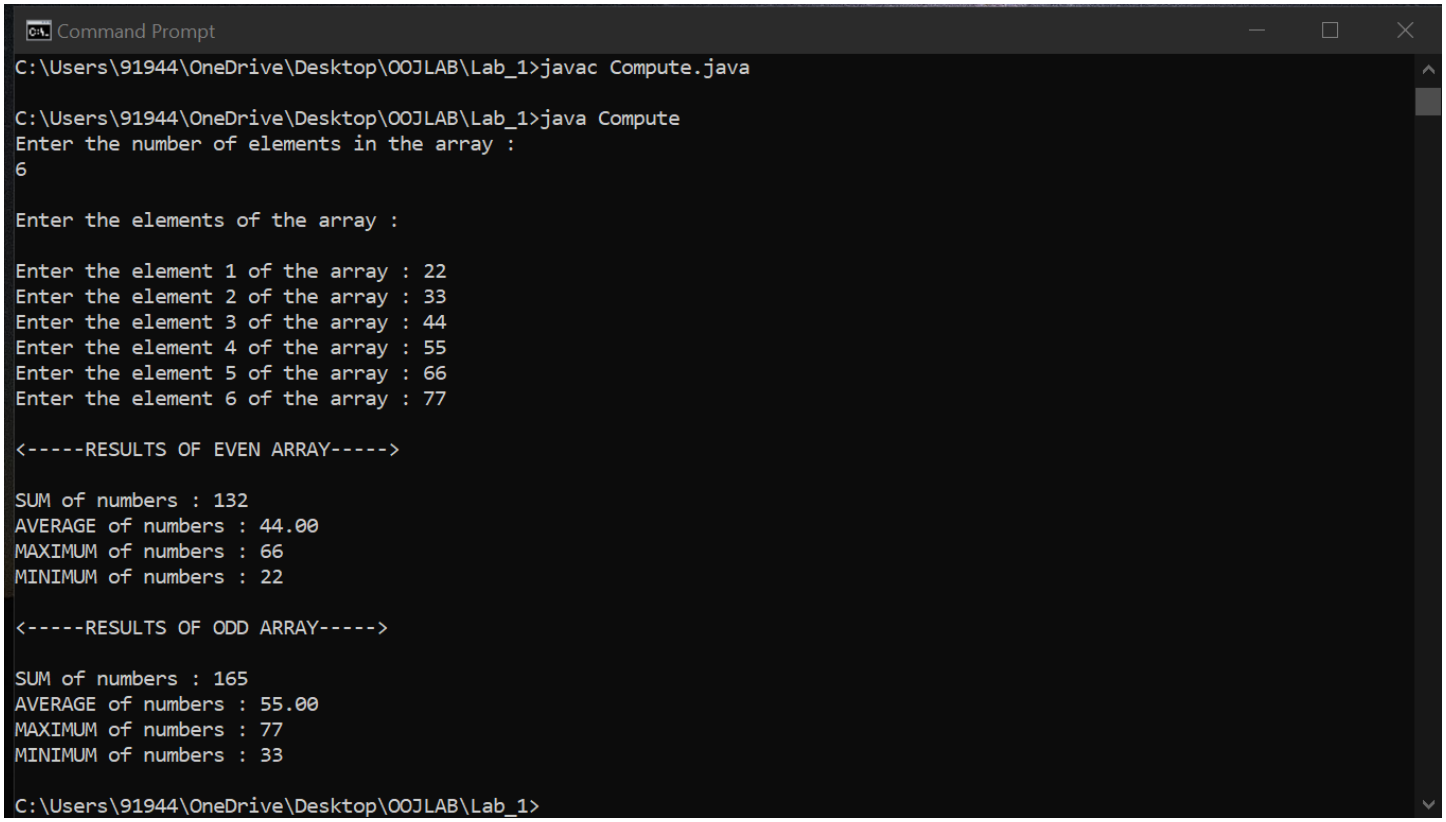
```java
import java.util.*;
import java.util.Scanner;

class Compute
{
    public static void main(String[] args)
    {
        int n, i, j, k, max, min, sum;
        sum = 0;
        float avg;
        Scanner ss = new Scanner(System.in);
        System.out.println("Enter the number of elements in the array :");
        n = ss.nextInt();
        int arr[] = new int[n];
        int odd[] = new int[n];
        int even[] = new int[n];
        System.out.println("\nEnter the elements of the array :\n");
        for(i = 0; i < n; i++)
        {
            System.out.print("Enter the element "+(i+1)+" of the array : ");
            arr[i] = ss.nextInt();
        }
        for(i = 0, j = 0, k = 0; i < n; i++)
        {
            if (arr[i] % 2 == 0)
            {
                even[j] = arr[i];
                j++;
            }
            else
            {
                odd[k] = arr[i];
                k++;
            }
        }

        max = even[0];
        min = even[0];
        for(i = 0; i < j; i++)
        {
            sum += even[i];
            if (even[i] > max)
                max = even[i];
            if (even[i] < min)
                min = even[i];
        }
        System.out.println("\n<-----RESULTS OF EVEN ARRAY----->\n");
        System.out.println("SUM of numbers : "+sum);
        System.out.printf("AVERAGE of numbers : %.2f\n",((float)sum/j));
        System.out.println("MAXIMUM of numbers : "+max);
        System.out.println("MINIMUM of numbers : "+min);

        sum = 0;
        max = odd[0];
        min = odd[0];
        for(i = 0; i < k; i++)
        {
            sum += odd[i];
            if (odd[i] > max)
                max = odd[i];
            if (odd[i] < min)
                min = odd[i];
        }
        System.out.println("\n<-----RESULTS OF ODD ARRAY----->\n");
        System.out.println("SUM of numbers : "+sum);
        System.out.printf("AVERAGE of numbers : %.2f\n",((float)sum/k));
        System.out.println("MAXIMUM of numbers : "+max);
        System.out.println("MINIMUM of numbers : "+min);
    }
}
```

OUTPUT:


Command Prompt
C:\Users\91944\OneDrive\Desktop\OOJLAB\Lab_1>javac Compute.java
C:\Users\91944\OneDrive\Desktop\OOJLAB\Lab_1>java Compute
Enter the number of elements in the array :
6
Enter the elements of the array :
Enter the element 1 of the array : 22
Enter the element 2 of the array : 33
Enter the element 3 of the array : 44
Enter the element 4 of the array : 55
Enter the element 5 of the array : 66
Enter the element 6 of the array : 77
<-----RESULTS OF EVEN ARRAY----->
SUM of numbers : 132
AVERAGE of numbers : 44.00
MAXIMUM of numbers : 66
MINIMUM of numbers : 22
<-----RESULTS OF ODD ARRAY----->
SUM of numbers : 165
AVERAGE of numbers : 55.00
MAXIMUM of numbers : 77
MINIMUM of numbers : 33
C:\Users\91944\OneDrive\Desktop\OOJLAB\Lab_1>