Assignment – 9

1. Write a program add the two-integer array of size 5 and store the result in the third array.

Program:

```
import java.util.Scanner;
public class SumArray
{
	public static void main(String[] args)
	{
	 // create Scanner class object
		Scanner scan = new Scanner(System.in);
		// declare three array with given size
		int array1[] = new int[5];
		int array2[] = new int[5];
		int sum[] = new int[5];
		// take input for array1 elements
		System.out.println("Enter first array elements: ");
		for (int i=0; i<array1.length; i++)
		{
			array1[i] = scan.nextInt();
		}
		// take input for array2 elements
		System.out.println("Enter second array elements: ");
		for (int i=0; i<array2.length; i++)
		{
```

```
                array2[i] = scan.nextInt();
            }
                // loop to iterate through the array
            for (int i=0; i<sum.length; i++)
            {
                // add array elements
                sum[i] = array1[i] + array2[i];
                System.out.println("sum of the two array elements:
"+sum[i]);
            }
        }
}
```

2. Write a program to find the sum of even number and odd number in the array of size 10.

Program:

```
import java.util.Scanner;
public class Arrayoddeven
{
    public static void main(String[] args)
    {
        Scanner scanner = new Scanner(System.in);
        // declare three array with size
        int even[] = new int[10];
        int odd[] = new int[10];
        int sum[] = new int[10];
        int i;
        // take input for even numbers
        System.out.println("Enter even numbers: ");
```

```
        for (i=0; i<even.length; i++)
        {
                even[i] = scanner.nextInt();
                if(even[i]%2==0)
                {
                        System.out.println();
                }
                else
                        System.exit(0);
        }

        // take input for odd numbers
        System.out.println("Enter odd numbers: ");
        for (i=0; i<odd.length;i++)
        {
                odd[i] = scanner.nextInt();
                if(odd[i]%2!=0)
                {
                        System.out.println();
                }
                else
                        System.exit(0);
        }

        for (i=0; i<sum.length; i++)
        {
        // add array elements
                sum[i]= even[i] + odd[i];
                System.out.println("sum of the two array elements: "+sum[i]);
        }
}
```

```
}
```

3. Write a program to print lowercase letter from your name.

Program:

```
import java.util.Scanner;
public class NameLowercaseUppercase
{
	public static void main(String args[])
	{
		//variable declaration
		String str;
		Scanner scanner=new Scanner(System.in);
		 //create a scanner object for input
		System.out.println("Enter your name: ");
		str=scanner.nextLine();
		for(int i=0; i<str.length(); i++)
		{
			char ch=str.charAt(i);
			if(ch>='a' && ch<='z')
			{
				System.out.println("lowercase characters in my name are:
"+ch);
			}
		}
	}
}
```

4 .write a program to count the number of vowels and consonants in the given message.

Program:

```
import java.util.Scanner;
public class ArrayVowelCount
```

```
{
	public static void main(String[] args)
	{
		String msg;
		int vowel=0,consonent=0;
		Scanner sc=new Scanner(System.in);
		System.out.println("enter the message: ");
		msg=sc.nextLine();
		for(int i=0; i<msg.length(); i++)
		{
			char ch=msg.charAt(i);
			if(ch=='a'||ch=='e'||ch=='i'||ch=='o'||ch=='u')
			{
				vowel++;
			}
			else if(ch>='a'&&ch<='z')
			{
				consonent++;
			}
		}
		System.out.println("no. of vowels present: "+vowel);
		System.out.println("no. of consonent present: "+consonent);
	}
}
```

5. Repeated Salary Count

John is working as a clerk in an organization where N number of people are working. His boss has asked him to get the count of employees who get same salary. Help him to get the count of repeated salary.

Include a function named countRepeaters that accepts 2 arguments and returns an int. The first argument is the input array and the second argument is an int that corresponds to the size of the array. The function returns an int that corresponds to the number of repeaters. If the size of the array is negative or if any of the array elements are negative, print "Invalid Input" and terminate the program. Input and Output Format: Input consists

of n+1 integers. The first integer corresponds to n, the number of elements in the array. The next 'n' integers correspond to the elements in the array. Output consists of an integer that corresponds to the number of repeaters. Assume that utmost one element in the array would repeat.

Assume that the maximum number of elements in the array is 20.

Sample Input 1:

5 1000 2000 3500 2000 5000

Sample Output 1: 2

Sample Input 2: -5

Sample Output 2: Invalid Input

Sample Input 3: 5 1000 -2000

Program:

```
import java.util.Scanner;
public class CountRepeaters
{
	static int count=0;
	public static void CountRepeaters(int[] array, int size)
	{
		for (int i = 0; i < size - 1; i++)
		{
			 for (int j = i + 1; j < size; j++)
			{
				if (array[i] == array[j])
				count++;
			}
		}
	}
	public static void main(String[] args)
	{
		Scanner sc=new Scanner(System.in);
		int size=sc.nextInt();
		if(size<0)
```

```
                {
                        System.out.println("invalid input");
                        System.exit(0);
                }
                int[]array= new int[size];
                for(int i=0;i<array.length;i++)
                {
                        array[i]=sc.nextInt();
                        if(array[i]<0)
                        {
                                System.out.println("invalid input");
                                System.exit(0);
                        }
                }
                CountRepeaters(array,size);
                System.out.println(count);
        }
}
```

6. Maximum Sum

Read the question carefully and follow the input and output format. Given an Integer array, find out sum of Even and odd Numbers individually and find the maximum. Input and Output Format : First line of input consists of n, the number of elements. Next n lines correspond to the array elements. Output consist of maximum of odd and even sum. 1) Print "Invalid array size" when size of the array is a negative number and terminate the program. 2) Print "Invalid input" when there is any negative numbers available in the input array and terminate the program. Include a function named maximumSum(int numbers[], int size) whose return type is an integer.

Sample Input 1:

5 12 13 14 15 16

Sample Output 1: 42

Sample Input 2: -13

Sample Output 2: Invalid array size

Program:

```
import java.util.Scanner;
public class ArraySumEvenOdd
{
	public static void main(String[] args)
	{
		Scanner scanner=new Scanner(System.in);
		System.out.println("enter the size of array: ");
		int size=scanner.nextInt();
		if(size<0)
		{
			System.out.println("invalid array size");
			System.exit(0);
		}
		int[]array= new int[size];
		System.out.println("enter the numbers: ");
		for(int j=0;j<size;j++)
		{
			array[j]=scanner.nextInt();
			if(array[j]<0)
			{
			System.out.println("invalid input");
			System.exit(0);;
			 }
		}
		System.out.println("maximum sum is: "+maximumSum(array,size));
	 }
	public static int maximumSum(int[] array, int size)
	{
		int sum=0,sum1=0;
```

```
                for(int j=0;j<size;j++)
                {
                        if(array[j]%2==0)
                        {
                                sum+=array[j];
                        }
                        else
                                sum1+=array[j];
                }

                return(sum1>sum)?sum1:sum;
        }
}
```