# ASSIGNMENT - 8

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

Program:

```
import java.util.Scanner;

public class ArraySample1 {

public static void main(String[] args) {

// TODO Auto-generated method stub

Scanner scanner = new Scanner(System.in);

int[] a = new int[5];

int[] b = new int[5];

int[] c = new int[5];

for(int i = 0; i < a.length; i++)

{

System.out.println(" Enter the Array of a:");

a[i] = scanner.nextInt();

}

for(int i = 0; i < b.length; i++)

{

System.out.println(" Enter the Array of b:");

b[i] = scanner.nextInt();

}

for(int i = 0; i < 5; i++)
```

```
{
c[i] = a[i] + b[i];
}
System.out.println(" Enter the Array of a and Array of b is:");
for(int i = 0; i < 5; i++)
{
System.out.println(c[i]);
}
}
}
```

Output:

```
Enter the Array of a:
2
Enter the Array of a:
4
Enter the Array of a:
6
Enter the Array of a:
56
Enter the Array of a:
74
Enter the Array of b:
```

```
4
Enter the Array of b:
3
Enter the Array of b:
87
Enter the Array of b:
98
Enter the Array of b:
22
Enter the Array of a and Array of b is:
6
7
93
154
96
```

## 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 ArrayExample2
{
public static void main(String[] args)
```

```
{
// TODO Auto-generated method stub
int n, sumE = 0, sumO = 0;
Scanner scanner = new Scanner(System.in);
System.out.println(" Enter the 10 Numbers in an array:");
n = scanner.nextInt();
int[] a = new int [10];
for(int i = 0; i < 10; i++)
{
a[i] = scanner.nextInt();
}
for(int i = 0; i < 10; i++)
{
if(a[i] % 2 == 0)
{
sumE = sumE + a[i];
}
else
{
sumO = sumO + a[i];
}
}
System.out.println("The Sum of even numbers:" +sumE);
```

```
System.out.println("The Sum of odd numbers:" +sumO);
}
}
```

Output:

```
Enter the 10 Numbers in an array:
1
2
3
4
6
7
8
4
3
2
4
The Sum of even numbers:30
The Sum of odd numbers:13
```

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

Program:

```
import java.util.Scanner;

public class LowercaseArray {

public static void main(String[] args) {

// TODO Auto-generated method stub

Scanner scanner = new Scanner(System.in);

System.out.println ("Enter the count of your name Letter :");

int size = scanner.nextInt();

char [] name = new char[size];

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

{

name [i] = scanner.next().charAt(0);

}

System.out.println("The Lowercase used in the name:");

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

{

if (name[i] >= 'a' && name[i] <= 'z')

{

System.out.println(name [i]);

}

}

}

}
```

Output:

```
Enter the count of your name Letter :
9
R
u
b
a
v
a
t
h
i
The Lowercase used in the name:
u
b
a
v
a
t
h
i
```

## 4. Write a program to count the number of vowels and consonents in the given message.

Program:

```
import java.util.Scanner;

public class VowelsAndConsonents {

public static void main(String[] args) {

// TODO Auto-generated method stub

int vowelsCount = 0;

int consonentsCount = 0;

String str = "This is a really simple sentence";

str = str.toLowerCase();

for(int i = 0; i<str.length(); i++)

{

if(str.charAt(i) == 'a' && str.charAt(i) == 'e' && str.charAt(i) == 'i' &&
str.charAt(i) == 'o' && str.charAt(i) == 'u')

{

vowelsCount++;

}

else if(str.charAt(i) >= 'a' && str.charAt(i) <= 'z' )

{

consonentsCount++;

}

}

System.out.println("Number of Vowels:" +vowelsCount);

System.out.println("Number of Consonents:" +consonentsCount);
```

}

}

Output:

Number of Vowels: 10

Number of Consonents: 17

## 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**

**Sample Output 3:**

**Invalid Input**

Program:

```
package countsalaryrepeater;

import java.util.Scanner;

public class CountRepeaters

{

public static int count = 1;

public static void arrayDetails(int array[], int size)

{

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

{

for(int j= 0; j < size; j++)

{
```

```
if(array[j] ==array[i])
{
count++;
}
}
}
System.out.println(count);
}
public static void main(String[] args) {
// TODO Auto-generated method stub
int[] array = new int[20];
int size;
Scanner scanner = new Scanner(System.in);
System.out.println("Enter the size of the array");
size = scanner.nextInt();
if(size >= 0)
{
System.out.println("Enter the Array");
for(int i = 0; i <size; i++)
{
array[i] = scanner.nextInt();
if(array[i] < 0)
{
```

```
System.out.println("Invalid Input");
System.exit(0);
}
}
arrayDetails(array, size);
}
else
{
System.out.println("Invalid Input");
}
}
private static void arrayDetails(int[] array, int size) {
// TODO Auto-generated method stub
}
}
```

## Sample Output 1:

```
Enter the size of the array
5
Enter the Array
1000
2000
3500
2000
```

5000

2

**Sample Output 2:**

Enter the size of the array

-5

Invalid Input

**Sample Output 3:**

Enter the size of the array

5

Enter the Array

1000

-2000

Invalid Input

## 6. Write a program 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:

```
package ArrayMaximum;

public class ArrayMaximum

{

static int even = 0;

static int odd = 0;

public static void maximumSum(int number[],int size)

{

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

{

if(number[i] % 2 ==0)

{

even += number[i];
```

```
}
if(number[i] % 2 != 0)
{
odd += number[i];
}
}
System.out.println(Math.max(even, odd));
}
public class ArrayMaximum1 {
public static void main(String[] args) {
// TODO Auto-generated method stub
Scanner scanner = new Scanner(System.in);
int[] number = new int[20];
int size;
System.out.println("Enter the size of the array");
size = scanner.nextInt();
if(size >=0)
{
System.out.println("Enter the numbers");
for(int i = 0; i <size; i++)
{
number[i] = scanner.nextInt();
}
```

```
maximumSum(number, size);
}
else
{
System.out.println("Invalid array size");
}
}
private static void maximumSum(int[] number, int size) {
// TODO Auto-generated method stub
}
}
```

Output:

```
Enter the size of the array
5
Enter the numbers
12
13
14
15
16
42
```

Output 2:

```
Enter the size of the array
```

-13

Invalid array size