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 ArrayAddition {

public static void main(String[] args) {

Scanner obj = 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] = obj.nextInt();

}

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

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

b[i] = obj.nextInt();

}

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

c[i] = a[i] + b[i];

}

System.out.println("The addition of array a and array b is: ");

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

System.out.print(c[i]);}}}
```

OUTPUT:

Enter the array of a:

5

Enter the array of a:

6

Enter the array of a:

56

Enter the array of a:

45

Enter the array of a:

34

Enter the array of b:

56

Enter the array of b:

3

Enter the array of b:

0

Enter the array of b:

12

Enter the array of b:

34

The addition of array a and array b is:

61

9

56

57

68

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 ArraySumEvenOdd {

public static void main(String[] args) {

Scanner obj = new Scanner(System.in);

int even = 0;

int odd = 0;

int[] a = new int[10];

System.out.println("Enter the 10 integer in an array:");

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

a[i] = obj.nextInt();

}

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

if (a[i] % 2 == 0) {

even += a[i];

}

if (a[i] % 2 != 0) {

odd += a[i];

}

}

System.out.println("The sum of even integer in array is: " + even);

System.out.println("The sum of odd integer in an array is: " + odd);

}}
```

OUTPUT:

```
Enter the 10 integer in an array:
1
2
3
4
5
6
7
8
9
10
The sum of even integer in array is: 30
The sum of odd integer in an array is: 25
```

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) {

Scanner obj = new Scanner(System.in);

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

int size = obj.nextInt();

char [] name = new char[size];

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

{

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

}

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

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:
5
A
n
g
e
l
The lowercase used in the name are:
n
g
e
l
```

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

PROGRAM:

```
import java.util.Arrays;

public class CountVowelsConsonent {

public static void main(String[] args) {

int vowels = 0;

int consonants = 0;

char[] input = new char[3];

input[0] = 'h';

input[1] = 'i';

input[2] = 'a';

System.out.println(" The given character is:");

System.out.println(Arrays.toString(input));

for (int i = 0; i < 3; i++) {

if (input[i] == 'a' || input[i] == 'e' || input[i] == 'i' || input[i] ==
'o' || input[i] == 'u') {

vowels++;

}

else {

consonants++;

}

}

System.out.println("the count of vowels is: "+vowels);

System.out.println("the count of consaonats is :"+consonants);

}

}
```

OUTPUT:

```
The given character are:

[h, i, a]

the count of vowels is: 2

the count of consonants is :1
```

5.Write a program 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 countsalrayrepeater;

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 = i + 1; j < size; j++) {

if (array[j] == array[i]) {

count++;

}

}

}

System.out.println(count);

}

public static void main(String[] args) {

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");
}
}
}
```

Sample output1:

```
enter the size of the array
5
enter the array
1000
2000
3500
2000
5000
2
```

Sample output2:

```
enter the size of the array
-5
Invalid Input
```

Sample output3:

```
enter the size of the array
5
enter the array
1000
-2000
Invalid Input
```

6.Write a program maximumSum

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 countsalrayrepeater;

import java.util.Scanner;

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 static void main(String[] args) {
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");
}
}
}
```

Output1:

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

Output2:

```
enter the size of the array
-13
Invalid array size
```