**Week 6 Mon-Tue-Thurs Lab Assignments**

1. Write a Java program that will read in five numbers, fine their sum and print the numbers in the reverse order.
2. **Self-Test: Mark the following statements as True or False:**
   1. A double type is an example of a primitive data type.
   2. A one-dimensional array is an example of a structured data type.
   3. Arrays can be passed as parameters to a method.
   4. A method can return a value of the type array.
   5. The size of an array is determined at compile time.
   6. Given the declaration:

int[] list = new int[10];

The statement:

list[5] = list[3] + list[2];

updates the content of the fifth element of the array list.

* 1. If an array index goes out of bound, the program terminates in an error.

1. **Consider the method headings:**

void funcOne(int[] alpha, int size)

int funcSum(int x, int y)

void funcTwo(int[] alpha, int[] beta)

and the declarations:

int[] list = new int[50];

int[] AList = new int[60];

int num;

Write Java Statements that do the following:

1. Call the method funcOne with the actual parameters, list and 50, respectively.
2. Print the value returned by the method funcSum with the actual parameters, 50 and the fourth element of list, respectively.
3. Print the value returned by the method funcSum with the actual paramenters, the thirtieth and tenth elements of list, respectively.
4. Call the method funcTwo with the actual parameters, list and AList, respectively.
5. **Suppose list is an array of six elements of type int. what is stored in list after the following Java code executes?**

list[0] = 5;

for(int i = 1; i < 6; i++)

{

list[i] = i \* i + 5;

if(i > 2)

list[i] = 2 \* list[i] – list[i-1];

}

1. **What is the output of the following program?**

public class Exercise5

{

public static void main(String[] args)

{

int j;

int[] one = new int[5];

int[] two = new int[10];

for(j = 0; j < 5; j++)

System.out.print(one[j] + “ “);

System.out.println();

for(j = 0; j < 5; j++)

{

two[j] = 2 \* one[j] – 1;

two[j + 5] = one[4 – j] + two[j];

}

System.out.print(“Two contains: “);

for(j =0; j < 10; j++)

System.out.print(two[j] + “ “);

System.out.println();

}

}

1. **Palindrome Number Program**: Write a program that determines whether an integer is a palindrome. An integer is a palindrome if it reads forward and backwards in the same way, ignoring any leading minus sign.

**For example, the integers: 5, 44, 434, -1881, and 789656987 are all palindromes.**

In this program, you will use an input dialog box to get the input and an output dialog box to show the output. So, an integer will be read as a String.

**Input**: An integer (positive or negative)

**Output**: A message indicating whether the integer is a palindrome.

1. Write a Java program that will read an int array and remove the duplicate elements entered from the array.

**Sample Run:**

Input array elements:

1, 2, 3, 1, 2, 3, 4

**Output**:

Elements after removing duplicates

1, 2, 3, 4

1. Write a Java program that will **read and print a two-dimensional array**. In this program you will be reading number of rows and columns and reading, printing the array elements according to the given inputs.

**Main purpose of this application is:** To read number of rows and columns, array elements for two-dimensional array and print in matrix format using java program. HINT: User should enter rows \* columns number of elements.

**Example Run:**

**Input:**

Enter row for the array (max 10): 3

Enter column for the array (max 10): 3

Enter 9 Array Elements

Enter row 1 and column 1: 23

Enter row 1 and column 2: 100

Enter row 1 and column 3: 522

Enter row 2 and column 1: 32

Enter row 2 and column 2: 85

Enter row 2 and column 3: 65

Enter row 3 and column 1: 45

Enter row 3 and column 2: 89

Enter row 3 and column 3: 52

**Output:**

The Array is

23 100 522

32 85 65

45 89 52