Exercise - Lab 3: (Due date 07-10-2022)

1.Calculate average of numbers using Array

2.Reverse an array

3.Sort an array in ascending order

4. Convert char Array to String

5. Add two Matrix using Multi-dimensional Arrays

6. Sort strings in alphabetical order

7. Find out the highest and second highest numbers in an array

8. Concatenate two arrays

9. Build a class Employee which contains details about the employee and compile and run its instance.

10. Build a class which has references to other classes. Instantiate these reference variables and invoke instance methods.

Exercise - Lab 4: (Due date: 11-10-2022)

1. Define a class of type Student that has rollno, name and age as private data members. Define SetData() and GetData() as public member functions with appropriate functionality.
Write a program that declares 2 student objects, initializes the first at run-time and second by reading from console, and then displays both student's data.

2. Demonstrate the access specifiers public and default with the student class in program 5 and also demonstrate that other access specifiers (protected and private) cannot be used with class.

3. Demonstrate the use of all access specifiers (public, protected, default and private) with the data members of student class in program 5.

4. Modify program 1 to add another array member marks to the class that stores marks of 5 subjects and then rework with the program.

5. Define a class of type address that has street, locality and city as members.
-Rework program 5 to add to the student class an object of address class as a data member which stores the student's address.

6. Define a class of type Distance that has Feet and Inches as members.
-Define a function that adds two Distances passed as argument and returns the sum as another Distance object.
Place the class in a package named user.own.pack . Compile and run the java file using console (javac and java utility).
Write a program that imports this package and uses class to find the sum of two distances.

7. Write a program to swap two numbers by

a) Passing primitive values to the method (attempt to show that swapping is not possible)

8. Creating two objects of Integer class and passing these objects to method using reference variable.

9. Write a program to demonstrate the scope and lifetime of primitive values and class objects.

10. Modify program 1 to add

a) a private static data member counter that keeps a track of the number of students currently existing

b) a public static function member SetCounter() that increments the counter by one.

11. Define an interface and show that data members of interface are by default public, static and final and also show that method members of interface are by default abstract and public.