LAB # 7

Generics in Java

OBJECTIVE:

Implementing generic classes and methods for ensuring compile time type safety of data.

Lab Task:

Write a program that takes integer array, double array and character array. Make a generic function that prints these array in reverse order.

```
package lab7;

public class reverse_array {

    public static < E > void printArray( E[] inputArray ) {
         // Display array elements
         for(E element : inputArray) {
         System.out.printf("%s ", element);
         }
         System.out.println();
    }
    public static <T> void reverse(T[] inputArray) {
        for (int i = inputArray.length - 1; i >= 0; i--)
            System.out.print(inputArray[i] + " ");

    }
    public static void main(String[] args) {

        Integer[] intArray = { 1, 2, 3, 4, 5 };
         Double[] doubleArray = { 1.1, 2.2, 3.3, 4.4 };
         Character[] charArray = { 'H', 'E', 'L', 'L', 'O' };

         System.out.println("Array integerArray contains:");
         printArray(intArray);
         System.out.println("\nReverse integerArray :");
         reverse(intArray);

         System.out.println("\n\nArray doubleArray contains:");
         printArray(doubleArray);
         System.out.println("\nReverse doubleArray :");
         reverse(doubleArray);

         System.out.println("\n\nArray characterArray contains:");
         printArray(charArray);
         System.out.println("\nReverse characterArray :");
         reverse(charArray);
    }
    }
```

```
Array integerArray contains:
1 2 3 4 5

Reverse integerArray :
5 4 3 2 1

Array doubleArray contains:
1.1 2.2 3.3 4.4

Reverse doubleArray :
4.4 3.3 2.2 1.1

Array characterArray contains:
H E L L O

Reverse characterArray :
O L L E H
```