

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.

```
public class reverseOrder {  
    public static <E> void printArray(E[] inputArray) {  
        for(E element : inputArray) {  
            System.out.printf("%s", element);  
        }  
        System.out.println();  
    }  
    public static void main(String[] args) {  
        Integer[] intArray= {1,2,3,4,5,6};  
        Double[] doubleArray = {1.1,1.2,1.3,1.4,1.5,1.6};  
        Character[] charArray = {'H','E','L','L','O'};  
  
        System.out.println("Original Array:");  
        printArray(intArray);  
        System.out.println("intArray in reverse order");  
        for(int i= intArray.length-1;i>=0;i--)  
            System.out.print(intArray[i] + "\t");  
  
        System.out.println("\nOriginal Array:");  
        printArray(doubleArray);  
        System.out.println("doubleArray in reverse order");  
        for(int i= doubleArray.length-1;i>=0;i--)  
            System.out.print(doubleArray[i] + "\t");  
  
        System.out.println("\nOriginal Array:");  
        printArray(charArray);  
        System.out.println("intArray in reverse order");  
        for(int i= charArray.length-1;i>=0;i--)  
            System.out.print(charArray[i] + "\t");  
    }  
}
```

OUTPUT:

```
Original Array:  
123456  
intArray in reverse order  
6      5      4      3      2      1  
Original Array:  
1.11.21.31.41.51.6  
doubleArray in reverse order  
1.6    1.5    1.4    1.3    1.2    1.1  
Original Array:  
HELLO  
intArray in reverse order  
O      L      L      E      H
```