Rajalakshmi Engineering College

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2024_28_III_OOPS Using Java Lab

2028_REC_OOPS using Java_Week 12_Q2

Attempt : 1
Total Mark : 10
Marks Obtained : 10

Section 1 : Coding

1. Problem Statement

Alex is learning about Java's functional interfaces and lambda expressions.

He wants to write a simple program that prints the square of each number in an array using a predefined functional interface.

Help Alex complete this task using the Consumer functional interface.

Input Format

- The first line contains an integer N, the number of elements in the array.
- The second line contains N space-separated integers.

Output Format

- Print the squares of all elements in the array, separated by a space.

Refer to the sample output for formatting specifications.

Sample Test Case

Input: 4
1 2 3 4
Output: 1 4 9 16

Answer

```java
import java.util.*;
interface square{
    int[] cal(int[] arr);
}
class p{
    public static void main(String[] args){
        Scanner sc = new Scanner(System.in);
        int n=sc.nextInt();
        int[] arr= new int[n];
        for(int i=0;i<n;i++){
            arr[i]=sc.nextInt();
        }
        square sq=(arr1)->{
            int[] arr2=new int[n];
            int l=0;
            for(int r:arr1){
                arr2[l++]=r*r;
            }
            return arr2;
        };
        int[] arr3=sq.cal(arr);
        for(int i=0;i<n;i++){
            System.out.printf("%d ",arr3[i]);
        }
    }
}
```

Status : Correct   *Marks : 10/10*