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
// You are using 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*