

# 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**

// You are using Java

import java.util.\*;

import java.util.function.\*;

```
public class Main {  
    public static void main(String[] args) {  
        Scanner sc = new Scanner(System.in);  
        int n = sc.nextInt(); // Number of elements  
        int[] arr = new int[n];  
  
        for (int i = 0; i < n; i++) {  
            arr[i] = sc.nextInt();  
        }  
  
        // Consumer functional interface using lambda  
        Consumer<Integer> printSquare = x -> System.out.print((x * x) + " ");  
  
        // Apply Consumer for each element  
        for (int num : arr) {  
            printSquare.accept(num);  
        }  
    }  
}
```

**Status :** Correct

**Marks :** 10/10