

# 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**

```
import java.util.*;
import java.util.function.Consumer;

public class Main {
    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();
        }

        Consumer<Integer> squareConsumer = num -> {
            System.out.print((num * num) + " ");
        };

        for (int num : arr) {
            squareConsumer.accept(num);
        }

        sc.close();
    }
}
```

**Status :** Correct

**Marks :** 10/10