

# Rajalakshmi Engineering College

Name: Siddharth Radhakrishnan  
Email: 241801269@rajalakshmi.edu.in  
Roll no: 241801269  
Phone: 9566179048  
Branch: REC  
Department: AI & DS - Section 4  
Batch: 2028  
Degree: B.E - AI & DS

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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
// You are using Java
import java.util.Scanner;
import java.util.function.Consumer;
import java.util.Arrays;
class SquarePrinter {

    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);

        int N = scanner.nextInt();
        int[] numbers = new int[N];

        for (int i = 0; i < N; i++) {
            numbers[i] = scanner.nextInt();
        }

        Consumer<Integer> squarePrinter = n -> {
            long square = (long) n * n;
            System.out.print(square + " ");
        };

        Arrays.stream(numbers)
            .boxed()
            .forEach(squarePrinter);

        System.out.println();

        scanner.close();
    }
}
```

**Status :** Correct

**Marks :** 10/10