

# Rajalakshmi Engineering College

Name: Kesavan M  
Email: 241501083@rajalakshmi.edu.in  
Roll no: 241501083  
Phone: 9789504694  
Branch: REC  
Department: AI & ML - Section 4  
Batch: 2028  
Degree: B.E - AI & ML

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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.Consumer;

```
public class Main {  
    public static void main(String[] args) {  
        Scanner sc = new Scanner(System.in);
```

```
        // Read number of elements
```

```
        int N = sc.nextInt();
```

```
        int[] arr = new int[N];
```

```
        // Read array elements
```

```
        for (int i = 0; i < N; i++) {
```

```
            arr[i] = sc.nextInt();
```

```
        }
```

```
        // Create a Consumer to print the square of a number
```

```
        Consumer<Integer> printSquare = x -> System.out.print((x * x) + " ");
```

```
        // Apply the Consumer to each element
```

```
        for (int num : arr) {
```

```
            printSquare.accept(num);
```

```
        }
```

```
        sc.close();
```

```
    }
```

```
}
```

**Status : Correct**

**Marks : 10/10**