

# 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.Consumer;

public class Main {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

int N = sc.nextInt(); // Read number of elements

int[] arr = new int[N];

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

arr[i] = sc.nextInt();

}

// Define a Consumer to print the square of a number

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

// Apply Consumer to each element

for (int num : arr) {

printSquare.accept(num);

}

sc.close();

}

}

**Status :** Correct

**Marks :** 10/10

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## 2024\_28\_III\_OOPS Using Java Lab

### 2028\_REC\_OOPS using Java\_Week 12\_Q1

Attempt : 1  
Total Mark : 10  
Marks Obtained : 10

#### Section 1 : Coding

##### 1. Problem Statement

Sabrina is working on a project that involves analyzing a set of numbers. In her exploration, she encounters scenarios where extracting even numbers and finding their sum is essential.

Create a program that calculates the sum of even numbers from a given array of integers using a lambda expression.

##### ***Input Format***

The first line of input consists of an integer N, representing the size of the array.

The second line consists of N space-separated integers, representing the elements of the array.

##### ***Output Format***

The output prints the sum of the even integers from the array.

Refer to the sample output for formatting specifications.

**Sample Test Case**

Input: 3  
29 37 45  
Output: 0

**Answer**

```
// You are using Java
import java.util.*;
import java.util.stream.*;

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();
        }

        int sumOfEvens = Arrays.stream(arr)
            .filter(num -> num % 2 == 0)
            .sum();

        System.out.println(sumOfEvens);
    }
}
```

**Status :** Correct

**Marks :** 10/10