

# Rajalakshmi Engineering College

Name: Darshan S  
Email: 241801040@rajalakshmi.edu.in  
Roll no: 241801040  
Phone: 7305911089  
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\_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(); // size of array
        int[] arr = new int[n];

        for (int i = 0; i < n; i++) {
            arr[i] = sc.nextInt();
        }

        // Lambda + Stream to calculate sum of even numbers
        int sum = Arrays.stream(arr)
                        .filter(x -> x % 2 == 0)
                        .sum();

        System.out.print(sum);
    }
}
```

**Status : Correct**

**Marks : 10/10**

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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