

# Rajalakshmi Engineering College

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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