

Rajalakshmi Engineering College

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Batch: 2028
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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 size of array
```

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

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

```
        // Read array elements
```

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

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

```
        }
```

```
        // Define Consumer to print 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);
```

```
        }
```

```
    }
```

```
}
```

Status : Correct

Marks : 10/10