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

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

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

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

        for (int num : arr)
        {
            square.accept(num);
        }
    }
}
```

Status : Correct   *Marks : 10/10*