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

```
import java.util.*;
import java.util.function.Consumer;

class SquarePrinter {
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        int n = Integer.parseInt(sc.nextLine());
        String[] input = sc.nextLine().split(" ");
        List<Integer> numbers = new ArrayList<>();

        for (int i = 0; i < n; i++) {
            numbers.add(Integer.parseInt(input[i]));
        }

        Consumer<Integer> squareConsumer = x -> System.out.print((x * x) + " ");
        numbers.forEach(squareConsumer);
    }
}
```

Status : Correct   *Marks : 10/10*