```java
package org.khushi;
import java.util.Scanner;
public class MaximumProduct {

    public static void main(String[] args) {
            Scanner sc = new Scanner(System.in);
        int n = sc.nextInt();
        if (n <= 0) {
            System.out.println("Invalid Input");
            return;
        }
        int[] array = new int[n];
        for (int i = 0; i < n; i++) {
            array[i] = sc.nextInt();
        }
        int maxProduct = Integer.MIN_VALUE;
        for (int i = 0; i < n; i++) {
            for (int j = 0; j < n; j++) {
                int product = array[i] * array[j];
                if (product > maxProduct) {
                    maxProduct = product;
                }
            }
        }
        if (maxProduct == Integer.MIN_VALUE) {
            System.out.println(-1);
        } else {
            System.out.println(maxProduct);
        }

        sc.close();
    }

}
```