Day 53 coding Statement : Given an integer array of size N. Write Program to find maximum product subarray in a given array.

Sample input 1:

4

2 -4 -1 -3

Sample output 1:

8 = {2, -4, -1}

Sample input 2:

5

1 5 -7 5 3

Sample output 2:

15 = {5, 3}

```java
import java.util.Arrays;
import java.util.Scanner;

public class Program {
    public static int maxProduct(int[] a) {
        int ans=Integer.MIN_VALUE;
        int cprod=1;
        for(int i=0;i<a.length;i++) {
            cprod*=a[i];
            ans=Math.max(ans, cprod);
            if(cprod==0) {
                cprod=1;
            }
        }
        cprod=1;
        for(int i=a.length-1;i>=0;i--) {
            cprod*=a[i];
            ans=Math.max(ans, cprod);
            if(cprod==0) {
                cprod=1;
            }
        }
        return ans;
    }
    public static void main(String[] args) {
```

```java
        Scanner sc=new Scanner(System.in);
        System.out.println("Enter the size of array: ");
        int n=sc.nextInt();
        System.out.println("Enter the array: ");
        int arr[]=new int[n];
        for(int i=0;i<n;i++) {
            arr[i]=sc.nextInt();
        }
        System.out.println(maxProduct(arr));
    }
}
```