

<https://course.acciojob.com/idle?question=ac88cc75-d94b-411e-b84d-ca0334811442>

● EASY

● Max Score: 30 Points

## Previous Greater element

---

You are given an array `arr` of distinct integers. Your task is to find the previous greater element for each element in the array. If previous greater doesn't exist print -1.

### Input Format

First line of input contains a single integer  $n$ , the size of array.

Second line of input contains  $n$  space separated integers representing the elements of the array.

### Output Format

Find the previous greater element for each of the element in the array.

### Example 1

Input

```
4
10 20 30 40
```

Output:

```
-1 -1 -1 -1
```

Explanation:

For element 10 we not have any element in its left which is greater than 10, so we print -1, similarly for 20, 30 and 40 no element is greater to the left of them. Therefore we print -1 -1 -1 -1.

## Example 2

Input

```
4
40 30 20 10
```

Output:

```
-1 40 30 20
```

Explanation:

For element 40 we dont have any value to its left which is greater than it, for 30 we have 40 on its left, for 20 we have 30 on its left and for 10 we have 20 on its left.

## Constraints

```
1 <= n <= 10^5
```

```
1 <= arr[i] <= 10^6
```

### Topic Tags

- [Stacks](#)
- [Arrays](#)

# My code

```
// n java
import java.util.*;
import java.lang.*;
import java.io.*;
```

```
public class Main
```

```

{
    public static void main (String[] args) throws
java.lang.Exception
    {
        //your code here
        Scanner s=new Scanner (System.in);
        int n=s.nextInt();
        int arr[]=new int[n];
        for(int i=0;i<n;i++)
            arr[i]=s.nextInt();
        Stack<Integer>st=new Stack<>();

        for(int i=0;i<n;i++)
        {
            while(true)
            {
                if(st.empty())
                {
                    st.push(arr[i]);
                    arr[i]=-1;
                    break;
                }

                if(st.peek()> arr[i])
                {
                    int a=arr[i];
                    arr[i]=st.peek();
                    st.push(a);
                    break;
                }
            }
        }
    }
}

```

```
                else    st.pop();
            }
        }
    for(int i=0;i<n;i++)
        System.out.print(arr[i]+" ");
        //System.out.print("HI ")
    }
}
```