

Next Greater Element in L.S

$$2 \rightarrow \frac{1}{-1} \rightarrow \frac{5}{2} \rightarrow X$$

Q8R \rightarrow

5	5	0
---	---	---

0 1 2

Qn 2 \rightarrow

$$\begin{array}{ccccccccc} 2 & \rightarrow & 7 & \rightarrow & 4 & \rightarrow & 3 & \rightarrow & 5 & \rightarrow & x \\ 0 & & 1 & & 2 & & 3 & & 4 & & \end{array}$$

7	0	5	5	0
0	1	2	3	4

$\hat{M}_{-1} \rightarrow \text{GND Loop} \rightarrow \text{TC} \rightarrow O(n^2)$

$$\int_{\text{for } (int\ i=0; i < n; ++i)} df$$

for $(int\ j = 0; j < n; ++j)$

$$i_f(a[i] < a[j]) \cdot f$$

```
ans[i] = a[j]
break;
```

4 4

$$TC = O(n^2)$$

Space = $O(n)$

M-2 \rightarrow Stack \rightarrow

2 \rightarrow 1 \rightarrow 7 \rightarrow 4 \rightarrow 5 \rightarrow 5 \rightarrow X
~~1~~ \rightarrow 0 ~~1~~ ~~2~~ ~~3~~ 4 5
 Arr1 \rightarrow [2 1 1 7 4 3 1 5]

Ans \rightarrow

0	0	0	0	0	0
---	---	---	---	---	---

 \rightarrow Initialize this array with zero

algo: if ($ll[i] > ll[st.top]$)
 { Pop till $ll[st.top] < ll[i]$
 & $ll[st.top]$'s greater element will be
 $ll[i]$;
 while ($ll[st.top] < ll[i]$)
 $st.pop()$

ans $[i] =$

{ else {
 $st.push(i)$;

Ex: \rightarrow 2 \rightarrow 1 \rightarrow 7 \rightarrow 4 \rightarrow 5 \rightarrow 5 \rightarrow X
 \downarrow \downarrow \downarrow \downarrow \downarrow \downarrow
 7 4 0 5 5 0

Initialize ans array with zero

	3 \rightarrow Pop
\swarrow	4 \rightarrow 5 > 4 > 3
Pop \leftarrow	27