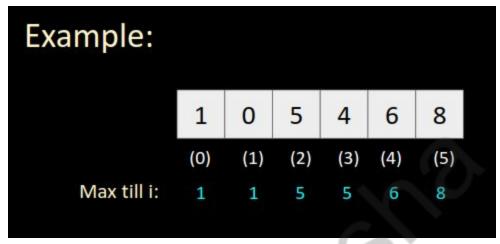
Arrays Challenge (Max till i)

Problem:

Given an array a[] of size n. For every i from 0 to n-1 output max(a[0], a[1],..., a[i]).



Approach:

- 1. Keep a variable mx which stores the maximum till ith element.
- 2. Iterate over the array and update,

$$mx = max(mx, a[i])$$

Iterations:



Apni Kaksha

• At i = 2:							
Given Array:	0	-9	1	3	-4	5	
			1				
mx = 1							
• At i = 3:							
Given Array:	0	-9	1	3	-4	5	P
				1			
	mx = 3						
• At i = 4:			9				
Given Array:	0	-9	1	3	-4	5	
					1		
		mx = 3					
• At i = 5:							
Given Array:	0	-9	1	3	-4	5	
						1	
					1	mx = 5	

Apmi Kaksha

Code:

```
int main()

int n;
cin >> n;

int a[n];
for(int i=0; i<n; i++)
{
    cin >> a[i];
}

int mx = -199999;
for(int i=0; i<n; i++)
{
    mx = max(mx, a[i]);
    cout << mx << endl;
}
return 0;
}</pre>
```

Time Complexity: O(n).

