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**Problem 4:** Given an array of integers arr, there is a sliding window of size k which is moving from the very left of the array to the very right. You can only see the k numbers in the window. Each time the sliding window moves right by one position. Return *the max sliding window*

```
from collections import deque
```

```
def max_sliding_window(arr, k): result = []

    window = deque()

    for i in range(len(arr)):
        if window and window[0] <= i - k:
            window.popleft()

        while window and arr[window[-1]] <= arr[i]:
            window.pop()

        window.append(i) if i

        >= k - 1:

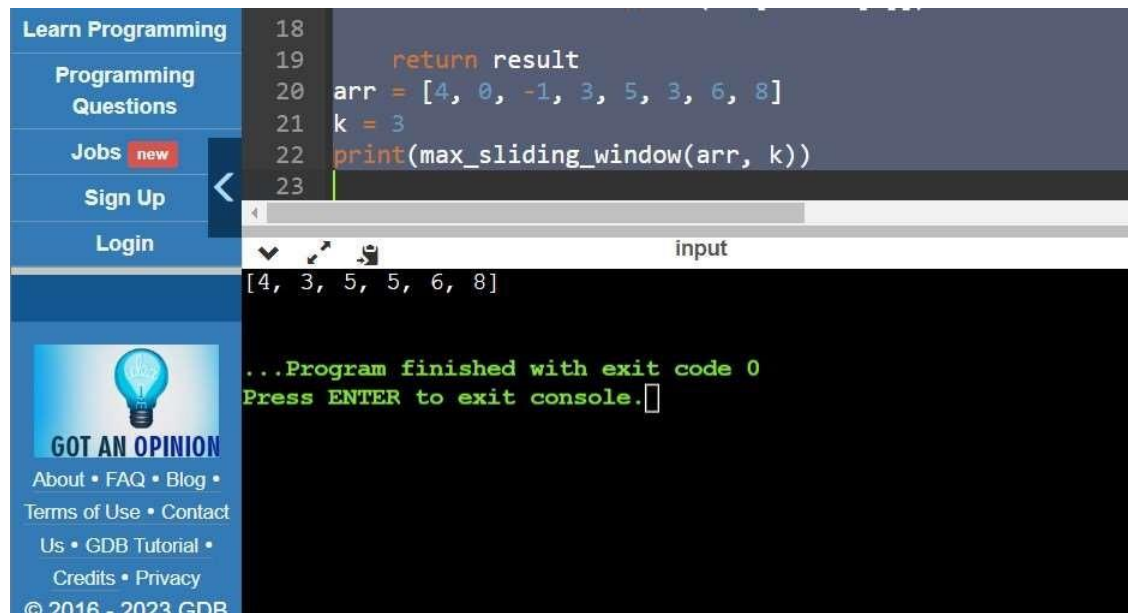
            result.append(arr[window[0]])

    return result

arr = [4, 0, -1, 3, 5, 3, 6, 8]

k = 3
```

```
print(max_sliding_window(arr, k))
```



The screenshot shows a web application interface. On the left is a blue sidebar with navigation links: 'Learn Programming', 'Programming Questions', 'Jobs' (with a 'new' badge), 'Sign Up', and 'Login'. Below these is a section titled 'GOT AN OPINION' with a lightbulb icon and links for 'About', 'FAQ', 'Blog', 'Terms of Use', 'Contact Us', 'GDB Tutorial', 'Credits', and 'Privacy'. The main area on the right contains a code editor with Python code and a terminal window below it. The code defines a function (partially visible), sets an array and a window size, and prints the result. The terminal shows the input array and the program's completion message.

```
18
19     return result
20 arr = [4, 0, -1, 3, 5, 3, 6, 8]
21 k = 3
22 print(max_sliding_window(arr, k))
23
```

input

[4, 3, 5, 5, 6, 8]

...Program finished with exit code 0  
Press ENTER to exit console.

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