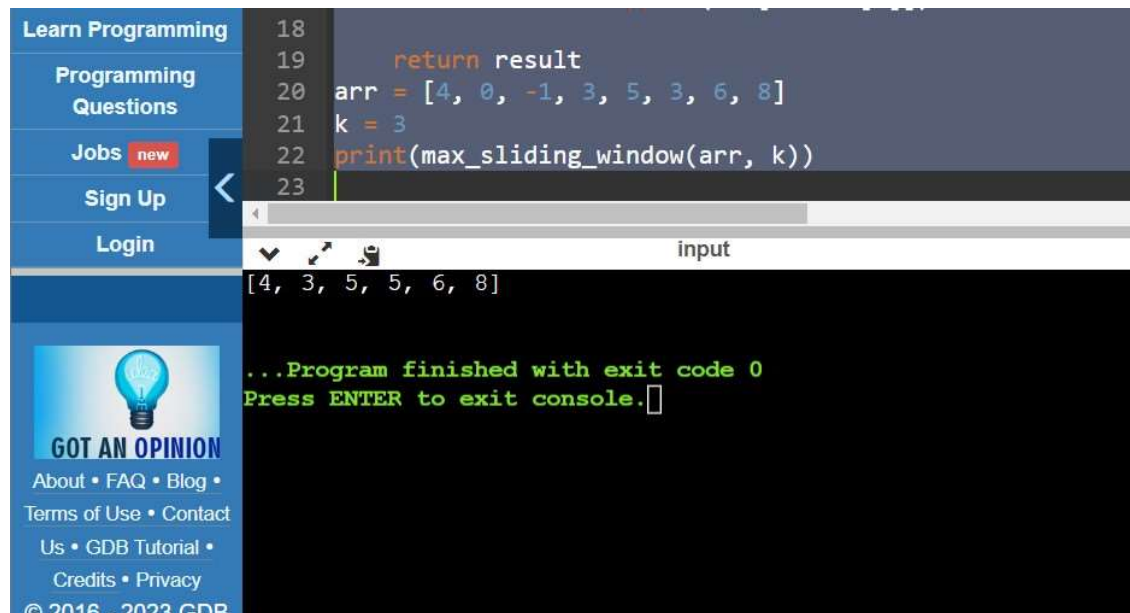


Problem 4: Given an array of integers `arr`, there is a sliding window of size `k` which is moving from the very left of the array to the very right. You can only see the `k` numbers in the window. Each time the sliding window moves right by one position. Return *the **max sliding window***

```
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-based IDE interface. On the left is a sidebar with navigation links: 'Learn Programming', 'Programming Questions', 'Jobs' (with a 'new' badge), 'Sign Up', and 'Login'. Below these links is a section titled 'GOT AN OPINION' with a lightbulb icon and a list of links: 'About', 'FAQ', 'Blog', 'Terms of Use', 'Contact Us', 'GDB Tutorial', 'Credits', and 'Privacy'. The main area displays a Python code editor with the following code:

```
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
```

Below the code editor is a console window. It shows the input array '[4, 3, 5, 5, 6, 8]' and the output '...Program finished with exit code 0'. It also prompts the user to 'Press ENTER to exit console.' with a cursor.