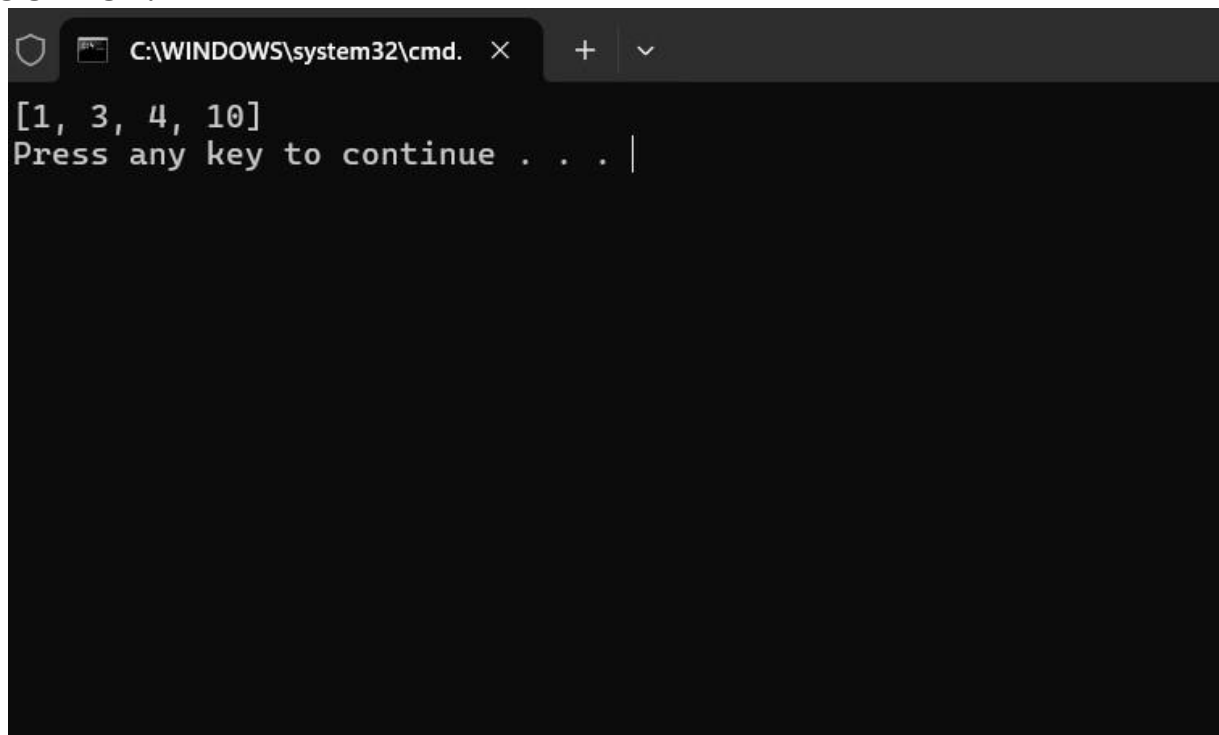


48) Merge Sorted Array You are given two integer arrays `nums1` and `nums2`, sorted in non-decreasing order, and two integers `m` and `n`, representing the number of elements in `nums1` and `nums2` respectively. Merge `nums1` and `nums2` into a single array sorted in non-decreasing order. The final sorted array should not be returned by the function, but instead be stored inside the array `nums1`. To accommodate this, `nums1` has a length of `m + n`, where the first `m` elements denote the elements that should be merged, and the last `n` elements are set to 0 and should be ignored. `nums2` has a length of `n`.

CODE: `def`

```
sort(a,b):  
a.sort()  
b.sort()  c=[]  for i in  
range(len(a)):  
    c.append(a[i])  for i  
in range(len(b)):  
    c.append(b[i])  
return c  
a=[3,1]  
b=[10,4]  
print(sort(a,b))
```

OUTPUT:

A screenshot of a Windows command prompt window. The title bar shows the path 'C:\WINDOWS\system32\cmd.' and standard window controls. The command prompt displays the output of the Python code: '[1, 3, 4, 10]' followed by the prompt 'Press any key to continue . . . |'. The background is black, and the text is white.

TIME COMPLEXITY : $O(m+n)$