

29) 10. Given two sorted arrays nums1 and nums2 of size m and n respectively, return the median of the two sorted arrays. The overall run time complexity should be $O(\log(m+n))$.

CODE:

```
def findMedianSortedArrays(nums1, nums2):
    merged = sorted(nums1 + nums2)
    total_len = len(merged)

    if total_len % 2 == 0:
        return (merged[total_len // 2 - 1] + merged[total_len // 2]) / 2
    else:
        return merged[total_len // 2]

nums1 = [1, 3]
nums2 = [2]
median = findMedianSortedArrays(nums1, nums2)
print("Median of the two sorted arrays is:", median)
```

OUTPUT:

A screenshot of a Windows command prompt window. The title bar shows 'C:\WINDOWS\system32\cmd.' with standard window controls. The command prompt displays the output of the Python script: 'Median of the two sorted arrays is: 2' followed by a prompt 'Press any key to continue . . . |'.

TIME COMPLEXITY : $O(\log(m+n))$