Problem 4: Given an integer array arr of size N, sorted in ascending order (with distinct values) and a target value k. Now the array is rotated at some pivot point unknown to you. Find the index at which k is present and if k isnot present return –1.

```
def find_target_index(arr, k):
    low, high = 0, len(arr) - 1

    while low <= high:
        mid = (low + high) // 2
        if arr[mid] == k:
            return mid

        if arr[low] <= arr[mid]:
            if arr[low] <= k <= arr[mid]:
                high = mid - 1
            else:
                low = mid + 1
        else:
            if arr[mid] <= k <= arr[high]:
                low = mid + 1
            else:
                high = mid - 1

    return -1
arr = [4, 5, 6, 7, 0, 1, 2, 3]
k = 0

index = find_target_index(arr, k)
print(index)
```


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input
4
...Program finished with exit code 0
Press ENTER to exit console.