

**Problem 5:** Given an integer array sorted in non-decreasing order, remove the duplicates in place such that each unique element appears only once. The relative order of the elements should be kept the same.

If there are  $k$  elements after removing the duplicates, then the first  $k$  elements of the array should hold the final result. It does not matter what you leave beyond the first  $k$  elements.

```
def removeDuplicates(arr):  
    if len(arr) == 0:  
        return 0  
  
    k = 1 # Pointer to keep track of the position of the next unique element  
  
    for i in range(1, len(arr)):  
        if arr[i] != arr[k - 1]:  
            arr[k] = arr[i]  
            k += 1  
  
    return k  
  
arr = [1, 1, 2, 2, 2, 3, 3]  
print(removeDuplicates(arr)) # Output: 3  
print(arr) # Output: [1, 2, 3, 2, 2, 3, 3]
```

```
18 |
input
3
[1, 2, 3, 2, 2, 3, 3]

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