

**Date: 09/09/2023**

**1. Given a list of numbers , print a new list that contain number divisible by 5**

example : [5,15,3,2,1]

output : [5,15]

TimeComplexity :  $O(n)$

SpaceComplexity :  $O(n)$

```
def divisibleBy5(nums):
    if len(nums) == 0:
        return []
    res = []
    for n in nums:
        if n%5 == 0:
            res.append(n)

    return res
```

Test Cases:

input : [5,15,3,2,1]

output : [5,15]

input : []

output : []

input : [ 0 ]

output : [ 0 ]

=====

**2. Given an list of numbers, modify the list such that all 0 go to end of this list**

example :

input : [1, 0, 2, 0, 3, 0, 5]

output : [1,2,3,5,0,0,0]

TC :  $O(n)$

SC :  $O(1)$

```
def moveZeroes(nums):
    i = 0
    for j in range(len(nums)):
        if nums[j] != 0:
```

```

        nums[i],nums[j]=nums[j],nums[i]
        i += 1
    return nums

```

Test Cases:

TC 1:

input : [1,2,0,3,0,5]

TC 2:

input : []

return : []

TC3:

input : [1]

output: [1]

```

def moveZeroes(nums):
    i = 0
    j = 0
    while i < len(nums) and j < len(nums):
        while nums[i] != 0:
            i = i + 1
        j = i + 1
        while j < len(nums) and nums[j] == 0:
            j = j + 1
        if j < len(nums):
            nums[i],nums[j]=nums[j],nums[i]
            i = i + 1
            j = j + 1
    return nums
nums = [0,0,0,5,0]
print(moveZeroes(nums))

```

**move zeroes with new list**

```

def moveZeroes(nums):
    res = []
    for i in range(len(nums)):
        if nums[i] != 0:
            res.append(nums[i])
    return res + [0] * (len(nums)-len(res))
nums = [0,0,0,5,0,1,4]

```

```
print(moveZeroes(nums))
```