class Solution:

def threeSum(self, nums: List[int]) -> List[List[int]]:

return self.usingSortingAndTwoPointer(nums)

def usingSortingAndTwoPointer(self, nums):

nums.sort()

added = set()

out = []

for i in range(len(nums) - 1, -1, -1):

last = nums[i]

start, end = 0, i - 1

while start < end:

s = last + nums[start] + nums[end]

if s == 0:

if (last, nums[start], nums[end]) not in added: out.append([last, nums[start], nums[end]])

added.add((last, nums[start], nums[end]))

start += 1

elif s > 0:

end -= 1

else: start += 1

return out