3 SUM

Given an integer array nums, return all the triplets [nums[i], nums[j], nums[k]] such that i != j, i != k, and j != k, and nums[i] + nums[j] + nums[k] == 0.

Notice that the solution set must not contain duplicate triplets.

Example 1:

Input: nums = [-1,0,1,2,-1,-4]

Output: [[-1,-1,2],[-1,0,1]]

Explanation:

nums[0] + nums[1] + nums[2] = (-1) + 0 + 1 = 0.

nums[1] + nums[2] + nums[4] = 0 + 1 + (-1) = 0.

nums[0] + nums[3] + nums[4] = (-1) + 2 + (-1) = 0.

The distinct triplets are [-1,0,1] and [-1,-1,2].

Notice that the order of the output and the order of the triplets does not matter.

Example 2:

Input: nums = [0,1,1]

Output: []

Explanation: The only possible triplet does not sum up to 0.

Example 3:

Input: nums = [0,0,0]

Output: [[0,0,0]]

Explanation: The only possible triplet sums up to 0.

Constraints:

- 3 <= nums.length <= 3000
- -10^5 <= nums[i] <= 10^5