January 2024 CSE 102
Online Assignment on Arrays
Triplet Sum

Time: 30 minutes

Subsections A1 & A2

Given an integer array **nums**, return all the triplets [nums[i], nums[j], nums[k]] **such that**

- i ! = j, i ! = k, and j ! = k
- nums[i] + nums[j] + nums[k] == 0

Note: A triplet refers to a set of three elements from the array. Notice that the solution set must not contain duplicate triplets.

Input

The first line will have a positive integer n. The second line will have n numbers.

Sample I/O

Input	Output	Explanation
6 -1 0 1 2 -1 -4	[[-1, -1, 2], [-1, 0, 1]]	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.
3 0 1 1	[ ]	The only possible triplet does not sum up to 0.
3 0 0 0	[[0, 0, 0]]	The only possible triplet sums up to 0.

** You don't need to print the explanation.

Marking Guideline

70% marks will be awarded if you generate results without removing duplicates.

Submission Guideline

1. Create a new folder named "your 7-digit student ID_online_array".
2. Your .c file should be named "your 7-digit student ID.c".
3. Put your .c file (not .exe or .o files) in the folder created in step 1.
4. Right-click on the folder, select "send to > compressed (zipped) folder" to zip the folder. Submit the zip file on Moodle.

For example, if your student ID is 2305999, then, rename your .c file as "2305999.c" and create a folder called "2305999_online_array". Put the .c file in the folder and zip it.