package day3;

import java.util.ArrayList;

import java.util.Arrays;

import java.util.List;

import java.util.Scanner;

public class Three\_Sum {

public List<List<Integer>> threeSum(int[] nums) {

Arrays.sort(nums);

ArrayList<List<Integer>> result = new ArrayList<>();

for (int i = 0; i < nums.length; i++) {

int j = i + 1;

int k = nums.length - 1;

if (i > 0 && nums[i] == nums[i - 1]) {

continue;

}

while (j < k) {

if (k < nums.length - 1 && nums[k] == nums[k + 1]) {

k--;

continue;

}

if (nums[i] + nums[j] + nums[k] > 0) {

k--;

} else if (nums[i] + nums[j] + nums[k] < 0) {

j++;

} else {

ArrayList<Integer> l = new ArrayList<>();

l.add(nums[i]);

l.add(nums[j]);

l.add(nums[k]);

result.add(l);

j++;

k--;

}

}

}

System.out.println(result);

return result;

}

public static void main(String[] args) {

Scanner s = new Scanner(System.in);

System.out.println("Enter the length of the array:");

int length = s.nextInt();

int [] n = new int[length];

System.out.println("Enter the elements of the array:");

for(int i=0; i<length; i++ ) {

n[i] = s.nextInt();

}

Three\_Sum d = new Three\_Sum();

d.threeSum(n);

}

}