

## Day 15

### 1. 4Sum.

Given an array `nums` of `n` integers, return an array of all the unique quadruplets `[nums[a], nums[b], nums[c], nums[d]]` such that:

$0 \leq a, b, c, d < n$

`a`, `b`, `c`, and `d` are distinct.

`nums[a] + nums[b] + nums[c] + nums[d] == target`

You may return the answer in any order.

Example 1: Input: `nums = [1,0,-1,0,-2,2]`, `target = 0` Output: `[[-2,-1,1,2],[-2,0,0,2],[-1,0,0,1]]`

Example 2: Input: `nums = [2,2,2,2,2]`, `target = 8` Output: `[[2,2,2,2]]`

### 2. Largest palindromic number.

You are given a string `num` consisting of digits only.

Return the largest palindromic integer (in the form of a string) that can be formed using digits taken from `num`. It should not contain leading zeroes.

Notes:

You do not need to use all the digits of `num`, but you must use at least one digit.

The digits can be reordered.

Example 1:

Input: `num = "444947137"`

Output: `"7449447"`

Explanation:

Use the digits `"4449477"` from `"444947137"` to form the palindromic integer `"7449447"`.

It can be shown that `"7449447"` is the largest palindromic integer that can be formed.

Example 2:

Input: `num = "00009"`

Output: `"9"`

Explanation:

It can be shown that `"9"` is the largest palindromic integer that can be formed.

Note that the integer returned should not contain leading zeroes.

### 3. Median of row wise sorted array.

### 4. Remove stars from a string.

You are given a string `s`, which contains stars `*`.

In one operation, you can:

Choose a star in s.

Remove the closest non-star character to its left, as well as remove the star itself.

Return the string after all stars have been removed.

Note:

The input will be generated such that the operation is always possible.

It can be shown that the resulting string will always be unique.

Example 1:

Input: s = "leet\*\*cod\*e"

Output: "lecoe"

Explanation: Performing the removals from left to right:

- The closest character to the 1st star is 't' in "leet\*\*cod\*e". s becomes "lee\*cod\*e".
- The closest character to the 2nd star is 'e' in "lee\*cod\*e". s becomes "lecod\*e".
- The closest character to the 3rd star is 'd' in "lecod\*e". s becomes "lecoe".

There are no more stars, so we return "lecoe".

Example 2:

Input: s = "erase\*\*\*\*\*"

Output: ""

Explanation: The entire string is removed, so we return an empty string.