H Home Workout Playlist

4s, 256MB

Life feels dull when you cannot go outside or meet your favorite people. Fortunately, your favorite bands keep releasing new hits this year, such as *Ussewa*, *Wan Koei Tuen*, and *Thought Crime*. Therefore, you decide to work out at home with your playlist!

You have a playlist of N songs, numbered from 1 to N, representing the order in which they are played. Each song i has a **hypeness value** A_i.

While exercising, you only want to listen to songs that match a certain pattern of rising excitement. You may choose to **skip some songs**, keeping the remaining ones in their original order.

Formally, let $S = [S_1, S_2, \ldots, S_k]$ be a subsequence of $[1,2,\ldots,N]$ representing the indices of unskipped songs. Your task is to find the **longest** possible subsequence S such that:

- The hypeness strictly increases: $A_{S_i} > A_{S_{i-1}}$ for all $i \geq 2$.
- The increase in hypeness also strictly increases: $A_{S_i} - A_{S_{i-1}} > A_{S_{i-1}} - A_{S_{i-2}}$ for all $i \geq 3$.

In other words, both the hypeness values and the gaps between them must form strictly increasing sequences. Find the maximum possible length of such a subsequence S.

INPUT

The first line contains a single integer N ($1 \leq N \leq 5 \cdot 10^4$) — the number of songs in the playlist.

The second line contains N integers $A_1, A_2, \ldots, A_N$ ($1 \leq A_i \leq 10^5$) — the hypeness values of the songs.

OUTPUT

On the first line, print one integer k — the number of unskipped songs.

On the second line, print k integers — the indices of the unskipped songs in ascending order.

If there are multiple valid lists of unskipped songs, you may print any of them.

EXAMPLE

INPUT	OUTPUT
5 2 1 3 4 6	3 3 4 5

NOTE

Other valid lists of unskipped songs include [1,3,5], which correspond to hypeness values [2,3,6], and [2,3,5], which correspond to hypeness values [1,3,6]. You may output any of them.