# Problem C
# Rod Cutting

Time limit: 1 second
Memory limit: 2048 megabytes

## Problem Description

You are presented with a rod of length $x_n$ that has $n$ marked points. The distance between the beginning of the rod and the $i$-th marked point is denoted as $x_i$.

Figure 1: An example of rod with marked points.

Your objective is to divide the rod into $n$ pieces using $n-1$ cuts. In each cut, you choose an unselected marked point $x_i$ ($1 \leq i \leq n-1$) and make the cut at that point. As a result, the rod containing that marked point is split into two separate pieces. The cost associated with this operation is equal to the difference in length between the two resulting rods.

Your task is to determine the minimum cost required to break the rod into $n$ pieces. You also have to show a way to perform the cuts.

## Input Format

The first line of the input contains an integer $n$. The second line of the input contains $n$ space-separated integers $x_1, x_2, \ldots, x_n$.

## Output Format

In the first line, output the minimum cost required to divide the rod into $n$ pieces.

In the second line, provide a sequence of $n-1$ integers: $a_1, a_2, \ldots, a_{n-1}$. These integers represent the order in which the cuts should be made. To clarify, when outputting $a_1, a_2, \ldots, a_{n-1}$, you will begin by making the first cut at the $a_1$-th marked point and continue with subsequent cuts, all the way to the $a_{n-1}$-th marked point.

To achieve a correct solution, it is essential that $a_1, a_2, \ldots, a_{n-1}$ forms a permutation of $1, 2, \ldots, n-1$, demonstrating a method to make these cuts that minimizes the cost.

## Technical Specification

- $2 \leq n \leq 200$
- $1 \leq x_i \leq 10^9$ for $i = 1, 2, \ldots, n$
- It is guaranteed that $x_1, \ldots, x_n$ is sorted in ascending order, and all numbers are distinct.

## Scoring

1. (30 points) $2 \leq n \leq 10$
2. (70 points) No additional constraints.

## Sample Input 1

```
5
3 5 10 13 29
```

## Sample Output 1

```
9
4 2 1 3
```

## Sample Input 2

```
2
1 100
```

## Sample Output 2

```
98
1
```

## Sample Input 3

```
7
2 49 69 88 134 135 307
```

## Sample Output 3

```
173
6 2 1 4 3 5
```