CS 401 - Computer algorithms, Spring 2020, CS, UIC
Programming assignment 1
Instructor: Anastasios Sidiropoulos
Due date: April 15, 2020

Problem 1: Integer partition. You are given n positive integers $x_1, \ldots, x_n \in \mathbb{N}$. The goal is to determine whether this set of integers can be partitioned into two disjoint subsets of the same sum.

The input consists of a sequence of positive integers, each given in a separate line. The first number is n, and the following n numbers are $x_1, \ldots, x_n$. If no solution exists, your algorithm should output `NO`. Otherwise, it should output the set of numbers in one of the two subsets, in an arbitrary order, with each number appearing on a separate line.

Example 1:

Input:

```
4
10
7
5
2
```

Output:

```
5
7
```

Example 2:

Input:

```
4
10
8
5
2
```

Output:

```
NO
```