

Problem D. D

Time limit 3000 ms

Mem limit 524288 kB

An array a is called *ugly* if it contains **at least one** element which is equal to the **sum of all elements before it**. If the array is not ugly, it is *beautiful*.

For example:

- the array $[6, 3, 9, 6]$ is ugly: the element 9 is equal to $6 + 3$;
- the array $[5, 5, 7]$ is ugly: the element 5 (the second one) is equal to 5;
- the array $[8, 4, 10, 14]$ is beautiful: $8 \neq 0$, $4 \neq 8$, $10 \neq 8 + 4$, $14 \neq 8 + 4 + 10$, so there is no element which is equal to the sum of all elements before it.

You are given an array a such that $1 \leq a_1 \leq a_2 \leq \dots \leq a_n \leq 100$. You have to **reorder** the elements of a in such a way that the resulting array is beautiful. Note that you are not allowed to insert new elements or erase existing ones, you can only change the order of elements of a . You are allowed to keep the array a unchanged, if it is beautiful.

Input

The first line contains one integer t ($1 \leq t \leq 2000$) — the number of test cases.

Each test case consists of two lines. The first line contains one integer n ($2 \leq n \leq 50$). The second line contains n integers a_1, a_2, \dots, a_n ($1 \leq a_1 \leq a_2 \leq \dots \leq a_n \leq 100$).

Output

For each test case, print the answer as follows:

- if it is impossible to reorder the elements of a in such a way that it becomes beautiful, print NO;
- otherwise, in the first line, print YES. In the second line, print n integers — any beautiful array which can be obtained from a by reordering its elements. If there are multiple such arrays, print any of them.

Sample 1

Input	Output
4 4 3 3 6 6 2 10 10 5 1 2 3 4 5 3 1 4 4	YES 3 6 3 6 NO YES 2 4 1 5 3 YES 1 4 4