A. Fashion in Berland

time limit per test: 1 second
memory limit per test: 256 megabytes
input: standard input
output: standard output

According to rules of the Berland fashion, a jacket should be fastened by `all the buttons except only one`, but not necessarily it should be the last one. Also if the jacket has only one button, it should be fastened, so the jacket will not swinging open.

You are given a jacket with n buttons. Determine if it is fastened in a right way.

Input

The first line contains integer n ($1 \le n \le 1000$) — the number of buttons on the jacket.

The second line contains n integers a_i ($0 \le a_i \le 1$). The number $a_i = 0$ if the i-th button is not fastened. Otherwise $a_i = 1$.

Output

In the only line print the word "`YES`" if the jacket is fastened in a right way. Otherwise print the word "`NO`".

Examples

input
3 1 0 1
output
YES

input
3 1 0 0
output
NO