
P0001. Upward numbers

P32149_en

We say that a natural number is *upward* if its digits fulfill the following property: on the right of a 0 can only be a 1, on the right of a 1 can only be a 2, on the right of a 2 can only be a 3, ..., on the right of a 8 can only be a 9 and on the right of a 9 can only be a 0. For instance, 34567 and 8901 are upward, but 1223 and 245 are not.

Your task is to write a program that, given a sequence of natural numbers, indicates if this contains two or more consecutive upward numbers.

Your program must include the function

```
\begin{verbatim}
    bool is_upward(int n);
\end{verbatim}
```

that indicates if a natural number $|n|$ is upward.

Input

The input is a sequence of natural numbers.

Output

If the input contains two upward consecutive numbers, your program must print “|YES|” in a line; otherwise print “|NO|” in a line.

Sample input 1

1234 4321 4554 2345 8901 123 6784

Sample output 1

YES

Sample input 2

Sample output 2

NO

Sample input 3

90 0

Sample output 3

YES

Problem information

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