Problem D: Non-boring sequences

We were afraid of making this problem statement too boring, so we decided to keep it short.

A sequence is called **non-boring** if its every connected subsequence contains a unique element, i.e. an element such that no other element of that subsequence has the same value.

Given a sequence of integers, decide whether it is **non-boring**.

Input

The first line of the input contains the number of test cases T. The descriptions of the test cases follow:

Each test case starts with an integer n ($1 \leqslant n \leqslant 200\,000$) denoting the length of the sequence. In the next line the n elements of the sequence follow, separated with single spaces. The elements are non-negative integers less than 10^9.

Output

Print the answers to the test cases in the order in which they appear in the input. For each test case print a single line containing the word **non-boring** or **boring**.

Example

Input	Output
4 5 1 2 3 4 5 5 1 1 1 1 1 5 1 2 3 2 1 5 1 1 2 1 1	non-boring boring non-boring boring