

Finding SAD Code

Team ID: 17

Team Member: R05902080 B02705016 B03303109

1. Topic

Stack

2. Description

"It's been a long day
Without you my friend
And I'll tell you all about it
When I see you again
We've come a long way
From where we began
Oh I'll tell you all about it
When I see you again
When I see you again"

On the Island of Sad, there exists a lucky code named "SAD Code". The locals believe it can make them be able to see the spirit of their loved ones again, so most things on the island are ordered according to this code. We are scientists doing research on the island, and we have collected all the data we need. Now we are going to see if this data we collected really exists the mystery SAD Code.

The SAD Code is a specific pattern of numbers. For example, given a sequence of numbers (ex: $V_a, V_b, V_c \dots$), there exists $V_n > V_o > V_m$, where $m < n < o$ (m, n, o do not have to be continuous). Please use "stack" to check if there exists a pattern like this in each dataset given.

3. Input and output format

Input:

k

datasets

k: #of datasets ($k \leq 100$)

dataset: contains a sequence of numbers (Each dataset contains less than 160,000 numbers, and all numbers ≥ 0 . But -1 occurs to show the end of the dataset.)

Output:

1/0

1: true

0: false

4. Sample input and output

Sample1

Input:

1

1 2 3 4 5 7 6 9 8 -1

Output:

1

Sample2

Input:

2

1 2 3 4 5 6 7 8 9 10 -1

3 3 3 6 6 6 6 6 6 6 6 -1

Output:

0

0

5. Time and memory limit

Time: 5s.

Memory: 10MB.

6. PPT link

<https://drive.google.com/open?id=0Bx2y-Kn9zhT9ajRXZzYxY2o4UUU>

