

00 Hr 21 Min 08 Sec
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Remaining Submissions

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Coding Area

A

B

ONLINE EDITOR (B)

Covid Stats

— Problem Description

In the situation of pandemic, the central Government wants to know the status of covid positive cases in the states and wants to get a trend regarding increase or decrease in the rate of positive cases.

They have some day by day data points from states. The data contains, for each state, the number of tests conducted in the state and the number of people tested positive in that state on that day.

The central government wants to determine the trend of the total positivity rate across all states, which is the ratio of the positive cases to the total number of tests taken. Because of the speed of the tests, test results arrive on the same day, and the reports reach the central government on the same day.

If the positivity rate is increasing from one day to the next, print "Increasing". If the positivity rate is decreasing from one day to the next, print "Decreasing". If the positivity rate does not change from one day to the next, print "Same"

You are given D days of data of S states.

— Constraints

$1 < D \leq 10$

$0 < S \leq 20$

— Input

There are multiple lines in the input. Each line has a set of space separated integers.

The first line contains two space separated Integers D and S, which denote number of days and number of states respectively

This is followed by D sets of two lines each, with each set corresponding to a day's data, and the sets of data corresponding to consecutive days.

The set of data for a day consists of two lines:

The first line contains S space separated integers denoting number of tests that took place on that day in each state

The second line contains S space separated integers denoting number of covid positive cases found that day in each state

— Output

Since D days of data will be provided only D - 1 trends can be obtained. Print each trend on a new line according to criteria mentioned below.

If the overall positivity is greater than the previous day's rate, print "Increasing". If the overall positivity is less than the previous day's rate, print "Decreasing". If the overall positivity is the same as the previous day's rate, print "Same".

Please refer the Examples section for better understanding

— Time Limit

1

— Explanation

Example 1

Input

3 3

10 20 30

9 19 29

10 20 30

9 19 28

100 200 300

90 190 280

Output

Decreasing

Same

Explanation:

We are given D = 3 and S = 3

As D=3, there will be (D-1) = 2 output lines

For Day1 we are having:

Total number of tests done in all S states: $10 + 20 + 30 = 60$

Total number of people tested positive in all S states $9 + 19 + 29 = 57$

Positivity rate of Day1: $57 / 60 = 19/20$

Note: we cannot compare Day1's rate because we don't have previous day's data.

For Day2 we are having:

Total number of tests done in all S states: $10 + 20 + 30 = 60$

Total number of people tested positive in all S states $9 + 19 + 28 = 56$

Positivity rate of Day2: $56 / 60 = 28/30$

So, we can see that Day2's rate < Day1's rate so we print "Decreasing" as the first line of output.

For Day3 we are having:

Total number of tests done in all S states: $100 + 200 + 300 = 600$

Total number of people tested positive in all S states $90 + 190 + 280 = 560$

Positivity rate of Day2: $560 / 600 = 28/30$

So, we can see that Day3's rate is same as Day2's rate so we print "Same" as the second line of output.

Example 2

Input

2 3

100 200 300

50 100 150

10 20 30

0 0 0

Output

Decreasing

Explanation:

We are given $D = 2$ and $S = 3$

As $D=2$, there will be $(D-1) = 1$ output line.

For Day1 we are having:

Total number of tests done in all S states: $100 + 200 + 300 = 600$

Total number of people tested positive in all S states $50 + 100 + 150 = 300$

Positivity of Day1: $300 / 600 = 1 / 2$

Note: we cannot compare Day1's rate because we don't have previous day's ratio.

For Day2 we are having:

Total number of tests done in all S states: $10 + 20 + 30 = 60$

Total number of people tested positive in all S states $0 + 0 + 0 = 0$

Positivity rate of Day2: 0 positive people out of 60 people i.e. 0

So, we can see that Day2's rate < Day1's rate so we print "Decreasing" as output.

Upload Solution [Question : B]

☐ I, **sreejit dey** confirm that the answer submitted is my own.

☐ Took help from online sources (attributions)

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