Wreck Sahab

ZPRAC-16-17-Lab8

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[20]*Wreck Sahab*

Shaktimaan came to know about Sahab's evil plans of defaming Shaktimaan by revealing his identity. The information of the identity of Shaktimaan is locked in a locker. The locker can be opened using a passcode. Please help Shaktimaan to find out the passcode and get the information papers from the locker before Sahab does.

The passcode is encrypted in a 2-D character matrix of size $n \times n$. Specifically, it consists of words formed from characters present in the bottom right triangular part of the matrix. Each word starts from last row and continues in the direction of right diagonal as shown below(bottom-left to top-right). For example, consider the below 3×3 matrix

x x t
x a m
f a l

The passcode for above matrix is "I am fat" as "I", "am" and "fat" are the words formed in the direction of right diagonal starting from the bottom-right corner("I") and following consecutive parallel diagonals for the other words $a \rightarrow m$ and $f \rightarrow a \rightarrow t$.

Given n and matrix as the input, print the passcode as output.

Note: Notice in the passcode, the space between each word but not before the first word. Also take care while taking input, it is a space separated matrix of characters. There can also be multiple whitespaces between the characters. Make sure your input is correctly recorded in your matrix.
Also, you should define only one 2-D array for taking input. declaring an extra 2-D array might exceed memory limit.

Example1:

Input:
3
x x t
x a m
f a l
Output:
I am fat

Example2:

Input:
4
x x t w
x x o t
x n o o
k n d l
Output:
I do not know

Constraints:
$1 \leq n \leq 100$

Hint for taking input: you can input each entry of the matrix as a string of size 2.

Basically, input $n2$ strings one by one and store first character of the string at the respective location in the matrix.