Artificium

Find a Safe Place

Runtime Limit – 3s

Problem Statement

Hero is surrounded by monsters in a deep dungeon. He is exhausted and injured, so he can't fight. Hero has a medical kit, but he can't use it if monsters are attacking him. Your goal is to help him find a safe place where monsters can't attack him.

You will be given an ASCII representation of the dungeon map, where:

- H is a hero.
- Digits from 1 to 9 is a monster. Its speed equals this digit.
- X is empty space.

Each monster can move as many squares per turn as its speed. If a monster ends up adjacent to a hero, the hero will be attacked. (Monster can't attack diagonally)

Hero has no movement limitation.

You must find the cell which can't be attacked by monsters at the end of this turn and the output coordinates of this cell. If there are several such cells, print the coordinates of the one closest to the hero.

Example:

XXX

1XX

XXX

1 is the enemy.

0XX

1**0**X

0XX

It can move on cells marked as **0**.

OAX

1OA

OAX

It can attack cells marked as **A**.

So the cells **(2,0)** and **(2,2)** are safe.

Format

Input

Line 1: *n*, which is side of square dungeon map

Next *n* lines: ASCII representation of this map

Output

A single line containing coordinates of closest to the hero safe cell in format (*x*,*y*)

Constraints

$0 < n < 16$

It is guaranteed that there is at least one safe cell in each case.

There won't be cases when there are several safe cells which are of equal distance to the hero.

Sample

Input

3

HXX

1XX

XXX

Output

(2,0)