## More Caterpillars

As we mentioned previously, there are two types of caterpillars.
Your new task is to print several caterpillars which are relaxing, lying on a square.

## Input

First two integers: $c, 1<=c<=100$, denoting the number of caterpillars and $n, 10<=n<=100$ the size of the square. Each of the next lines consists of one letter ( V , for vertical caterpillars or H for horizontal ones, an integer $3<=n<=20$ - the caterpillar size in segments and two integers: $x, y$ denoting the coordinates of the upper left corner of the given caterpillar.

## Output

The $n \times n$ square and the caterpillars according to the description. Please consult the examples below.

## Examples

## Example 1

Input:
212
V5 11
H3 710
Output:
\#\#\#.
..\#.........
\#\#\#.
\#..
\#\#\#.
..\#.
\#\#\#.
\#..
\#\#\#.
..\#...\#.\#\#\#.
......\#.\#.\#.
......\#\#\#.\#\#

## Example 2

Input:
414
H3 31
H3 44
V4 25
V3 87

## Output:

..\#.\#\#\#.
..\#.\#.\#.......
..\#\#\#.\#\#.
.\#\#\#.\#.\#......
...\#\#\#.\#\#.....
.\#\#\#...\#\#\#....
.\#.......\#....
.\#\#\#...\#\#\#....
...\#...\#......
.\#\#\#...\#\#\#....
.\#.......\#....

## Scoring

By solving this problem you score 10 points.

