# Drawing

## Description

Epp11e likes drawing very much, but he is too lazy to consider what he is going to draw.

One day Epp11e found a very interesting drawing game which perfectly meet his needs.

The game provides you with a n\*n canvas and a pen. Initialy the canvas any contains white cells(represented by ‘.’), you can only draw the canvas clockwise helically and only start your drawing at the top-left cell of the canvas. That is to say your drawing order should follow the table below when n = 4

|  |  |  |  |
| --- | --- | --- | --- |
| 0 | 1 | 2 | 3 |
| 11 | 12 | 13 | 4 |
| 10 | 15 | 14 | 5 |
| 9 | 8 | 7 | 6 |

You may ask why we should care about the drawing order of the game, so I STRESS that the pen provided is not an ordinary pen, it’s a magic pen in fact. After you draw a cell the color of the pen would change immediately. We use upper characters ‘A’ – ‘Z’ to present each color so there are at most 26 colors. A string str consist of ‘A’ – ‘Z’ represent the color of the pen, when you draw the ith cell in the drawing order, the color of the pen will change to str[i]. Note you stop your drawing immediatedly if the color run out OR you have drawn all the cell.

Given the size of the canvas and the color of the pen, you should output the canvas after drawing.

## Input

The first line contains a integer T ( T <= 50), then T cases follows.

In each case, there are 2 lines of input.

The first line contains a single integer n representing the size of the canvas.

The second line contains a string str.

1 <= T <= 50

0 < n < 80

0 < len(str) <= 3000

## Output

For each case, you should output a n\*n matrix of the coresponeding canvas.

Output a blank line after each case.

## Sample

|  |  |
| --- | --- |
| **Input** | **Output** |
| 3  ABCDEFGHI  3  A | ABC  HID  GFE  A..  ...  ... |

## Hint

Len(str) means the length of the str.