

Akhil And Colored Balls

Problem Code: **ACBALL**

Akhil has many balls of white and black colors. One day, he was playing with them. During the play, he arranged the balls into two rows both consisting of N number of balls. These two rows of balls are given to you in the form of strings X , Y . Both these string consist of 'W' and 'B', where 'W' denotes a white colored ball and 'B' a black colored.

Other than these two rows of balls, Akhil has an infinite supply of extra balls of each color. he wants to create another row of N balls, Z in such a way that the sum of hamming distance between X and Z , and hamming distance between Y and Z is maximized.

[Hamming Distance](#) between two strings X and Y is defined as the number of positions where the color of balls in row X differs from the row Y ball at that position. e.g. hamming distance between "WBB", "BWB" is 2, as at position 1 and 2, corresponding colors in the two strings differ.

As there can be multiple such arrangements of row Z , Akhil wants you to find the lexicographically smallest arrangement which will maximize the above value.

Input

- The first line of the input contains an integer T denoting the number of test cases. The description of T test cases follows:
 - First line of each test case will contain a string X denoting the arrangement of balls in first row
 - Second line will contain the string Y denoting the arrangement of balls in second row.
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Output

- For each test case, output a single line containing the string of length N denoting the arrangement of colors of the balls belonging to row Z .
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Constraints

- $1 \leq T \leq 3$
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Subtasks

- Subtask #1 (10 points) : $1 \leq N \leq 16$
 - Subtask #2 (20 points) : $1 \leq N \leq 10^3$
 - Subtask #3 (70 points) : $1 \leq N \leq 10^5$
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Example

Input :

1

WBWB

WBBB

Output:

BWBW

Explanation

Example case 1. As we know, Hamming Distance(WBWB, BWBW) + Hamming Distance(WBBB, BWBW) = 4 + 3 = 7.

You can try any other value for string **Z**, it will never exceed 6.