Problem I. Innovative Alignment

Input file:	`stdin`
Output file:	`stdout`
Time limit:	2 seconds
Memory limit:	256 MB

Stringers can only read books if the i'th word of consecutive sentences start at the same position. If this condition is not met, they cannot read their books, and get rather upset. Can you help the **Stringers** by aligning all the given words correctly?

Input

The first line contains one integer n ($1 \leq n \leq 10$), representing the number of sentences you will be given to align.

The next n lines that follow contain the sentences to align. Each sentence contains up to 10 words, and each word has up to 10 characters. The alphabet for this problem will only consist of uppercase and lowercase English letters.

Output

Output the correct alignment of the input strings, such that the i'th word of each sentence starts at the same index. Note that when aligning words, there is always a space between the longest i'th word of any sentence and the first position of the alignment of the $i+1$'th words. Please take a look at the examples (specifically the second) below for clarification.

Examples

stdin	stdout
2 Hello World UoI IPL	Hello World UoI IPL

stdin	stdout
3 Align my life plz CTCI sucks Welcome to check in	Align my life plz CTCI sucks Welcome to check in

Explanation

In the second example, the most important thing to note is the space between the second 's' in 'sucks' and the first alignment position for 'life' and 'check' (i.e. you can think about the index of the second 's' in 'sucks' is 12 and the index of the beginning of 'life' and 'check' is 14).