The Element of Surprise

General Tontus holds the record for most consecutive losses in military history. The emperor is not pleased that his general holds this unique distinction and has threatened to fire him in the event of another loss. The general is convinced that his losing streak is not due to poor strategy on his part. Instead, he blames his messengers for allowing important orders to be intercepted by the enemy, thus giving away the element of surprise. To alleviate this problem, the general has devised a cunning plan. All sensitive messages will have the order of their characters reversed, so that even if they fall in enemy hands, they will be incomprehensible! Because this scheme is too complex to be applied by hand, the general needs some way to automate it. Help save the general's job by writing a program to apply this encryption algorithm.

Input

The first line will contain a single integer N (0 < N < 100). Each of the next N lines will contain a string of at most 1024 characters which must be encrypted.

Output

For each test case, output a single line containing the encrpyted string. Beware, spaces are significant.

Example

Input:
4
 Hello World!
I know 10 digits of pi after the decimal: 3.1415926535
You just lost the game.
ATTACK AT DAWN

Output:
!dlroW olleH
5356295141.3 :lamiced eht retfa ip fo stigid 01 wonk I
.emag eht tsol tsuj uoY
NWAD TA KCATTA