

properly. Given the description of the state of each LED, and the pattern to display, you must tell whether the appropriate LEDs can be turned on at every step of the pattern scrolling.

Input

The first line contains three integers R , C , and K ($1 \leq R, C, K \leq 1000$), indicating respectively the number of rows of both the LED matrix and the pattern, the number of columns of the matrix, and the number of columns of the pattern.

The next R lines describe the matrix and the pattern from top to bottom. Each of these lines contains a string M of length C and a string P of length K , describing respectively a row of the matrix and a row of the pattern. Each character of both M and P is either “*” (asterisk) or “-” (hyphen). For M , the character “*” indicates a good LED while the character “-” represents a broken LED. For P , the character “*” indicates an LED that must be turned on while the character “-” represents an LED that must be turned off.

Output

Output a single line with the uppercase letter “Y” if the appropriate LEDs can be turned on at every step of the pattern scrolling, and the uppercase letter “N” otherwise.

Examples

standard input	standard output
<pre>6 6 6 ***** --*--- ***** -*--- ***** ***** ***** ***** ***** -*--- *****- --*---</pre>	N
<pre>2 4 6 **** ----- ***- *-----</pre>	N
<pre>2 6 4 ***** ***** *-***- *-----</pre>	Y
<pre>1 1 1 * *</pre>	Y
<pre>1 1 1 * -</pre>	Y
<pre>1 1 1 - *</pre>	N
<pre>1 1 1 - -</pre>	Y