Problem K. Beautiful Tables

Input file:	*standard input*
Output file:	*standard output*
Time limit:	2 seconds
Memory limit:	512 mebibytes

Alice has a rectangular table consisting of $n \times m$ squares. Some squares are empty, and other are filled with integers.

Alice thinks that a table is *beautiful* if:

- for every square which has neighbors both left and right, the number in it is half of the sum of numbers in these neighbors,
- for every square which has neighbors both up and down, the number in it is half of the sum of numbers in these neighbors.

Alice want to check if she can put numbers (not necessary integers) in all empty squares to make her table beautiful. Also, if she can, she is interested if there is an unique way to do it.

Input

The first line contains two integers n and m ($1 \le n, m \le 10$). The next n lines describe of the table. Each of these lines contains m tokens separated by spaces. Each token is either "`?`" if the respective square is empty, or the respective number if it is filled.

All the given numbers are integers not greater than 100 by absolute value. However, there are no such constraints on the numbers which Alice can put in empty cells.

Output

If there is no way to make the table beautiful, print the only word "`None`".

If there is an unique way to make the table beautiful, print the word "`Unique`" on the first line, and then n lines containing the table after filling all empty squares.

If there is more than one way to make the table beautiful, print the word "`Multiple`" on the first line, and then two different solutions: n lines containing one example of the table, then a line with the word "`and`", and then n more lines containing a different example of the table. Two tables are considered different if there is at least one square in which they differ.

The numbers in tables should be printed as rational fractions with numerator no more than 10^{18} by absolute value and positive denominator no more than 10^{18}, separated by a single character "`/`". Numerator and denominator should be coprime, and a denominator equal to one can be omitted, but only together with the character "`/`". Please refer to the examples for more details.

Examples

standard input	standard output
3 5 1 2 3 ? ? ? 5 ? ? ? ? ? ? 0 ?	Unique 1/1 2/1 3/1 4/1 5/1 13/2 5/1 7/2 2/1 1/2 12/1 8/1 4/1 0/1 -4/1
3 3 1 2 3 7 ? 4 ? 6 5	None
2 2 1 2 ? 4	Multiple 1/1 2/1 3/1 4/1 and 1/1 2/1 2/1 4/1