Problem 4: Counting paths

Every afternoon, Jack runs from his house to John's. Their houses are in an open field of size **N** x **M**. Jack is trying to use a different path each day but he is not sure how many different ways to reach John's house exist.

We will represent the field using a grid of **N** rows and **M** columns like the following:

```
....
..X.
....
```

Jack lives in the top-left position and John in the bottom-right. Jack wants to use a different route every day but does not want to waste time he will only walk down and/or right. Also, some parts of the fields have obstacles such as rocks or houses and Jack cannot go through them (they are marked with an X in the grid).

In the previous field, the 4 valid routes are:

`****`
`..X*`
`...*`
	`*...`
	`*.X.`
	`****`
		`*...`
		`**X.`
		`.***`
			`**..`
			`.*X.`
			`.***`

Notice that all the valid routes will always have the same length (N + M - 1).

The number of possible paths can be very large so print the result modulo 1000000007 (10^9 + 7).

Input

The first line will contain two integers **N** and **M**. The rows and columns of the map.

Each of the following **N** lines will contain **M** characters. If the character is a dot (.), this position is empty. If the character is an X, it means that there is an obstacle and Jack cannot use this cell.

The top-left and bottom-right cells will never have an obstacle on them.

Limits

2 <= N <= 200
2 <= M <= 200

Output

Print the number of possible path between the top-left and bottom-right positions. Remember to print the result modulo 1000000007.

In most languages the modulus operator is %.

Examples

Input example 1	Output example 1
3 4 .... ..X.	4
Input example 2	**Output example 2**
3 3 .X. X.. ...	0

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Input example 3

```
5 5
.....
.....
.....
.....
.....
```

Output example 3

```
70
```

Input example 4

```
30 20
....................
....................
....................
....................
....................
....................
....................
....................
....X...............
....................
....................
....................
....................
....................
....................
....................
....................
....................
....................
............X.......
....................
....................
....................
```

Output example 4

```
833886024
```

Note that the actual result is 6768833933400 but we need to print the value modulo 1000000007 and 6768833933400%1000000007 equals 833886024.

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....	