[CS 11] Prac 6l – Sculk Spreading

Problem Statement

Steve found some sculk in his world, and it is spreading!

We can model the cave floor as a grid. Some of the cells in this grid are *ores*, some are *stone*, and some are *sculk*. You are given the state of the cave floor.

However, when Steve returned the following day, every stone block adjacent to a sculk block has turned into sculk!

What is the state of the cave floor that Steve saw?

Task Details

Your task is to implement a function called `spread`. This function has a single parameter, a `tuple` or r `str`s, each of length c. Each cell corresponds to a block and is represented by a character:

- `.` means a stone block.
- `#` means an ore block.
- `X` means a sculk block.

The function must return a `list` or r `str`s, each of length c, representing the state of the cave floor that Steve saw.

Restrictions

(See 6a for more restrictions)

For this problem:

- Loops and lists are allowed.
- Up to 16 function definitions are allowed.
- Recursion is **disallowed**. (The recursion limit has been greatly reduced.)
- Sets and dictionaries are allowed.
- Generators and comprehensions are allowed.
- The following names are allowed: `set`, `dict`, `iter`, `next`, `any`, `all`, `popitem`, `setdefault`, `update`, `add`, `discard`.
- The source code limit is 1000.

Example Calls

Example 1 Function Call

Copy

```
spread((
    '......',
    '.X...#',
    '....#.',
    '..#X..',
    '...#..',
    '.X.X..',
    '.X....',
))
```

Example 1 Return Value

Copy

```
[
    '.X....',
    'XXX..#',
    '.X.X#.',
    '..#XX.',
    '.X.#..',
    'XXXXX.',
    'XXXX..',
]
```

Constraints

- The function `spread` will be called at most 20 times.
- $1 \leq r, c \leq 250$

Scoring

- You get 75 ❤ points if you solve all test cases where:
  - $r \leq 40$
  - $c \leq 40$
- You get 50 ❤ points if you solve all test cases.

Submit solution [CS 11] Practice 6 ❤

My submissions ❤

Points: 125 (partial)
Time limit: 7.0s
Memory limit: 1G

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Problem type

Allowed languages
~~NONE~~, py3

Clarifications

Report an issue

No clarifications have been made at this time.