B2 - Stumpers

B-CPE-210

Fractals

Duo Stumper

Fractals

binary name: fractals
language: C
compilation: via Makefile, including re, clean and fclean rules

- The totality of your source files, except all useless files (binary, temp files, obj files,...), must be included in your delivery.
- Error messages have to be written on the error output, and the program should then exit with the 84 error code (0 if there is no error).

For this project, the **only** authorized functions are `write, malloc and free`.

The goal of this project is to draw a fractal. A fractal designates a shape that exhibits a repeating pattern displayed at every scale.

The fractal will be drawn using 2 characters: `#` and `.`(point). It will be drawn by replacing each of the two characters with a corresponding pattern. The goal is to construct the fractal by successively applying the transformations of the two characters.

Your program must take the number of the transformations' iterations and two character strings, representing the transformation patterns of `#` and `.` (point), respectively, as parameters. Your program's output will always end with a line break.
Regardless of the transformation rules, `./fractals 0 chain1 chain2` will display the `#` character.
The line breaks will be represented in the transformation patterns by the `@` character. The transformation patterns will be formatted in the same way (same number of characters and same number of line breaks).

If there is not enough parameters or if they are invalid, you must display a meaningful error on the error output.

Terminal

```
~/B-CPE-210> ./fractals 0 "##@#." "..@.." | cat -e
#$
~/B-CPE-210> ./fractals 1 "##@#." "..@.." | cat -e
##$
#.$
~/B-CPE-210> ./fractals 2 "##@#." "..@.." | cat -e
####$
#.#.$
##..$
#...$
~/B-CPE-210> ./fractals 1 "###@#.#@###" "...@...@..." | cat -e
###$
#.#$
###$
~/B-CPE-210> ./fractals 3 "###@#.#@###" "...@...@..."
###########################
#.##.##.##.##.##.##.##.##.#
###########################
###...######...######...###
#.#...#.##.#...#.##.#...#.#
###...######...######...###
###########################
#.##.##.##.##.##.##.##.##.#
###########################
#########.........#########
#.##.##.#.........#.##.##.#
#########.........#########
###...###.........###...###
#.#...#.#.........#.#...#.#
###...###.........###...###
#########.........#########
#.##.##.#.........#.##.##.#
#########.........#########
###########################
#.##.##.##.##.##.##.##.##.#
###########################
###...######...######...###
#.#...#.##.#...#.##.#...#.#
###...######...######...###
###########################
#.##.##.##.##.##.##.##.##.#
###########################
```