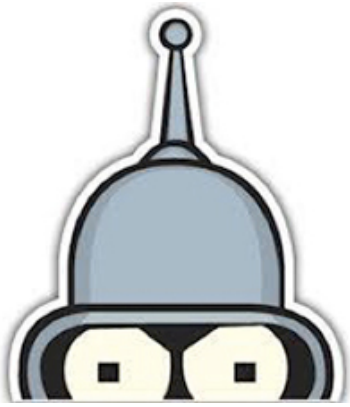
B2 - Stumpers

B-CPE-210

Ginger

Duo Stumper



1.01

{EPITECH.}

Ginger

binary name: my_ginger
repository name: CPE_duostumper_$STUMPERNUMBER_$ACADEMICYEAR
repository rights: ramassage-tek
language: C
compilation: via Makefile, including re, clean and fclean rules

- Your repository must contain the totality of your source files, but no useless files (binary, temp files, obj files,...).
- 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).

The $STUMPERNUMBER is always on one digit: `1`, `2`, ...

For this project, the **only** authorized functions are those of the standard `libC`.

Ginger is a gerbil that was born in 2008 in the heart of the plains of Glasgow. She was trained, from a very young age, to intensively destroy tokens. Ginger is starting to show her age and needs your help in order to correctly accomplish her task.

More specifically, the game will be played on a rectangular game board that is made up of different squares: food ('F'), token ('T'), empty squares ('.') and a Ginger square ('G').

The goal of the game is to find the route that Ginger should take in order to eat a maximum of tokens.
Ginger will begin with `m` movement points and the round is over when Ginger can no longer move or when all of the tokens have been consumed.
Ginger can move one square, but it will cost one movement point. Ginger cannot move diagonally.
When Ginger encounters a token square, it is eaten and the score is raised by 1 point.
When Ginger encounters a food square, it is eaten and Ginger earns `m` movement points.
Once a resource is consumed, the square becomes an empty square.
The game board is circular. If Ginger exits on one side of the game board, she will reappear on the other side.

Usage: `./my_ginger -f FILE_MAP -m MV_INIT`
-f FILE_MAP: the file that contains the starting game board.
-m MV_INIT: the initial number of movement points (`m`). It also define the number of points Ginger earn when she reaches a food square.

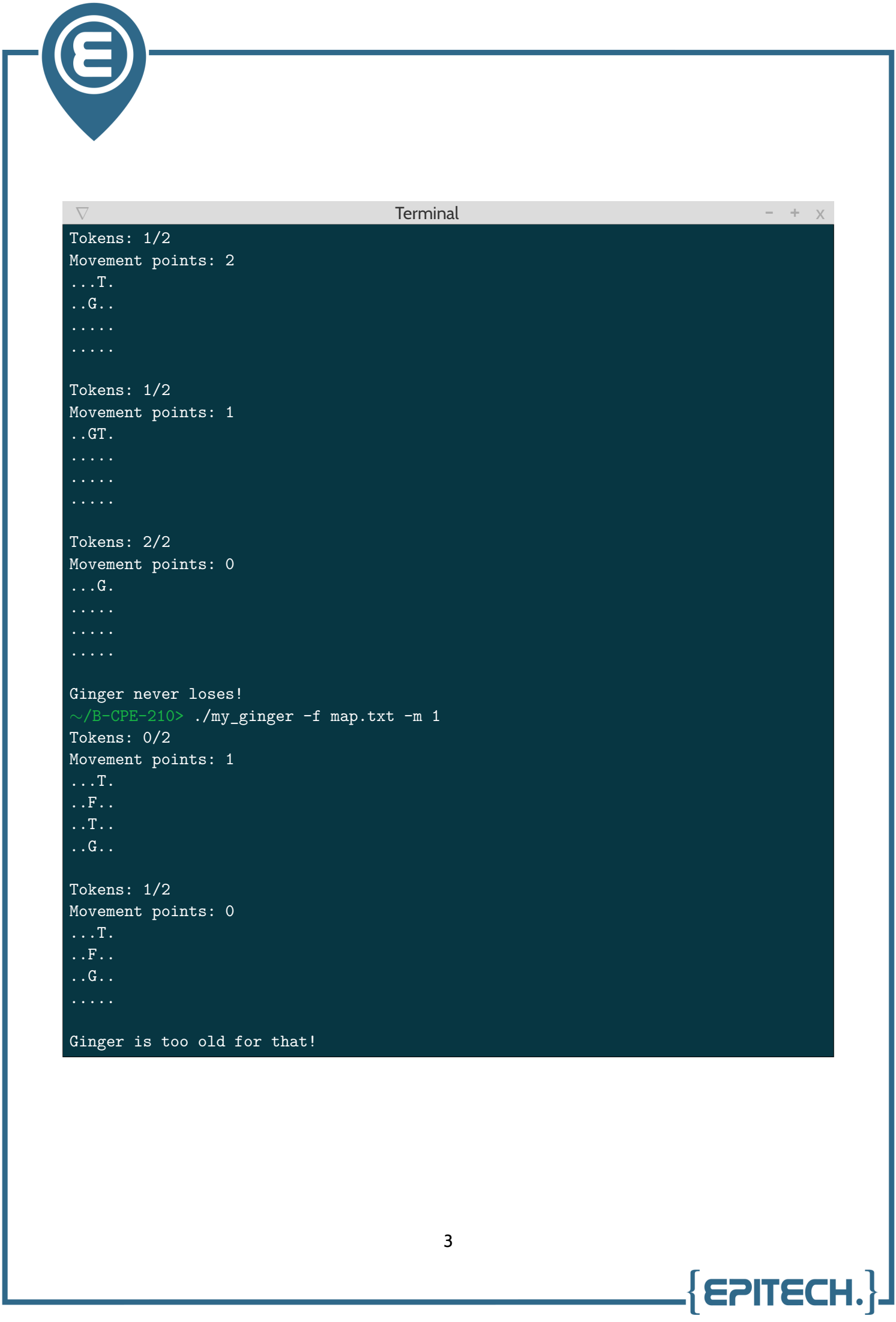
With each of Ginger's actions, you must display the updated game board, the number of remaining movement points and the number of eaten tokens in relation to the total number of tokens, like in the examples.

The parameters can be in any order and must be valid. If something is wrong you should display a message on the error output and exit with the correct status.
Ginger can smell the tokens and the food, so she use the smallest path to go where she wants.

Terminal

```
~/B-CPE-210> cat -e map.txt
...T.$
..F..$
..T..$
..G..$
~/B-CPE-210> ./my_ginger -f map.txt -m 2
Tokens: 0/2
Movement points: 2
...T.
..F..
..T..
..G..

Tokens: 1/2
Movement points: 1
...T.
..F..
..G..
.....
```


Terminal
Tokens: 1/2
Movement points: 2
...T.
..G..
.....
.....
Tokens: 1/2
Movement points: 1
..GT.
.....
.....
.....
Tokens: 2/2
Movement points: 0
...G.
.....
.....
.....
Ginger never loses!
~/B-CPE-210> ./my_ginger -f map.txt -m 1
Tokens: 0/2
Movement points: 1
...T.
..F..
..T..
..G..
Tokens: 1/2
Movement points: 0
...T.
..F..
..G..
.....
Ginger is too old for that!