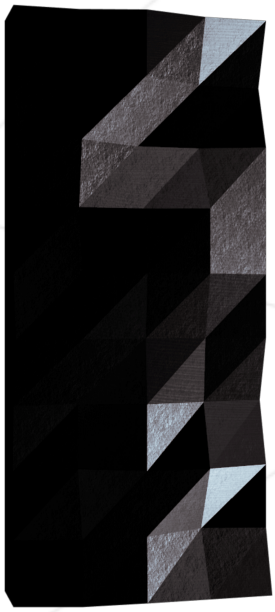


2048

The game

Summary: iOS ? No. Android ? No. console ? Yes!

Version: 1

Contents

Chapter I

Preamble

This rush will be easier if you watch this video beforehand.

```
Man: It takes a lot to make a stew
Woman: A pinch of salt and laughter, too
M: A scoop of kids to add the spice
W: A dash of love to make it nice, and you've got
Both: Too many Cooks
W: Too many Cooks
B: Too many Cooks
M: Too many Cooks
B: Too many Cooks
W: Too many Cooks
B: Too many Cooks
M: Too many
W: It takes a lot to make a stew
M: When it comes to me and you
W: And him and her and the baby, too
B: Too many Cooks, it's true
M: The saying goes, it'll spoil the broth
W: Honey, I think that's not true
M: Well, maybe too many Cooks will spoil the broth,
   but they'll fill our hearts with
B: So much, so much lo-o-ove
   Too many Cooks
M: A family is like a soup
W: Everyone adds an extra scoop
M: Mix an ounce of smile so sweet
W: A dash of cool to add the heat, and you've got
B: Too many Cooks
W: Too many Cooks
B: Too many Cooks
M: Too many Cooks
B: Too many Cooks
M: Too many Cooks
B: Too many Cooks
W: Too many Cooks
```

```
B: Too many Cooks
W: Too many Cooks
B: Too many Cooks
M: Too many Cooks
B: Too many Cooks
W: Too many Cooks
B: Too many Cooks
M: Too many Cooks
B: Too many Cooks
W: Too many Cooks
B: Too many Cooks
M: Too many Cooks
B: Too many Cooks
W: Too many Cooks
B: Too many Cooks
M: Too many
   It takes a lot to make a stew
W: Especially when it's me and you
M: And him and Steve from corporate, too
...
```

Chapter II

Introduction

The goal of this rush is to rewrite the 2048 game for a console display. It is not very complicated and yet many of you will fail through breach of trust and lack of checks... yes yes, even if we warn you! And to be frank 2048 is more complex than you might imagine.
You will have to be rigorous, take care not to forget anything, read this subject well , test your program well, and work in pairs. So don't waste time! Especially since there is room to make bonuses easily if your program is well designed from the start.

2048 is played on a simple gray 4 x 4 grid, with numbered tiles that slide smoothly when a player moves them using the four arrow keys.
Every turn, a new tile will randomly appear in an empty spot on the board with a value of either 2 or 4.
Tiles slide as far as possible in the chosen direction until they are stopped by either another tile or the edge of the grid. If two tiles of the same number collide while moving, they will merge into a tile with the total value of the two tiles that collided. The resulting tile cannot merge with another tile again in the same move. (source: Wikipedia)

As your game will be displayed on the console, it will not be "smoothly" but rather "instantly".
You can play 2048 here

`EXCEPTIONALLY, you are authorized to play to 2048 as part of this rush. Any other use of video games in cluster remains subject to the usual rules ...`

Chapter III

General rules

- The program name is `2048`.
- Your assignment has to be written in C.
- No norm.
- `cc` is used as compiler.
- You have to compile with the following flags `-Wall -Wextra -Werror`.
- You have to turn in a `Makefile` which will compile your source files.
- Your Makefile must at least contain the rules: `NAME, all, clean, fclean and re` and must not `relink`.
- Your program should not quite unexpectedly (segmentation fault, bus error, double free, and so forth) except for undefined behaviors.
- Within the mandatory part, you're allowed to use the following:
  - Libft.
  - The library ncurses.
  - The following functions: `rand(3), srand(3), time(3), signal(3)`.
- A global variable is allowed to manage the signals.

Chapter IV

Instructions

IV.1 Game instructions

- The game is played on a plain 4×4 grid.
- Each square contain a number or nothing.
- The game start with 2 randoms number that are either `2` or `4`.
- Manage the generation of new numbers, `2` and `4`.
- `2` appear more often than `4`.
- You must manage the `up, down, left, right` movements like in the game.
- The `ESCAPE` key should allow you to quit the game properly.
- Players can continue their game after reaching the victory condition.
- The game ends when a player cannot move or when a square reaches the value 2048.
- You need to submit and use the following enumeration. It may be modified in defense.

```
enum    e_const
{
    WIN_VALUE = 2048
};
```

note: This value is taken into account only if it is a power of 2.

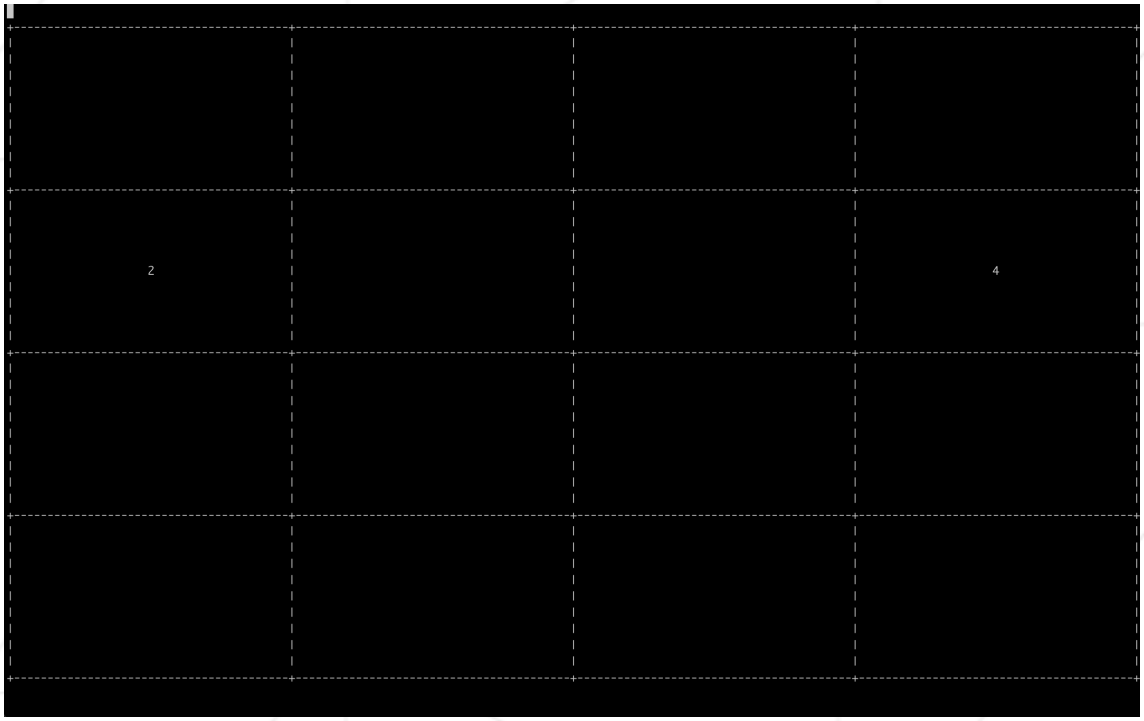
- You need to let the player.. ah. I am told that i do too much work for you... you'll understand, it's a 2048.

`Window resize.`

Chapter V

Example

Here is a board.



Chapter VI

Bonus

The only valid bonus are:

- Colors.
- You can choose between 4x4 or 5x5 grid.
- The game is preceded by a menu.
- Numbers are drawn in `ascii art`.
- Best scores are saved in a file and shown in the game.

The bonus part will only be accessed if the mandatory part is PERFECT. Perfect means the mandatory part has been integrally done and works without malfunctioning. If you have not passed ALL the mandatory requirements, your bonus part will be evaluated at all.

Chapter VII

Turn-in and peer-evualation

As usual, turn in your work on your repo GiT. Only the work included on your repo will be reviewed during the evaluation.

Good luck.