

## Arcade Documentation

### 1 / Console

To launch program : `./console lib/path_to_main_graphic_lib`

On start, console will load all libs on games/ and lib/ directory path. Do not launch the program with a lib stored out of these paths.

Error will be printed on error channel. All these libraries must be shared and compiled like bellow :

Compiler : `g++`  
Flags : `-W -Wall -Wextra -shared -fPIC`

#### How console loads libs ?

Functions bellow throw `arcade::Exception` with error.

- `void arcade::Console ::loadGames()` // Open games directories and store results of `openLib` on attributes `console.games`
- `void arcade::Console ::loadGraphics()` // Open libs directories and store results of `openLib` on attributes `console.graphics`
- `void arcade::Console ::openLib(std::string path)` // Open a path and return the result of `dlopen`
- `void arcade::Console::LaunchGraphics(std::string entry_function_name, void *ptr_dl_open)`  
// Call `dlsym` with `entry_function_name` on `ptr_dl_open`, stored result on `console.graphics_ptr`
- `void arcade::Console::LaunchGame(std::string entry_function_name, void *ptr_dl_open)`  
// Call `dlsym` with `entry_function_name` on `ptr_dl_open`, stored result on `console.game_ptr`

#### How console manages game and lib ?

First, console will call the menu of the current graphical lib. On this menu, player can change the current graphical lib and can choose a game.

### 2 / Games libs

Sources of game must contain an entry point named « launch » which return a `std::unique_ptr<IGames>` of the game. Game must contain an other function named `start`, it will be called on a while (the loop game) on the console. Start function must return the score and take a `std::unique_ptr` to the graphic lib.

### 3 / Graphical libs

Source of graphical lib must contain an entry point named « launch » which return a `std::unique_ptr<IGraphics>` of the lib. The lib must follow the interface with mandatory functions like (`clearWindow`, `displayWindow`, `drawMap`, etc.).

#### **4/ Textures**

Texture are preset like bellow :

# : Wall

‘./o’ : Food, player can eat

‘b’ : Bonus, player can eat.

‘ ‘ : Nothing, player can walk on it.

‘1/2/3/4/5’ : Block, can be destroyed.

‘A/B/C/D’ : Player direction

‘[E/F/G/H]-[I/J/K/L]-[M/N/O/P]’ : Each group represent a mob’s direction .

#### **5 / Scoreboard**

When the game is over, the console will open a file on scoreboard/game\_name/score.txt and write the name and the score of the player.