{EPITECH}

CSFML INITIATION

C GRAPHICAL PROGRAMMING BOOTSTRAP

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Prerequisite

On the official DUMP

If you need, you can install the CSFML dev libraries by typing a simple command.
`sudo apt-get install lcsfml-dev`

On a unofficial DUMP

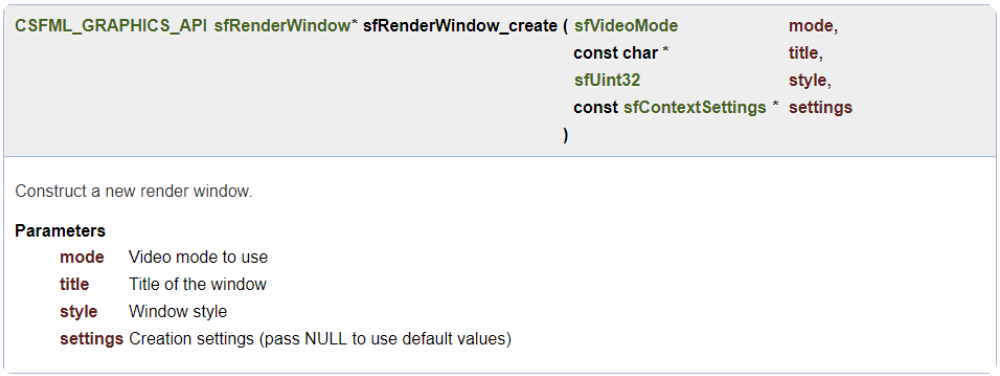
If you have not intalled the official dump, you will have to install it manually. CSFML github.

In directory created by git clone command, create new folder `build` with `mkdir` command.
Then, go inside, and `cmake ..`
Finally, type `sudo make install` command to install the entire library.

Be careful, this installation builds library files into /usr/local/lib folder. You will have to add these folders into your path libraries

Opening a window

The goal of this Bootstrap is to display your first images in a window.
The first step, obviously, is to open this very window.
In order to do this, look at the **sfRenderWindow** documentation page and check out all its associated functions, like `sfRenderWindow_create`.



```
CSFML_GRAPHICS_API sfRenderWindow* sfRenderWindow_create (sfVideoMode mode,
                                                          const char * title,
                                                          sfUint32 style,
                                                          const sfContextSettings * settings
                                                          )
```

Construct a new render window.

Parameters

mode	Video mode to use
title	Title of the window
style	Window style
settings	Creation settings (pass NULL to use default values)

After that, your first step is to open an 800x600 window.

The point of this exercise is not just to open a window, but also to keep it open!

Displaying pixels

The main page of the documentation introduces code sample allowing you to draw a pixel in a window.
Some functions need to be filled in.

Try to code the following functions :

- ✓ framebuffer_create
- ✓ framebuffer_destroy
- ✓ my_put pixel

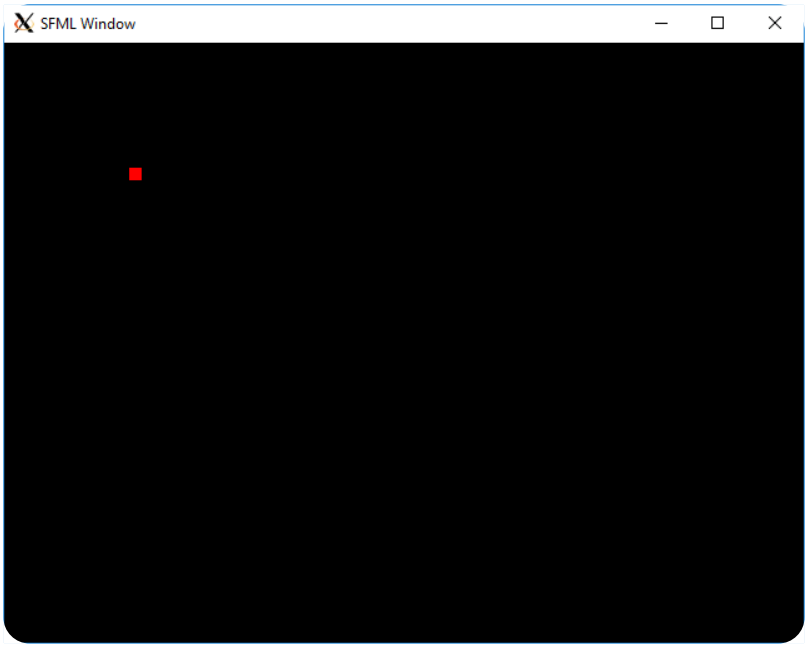
Read carefully the comment inside each function.

Drawing a square

Let's display a blue square of 10 pixels by 10 pixels at the position (100 ; 100).
Create a `my_draw_square` function with the following prototype:

```
void my_draw_square(framebuffer_t *buffer, sfVector2u position,
                                                              un
```

Here is the result you should get:



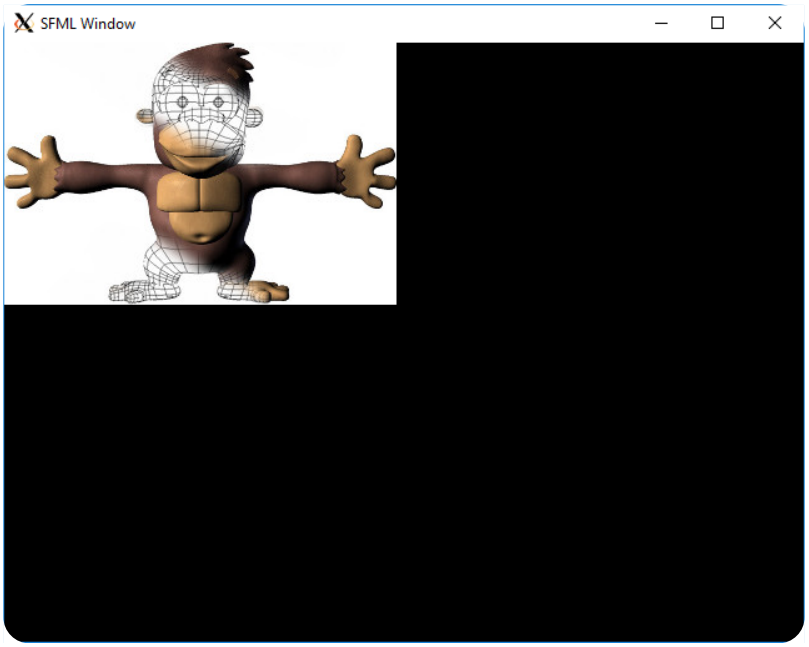
According to you, where should look for some information about sfVector2u??

Displaying an image

To complete this initiation, you need to display an existing image from a file in your window.

You should have already found that you need to refer to the *sfTexture_createFromFile* function.

Here is an example of the result of an image loaded in this way:



Going further

If you are done with the previous exercises, take some time to check CSFML functions.
Test them and implement some nice features:

- ✓ drawing more shapes (circles,…),
- ✓ displaying several images,
- ✓ moving shapes or images,
- ✓ adding some sound,
- ✓ building a full layer-based computer-aided architectural design software,
- ✓ …

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