

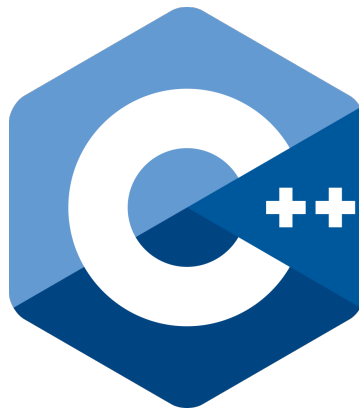


B4 - C++ Programming

B-CPP-401

Indie Studio

Time to go cross-platform





Indie Studio

binary name: bomberman
repository name: cpp_indie_studio
repository rights: ramassage-tek
language: C++
compilation: CMake



- Your repository must contain the totality of your source files, but no useless files (binary, temp files, obj files,...).
- All the bonus files (including a potential specific Makefile) should be in a directory named *bonus*.
- 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 aim of the **Indie Studio** is to implement a **cross-platform** 3D video game with **real-world** tools.

Making an enjoyable game is just as important as writing clean code.

A working game which is no fun to play is pointless!

You must implement one of the games described below.



Let's be honest. Implementing a video game is generally not fun (at least not all the time). But it can be, and having someone else enjoy a game you made is an amazing feeling. The result will be worth the effort, so do your best! And most importantly, **have fun**.

You **MUST** use **CMake** as a cross-platform build system:

- **Linux:** the Makefile generated by `cmake` must have an `install` target which will install the required libraries and the game on the system.
- **Windows:** you must provide an executable installer file.
Various programs let you easily create an installer.

You also must use the **Irrlicht 1.8.4** library and use assets. We don't want to see any fighting cubes!



There are plenty of free assets on the Internet. Creating your own should be far from being a priority... Do not waste time.
Even if the assets doesn't fit well with the game it's better the simple cubes.



THE GAME



The game you must implement is a Bomberman-like game.

Bomberman is one of the most famous video games of all time.

With over 70 franchises, ranging from the first version on MSX, ZX Spectrum and Sharp MZ-700 in 1983 to the latest versions on modern consoles, over 10 million units have been sold.

Our gameplay reference is **Neo Bomberman**, released on the Neo Geo and MVS systems in 1997.

Here's the required features :

- Local multi-player with the possibility the play with a friend + AI's controlled bots.
- A main game menu (to start a new game or load an existing one).
- Your game must feature 3D graphics but a 2D gameplay.
- Your game must feature **procedurally generated maps**.
- Save/Load a game
- Animation and sounds to give life to the game (especially during various interactions)
 - Think about bomb explosion, player walking, background music, ...
- Some Power-ups
 - Bomb Up
 - Speed Up
 - Fire Up
 - Wall Pass

The goal of this project is not only to code a video game, but it's to code a full finished video game. This means that the efforts you make to polish your game will count as much as the technical aspect.

Do your best to avoid clunky animations or graphical glitches, manage your camera in a way that the "out-side" of the game is never visible, pay attention to game design, level design and sound design, add variations in ennemies and environnements, etc.