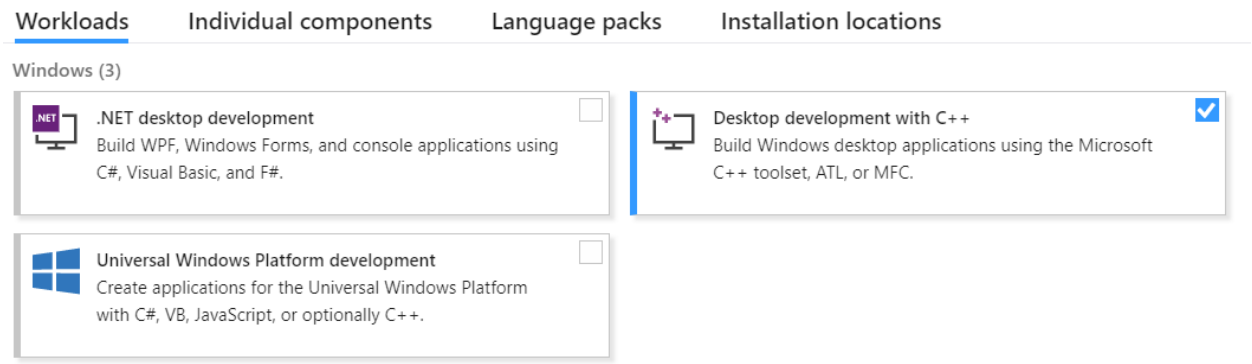
The code can be built in both Windows and Linux. I personally recommend **Windows**, since this is the environment I used when developing the application. Also, in my ubuntu VM, my application was killed very often due to high memory usage. I also had some problems with the mouse speed. Nonetheless, it is possible to build and run in Linux. Instructions are at the end.

How to build on Windows:

- Install **Visual Studio**, make sure that the C++ desktop development tools are installed

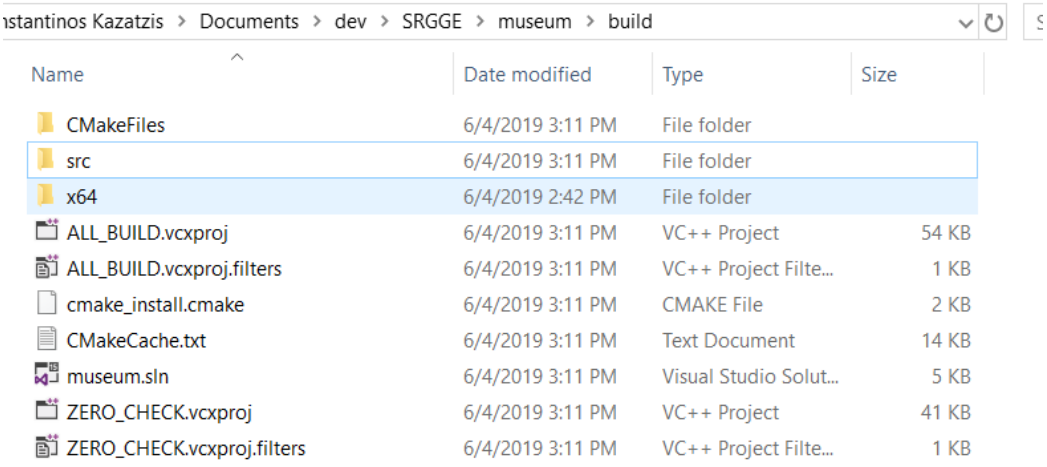


- Install **CMake** for Windows, make sure to add cmake in the PATH environment variable

- Open the source code folder, and run cmake inside the build folder

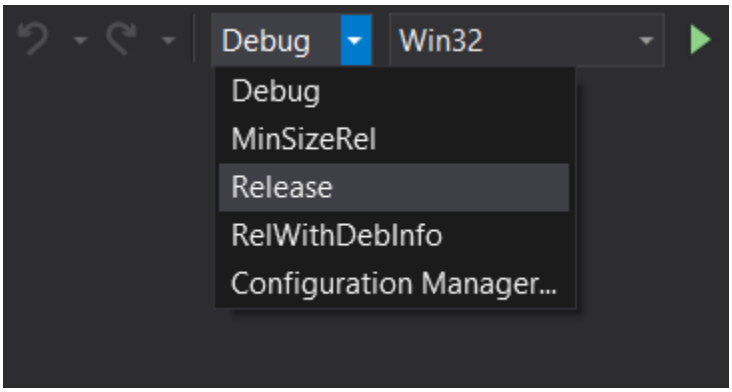
```
PS C:\Users\konka\Documents\dev\SRGGE\museum\build> cmake ../
```

If OpenGL is installed, and Visual Studio is installed correctly, museum.sln should be created inside the build folder

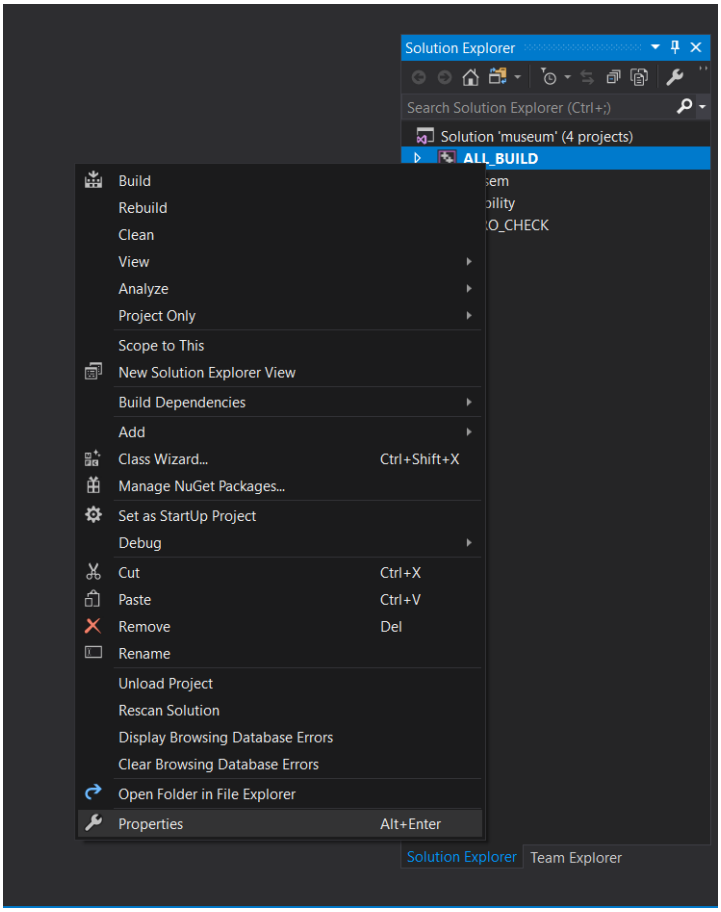


- Open museum.sln with **Visual Studio**

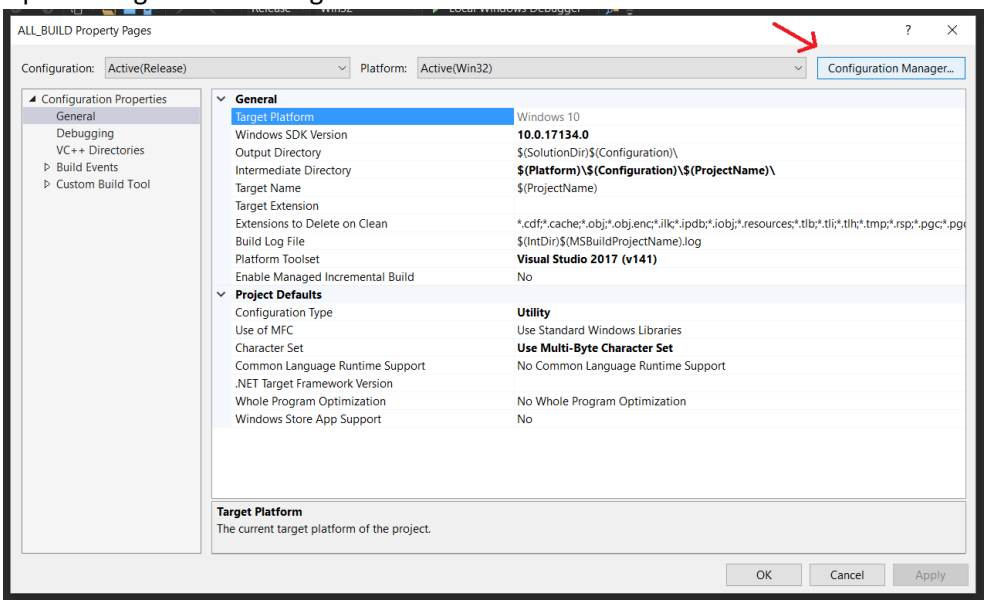
- Change build type to Release



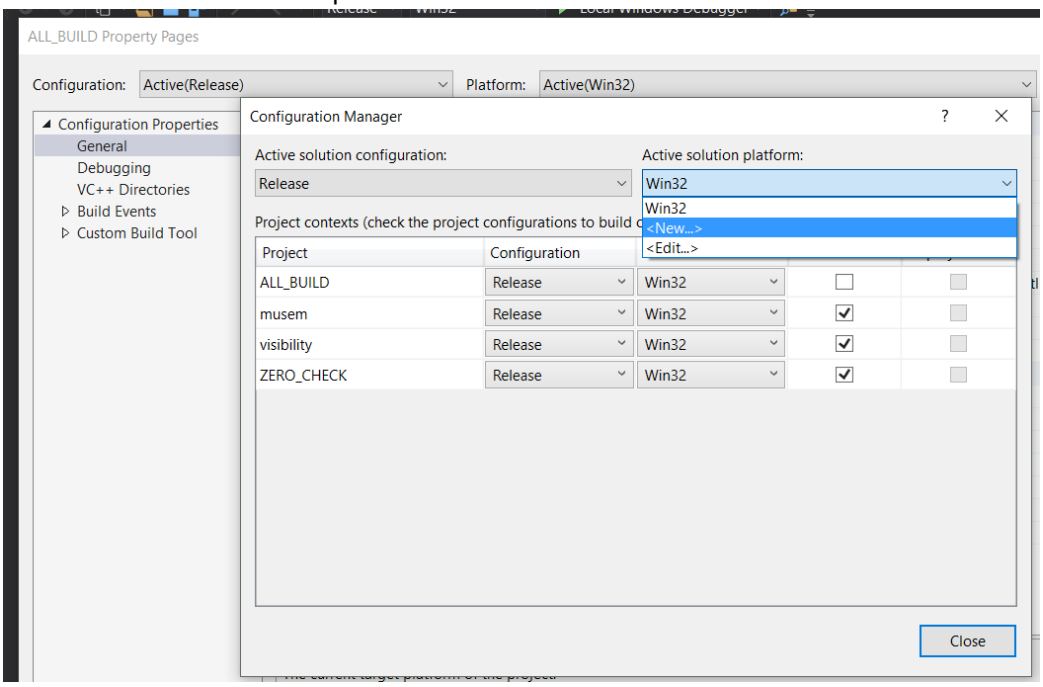
- Set target to x64 (x64 because we are going to use big models, like the dragon, where memory usage reaches 5GB):
  ALL_BUILD -> Properties:

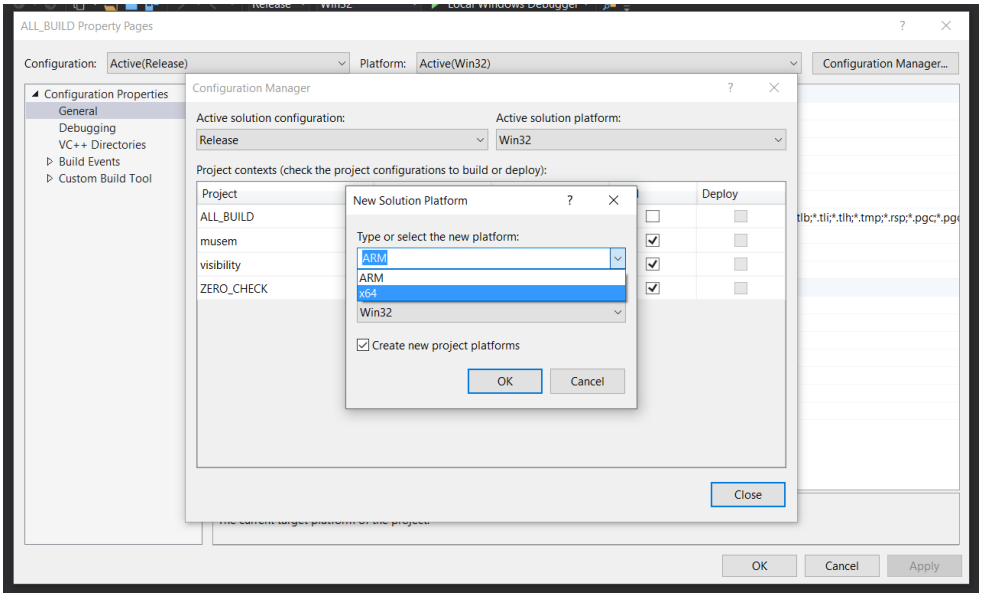


Open configuration Manager:



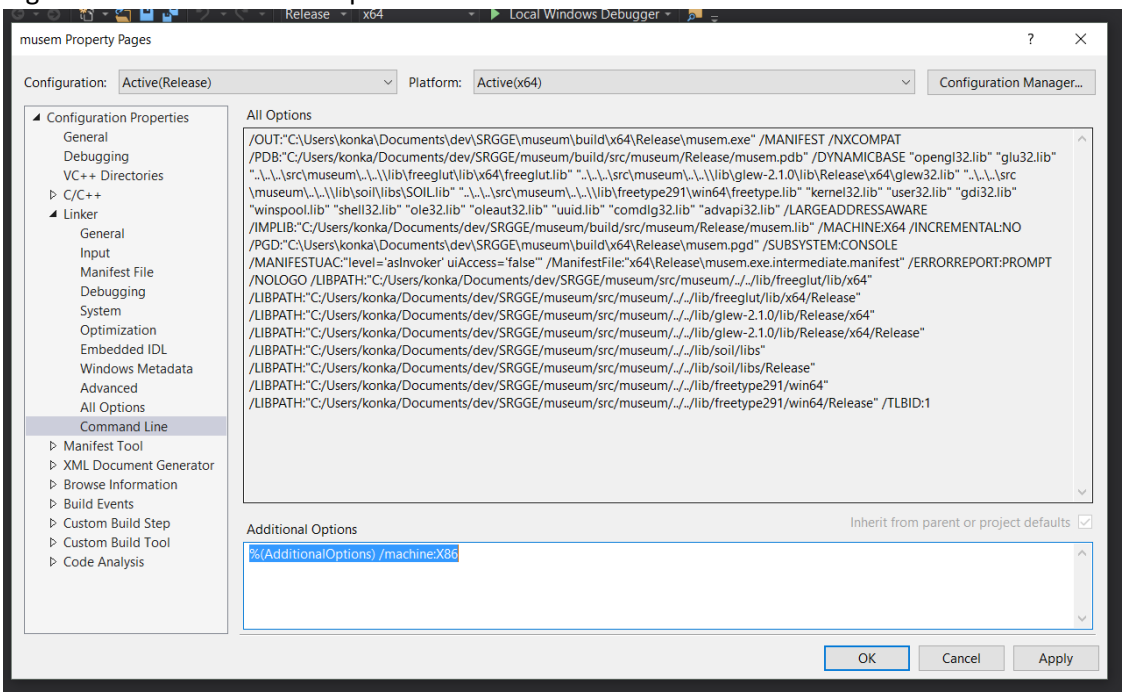
Create new Active Solution platform for x64:





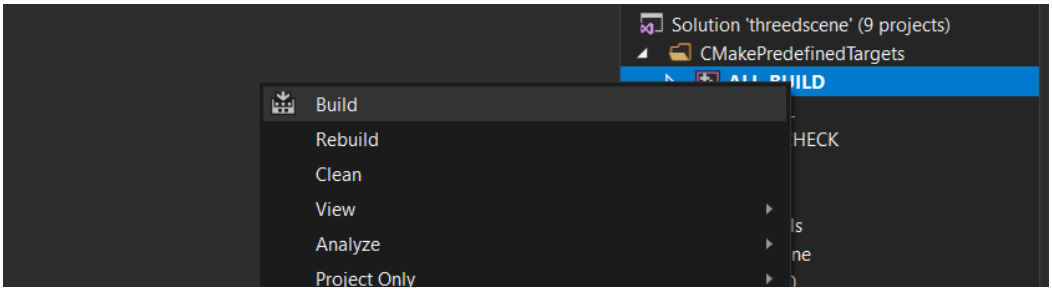
OK -> Close -> OK

- Remove x86 Linker dependencies:
  Right click on museum -> Properties -> Linker -> Command Line

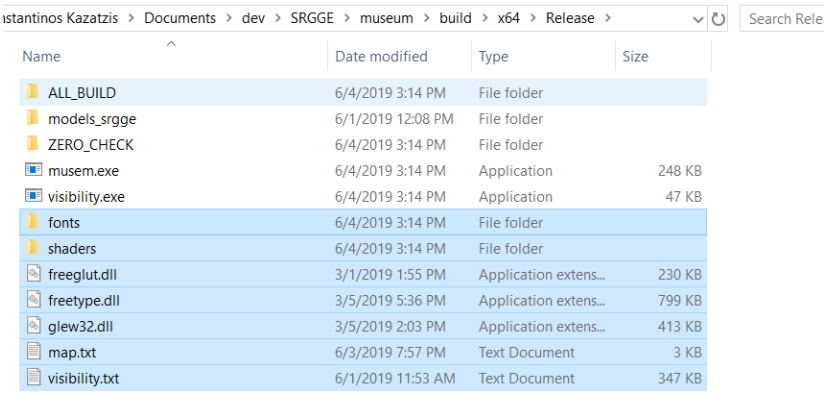


Delete the Additional Options text, and click Apply.
Do the same for visibility project.

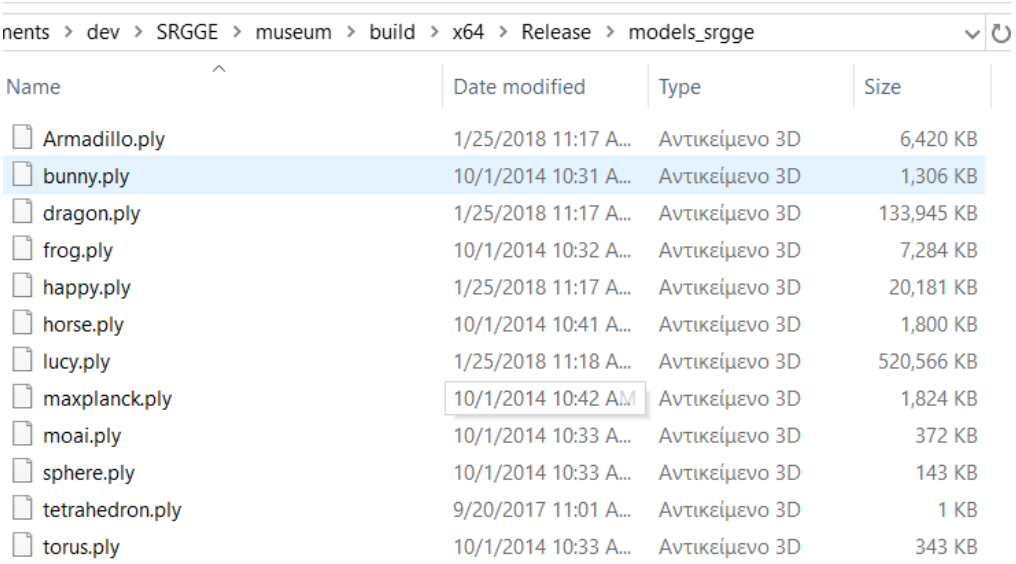
- Right click on ALL_BUILD -> Build



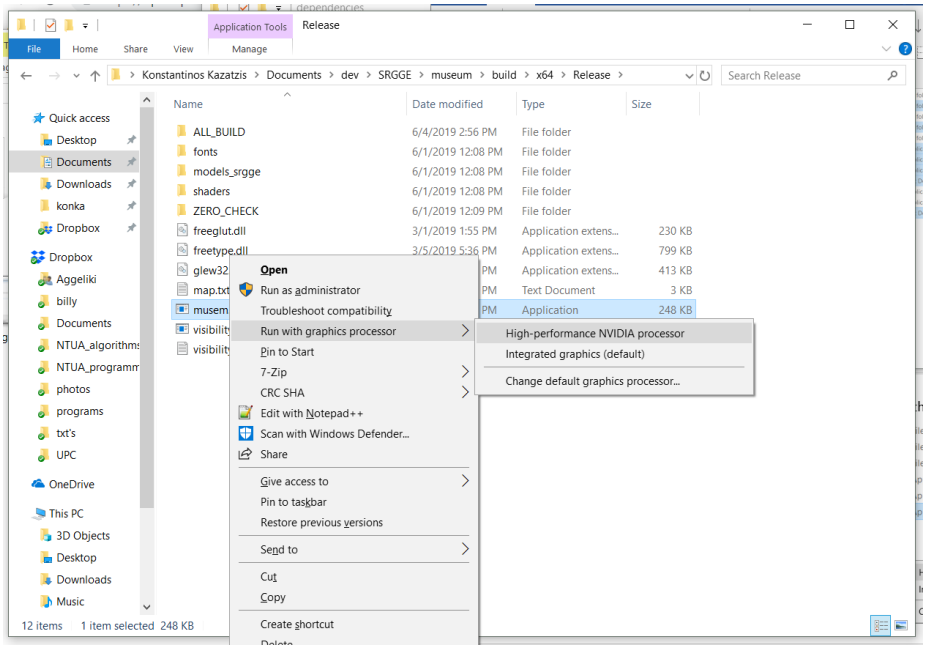
- Go to directory “build\x64\Release” where the executables are created, and paste the **contents** of the dependencies folder, which is located in the top-level directory



Make sure to also place a folder named “models_srgge”, with all the models inside



- Run the musem.exe with your favorite graphics card



  Or run the visibility program to recompute visibility
- A standalone executable is provided inside the folder standalone
- If you wish to run the code through the Visual Studio debugger, make sure to paste all the dependencies inside the working directory of Visual Studio, which is “build/src/ museum/”

How to build in Linux:

- Install dependencies: OpenGL, GLUT, FreeGLUT, GLEW, SOIL, Freetype
- Create build folder
- Run *cmake../* inside the build folder
- Run *make* inside the build folder
- Copy the required dependencies (shaders, fonts, map file, config file, visibility file, models) besides the executable

This does not set the target platform to x64 or sets the optimizations for the compiler. This means that it’s possible for the execution to be *Killed* from the runtime system or run very slowly.