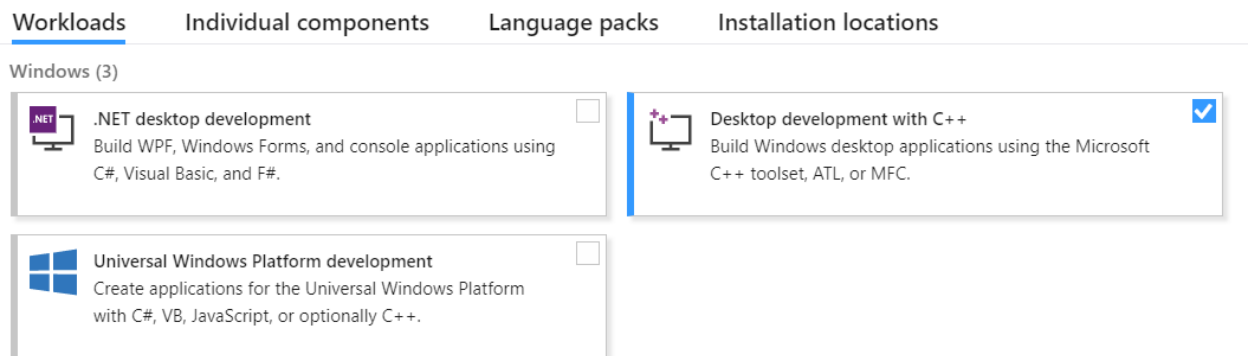


The code can be built in both Windows and Linux. I personally recommend **Windows**, since this is the environment I used when developing the application. Also, in my ubuntu VM, my application was killed very often due to high memory usage. I also had some problems with the mouse speed. Nonetheless,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

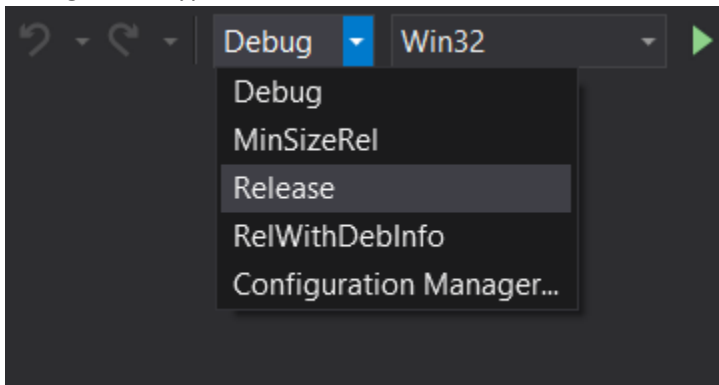
```
PS C:\Users\konka\Documents\dev\SRGGE\museum\build> cmake ../
```

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

Instantinos Kazatzis > Documents > dev > SRGGE > museum > build

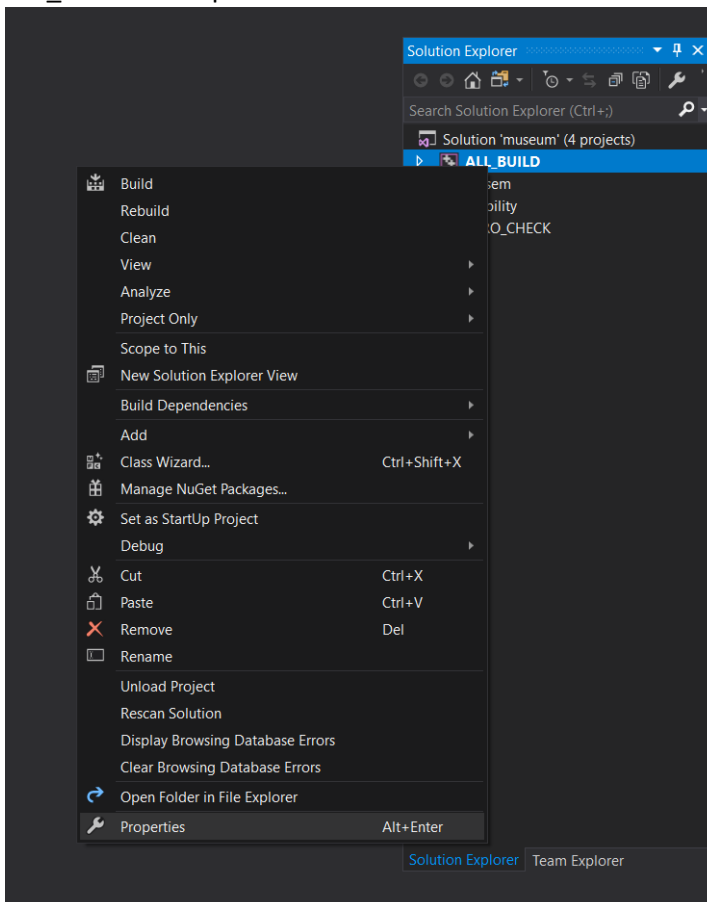
Name	Date modified	Type	Size
CMakeFiles	6/4/2019 3:11 PM	File folder	
src	6/4/2019 3:11 PM	File folder	
x64	6/4/2019 2:42 PM	File folder	
ALL_BUILD.vcxproj	6/4/2019 3:11 PM	VC++ Project	54 KB
ALL_BUILD.vcxproj.filters	6/4/2019 3:11 PM	VC++ Project Filte...	1 KB
cmake_install.cmake	6/4/2019 3:11 PM	CMAKE File	2 KB
CMakeCache.txt	6/4/2019 3:11 PM	Text Document	14 KB
museum.sln	6/4/2019 3:11 PM	Visual Studio Solut...	5 KB
ZERO_CHECK.vcxproj	6/4/2019 3:11 PM	VC++ Project	41 KB
ZERO_CHECK.vcxproj.filters	6/4/2019 3:11 PM	VC++ Project Filte...	1 KB

- Open museum.sln with **Visual Studio**
- Change build type to Release

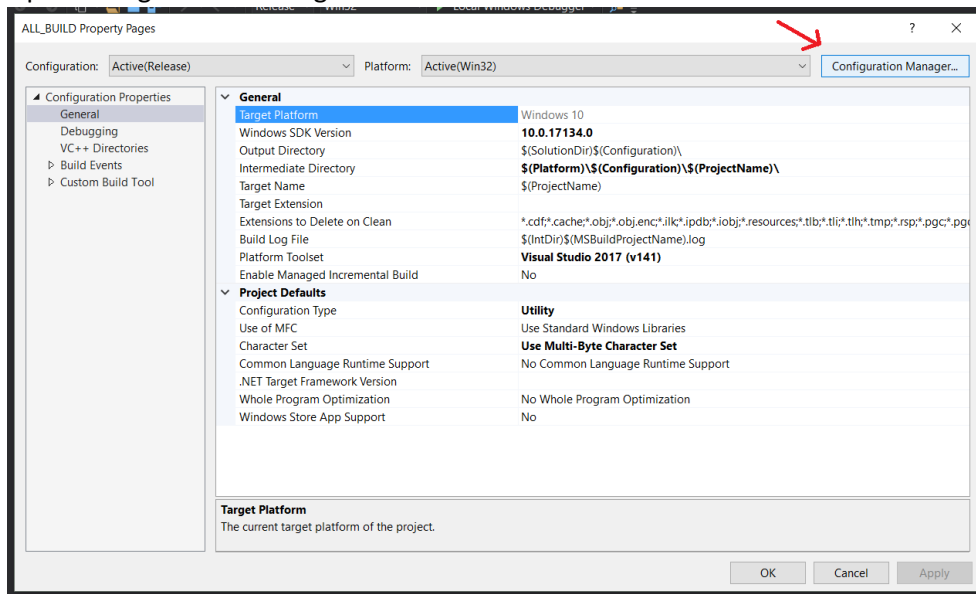


- Set target to x64 (x64 because we are going to use big models, like the dragon, where memory usage reaches 5GB):

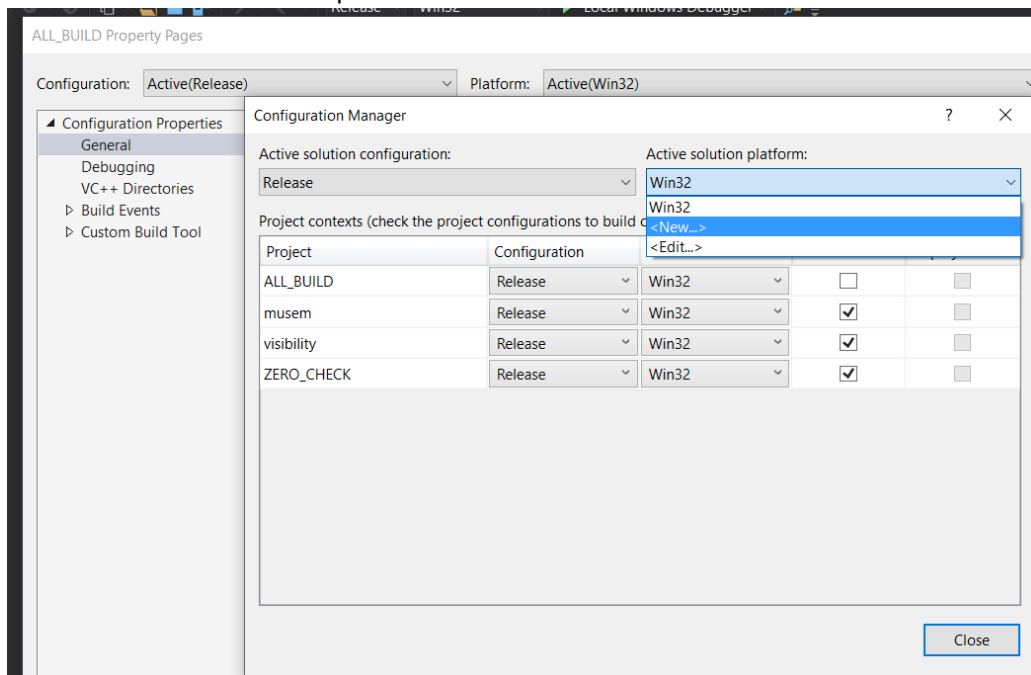
ALL_BUILD -> Properties:

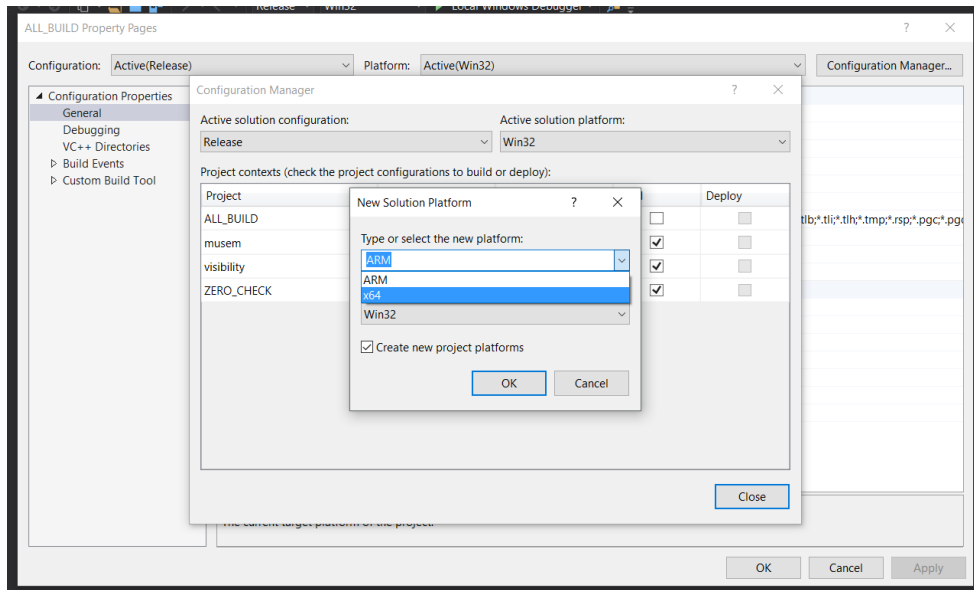


Open configuration Manager:



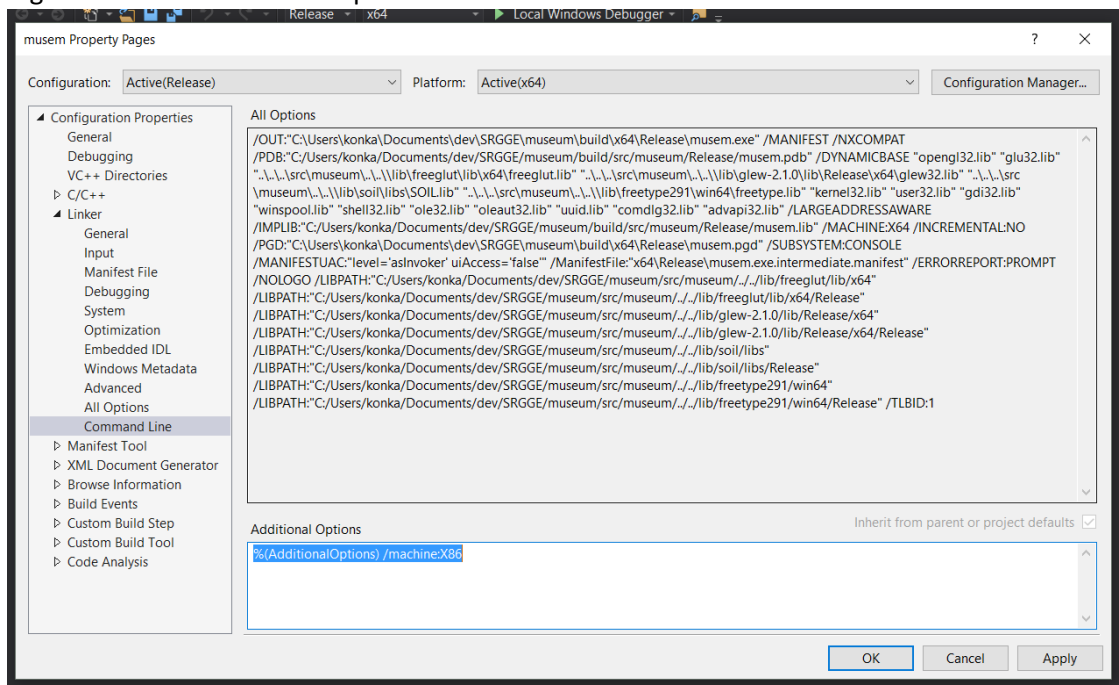
Create new Active Solution platform for x64:





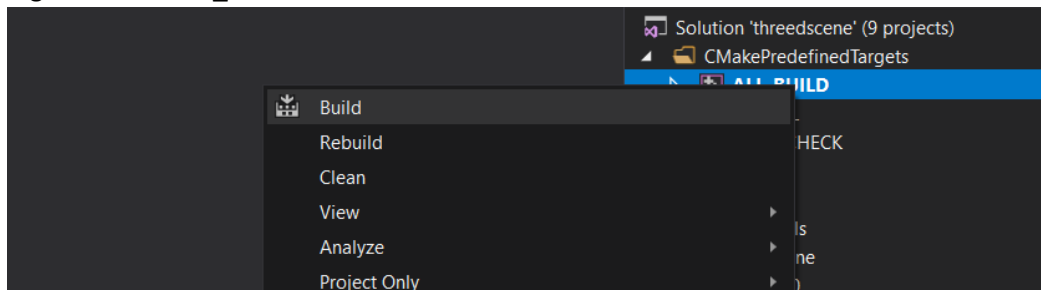
OK -> Close -> OK

- 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

istaninos Kazatzis > Documents > dev > SRGGE > museum > build > x64 > Release >

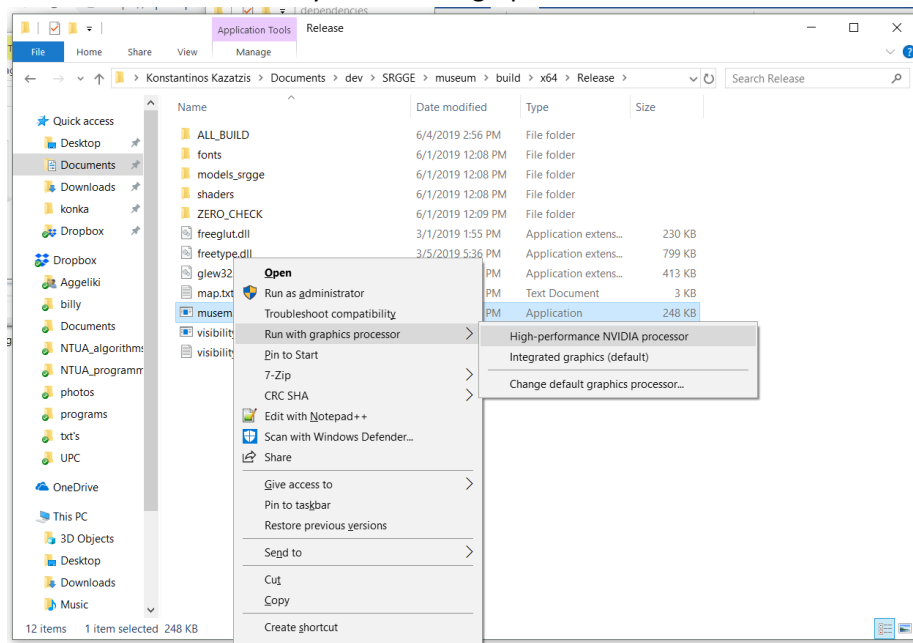
Name	Date modified	Type	Size
ALL_BUILD	6/4/2019 3:14 PM	File folder	
models_srgge	6/1/2019 12:08 PM	File folder	
ZERO_CHECK	6/4/2019 3:14 PM	File folder	
museum.exe	6/4/2019 3:14 PM	Application	248 KB
visibility.exe	6/4/2019 3:14 PM	Application	47 KB
fonts	6/4/2019 3:14 PM	File folder	
shaders	6/4/2019 3:14 PM	File folder	
freeglut.dll	3/1/2019 1:55 PM	Application extens...	230 KB
freetype.dll	3/5/2019 5:36 PM	Application extens...	799 KB
glew32.dll	3/5/2019 2:03 PM	Application extens...	413 KB
map.txt	6/3/2019 7:57 PM	Text Document	3 KB
visibility.txt	6/1/2019 11:53 AM	Text Document	347 KB

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

nents > dev > SRGGE > museum > build > x64 > Release > models_srgge

Name	Date modified	Type	Size
Armadillo.ply	1/25/2018 11:17 A...	Αντικείμενο 3D	6,420 KB
bunny.ply	10/1/2014 10:31 A...	Αντικείμενο 3D	1,306 KB
dragon.ply	1/25/2018 11:17 A...	Αντικείμενο 3D	133,945 KB
frog.ply	10/1/2014 10:32 A...	Αντικείμενο 3D	7,284 KB
happy.ply	1/25/2018 11:17 A...	Αντικείμενο 3D	20,181 KB
horse.ply	10/1/2014 10:41 A...	Αντικείμενο 3D	1,800 KB
lucy.ply	1/25/2018 11:18 A...	Αντικείμενο 3D	520,566 KB
maxplanck.ply	10/1/2014 10:42 A...	Αντικείμενο 3D	1,824 KB
moai.ply	10/1/2014 10:33 A...	Αντικείμενο 3D	372 KB
sphere.ply	10/1/2014 10:33 A...	Αντικείμενο 3D	143 KB
tetrahedron.ply	9/20/2017 11:01 A...	Αντικείμενο 3D	1 KB
torus.ply	10/1/2014 10:33 A...	Αντικείμενο 3D	343 KB

- 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.