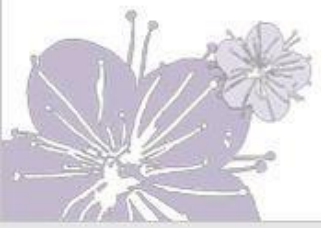
OpenGL Environment Setting

CS 550000 Computer Graphics

CGV Lab, NTHUCS



Prerequisite

- Choose one of the solution bellow
  - Microsoft Visual Studio Professional 2017/2015/2013 (available from Campus Licensed Software Service)
  - Visual Studio Community 2017 (recommend)
- Ensure you have also install C++ package when installing IDE

Prerequisite

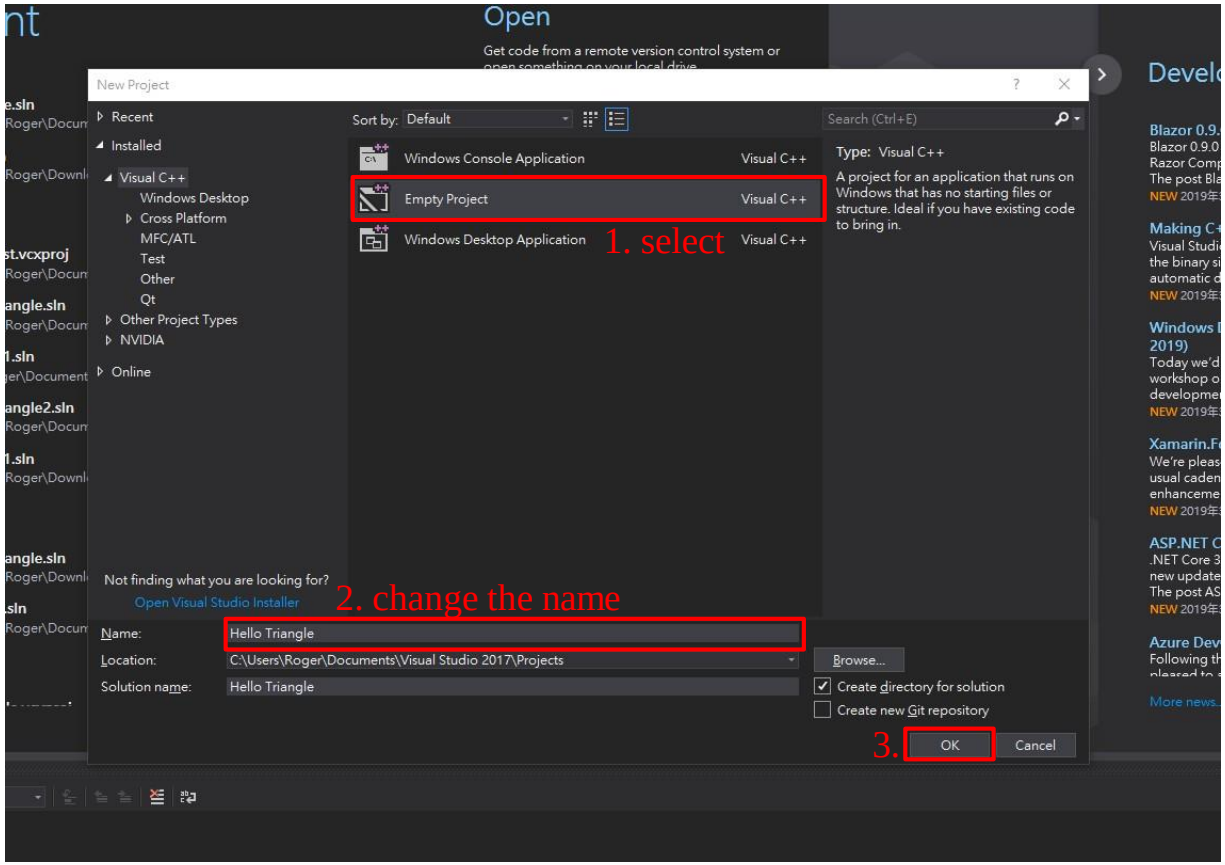
- Download and unzip our provided sample code
- (Optional) Download the latest precompiled binaries of glfw and generate a glad loader

```
C:.
  OpenGLFramework-VS2017-New.sln

├─include
  ├─glad
        glad.h

  ├─GLFW
        glfw3.h
        glfw3native.h

  └─KHR
         khrplatform.h

├─lib
      glfw3.lib

└─OpenGLFramework-VS2017-New
       glad.c
       main.cpp
       OpenGLFramework-VS2017-New.vcxproj
       OpenGLFramework-VS2017-New.vcxproj.filters
       OpenGLFramework-VS2017-New.vcxproj.user
       shader.fs
       shader.vs
       textfile.cpp
       textfile.h
```

unzipped folders structure

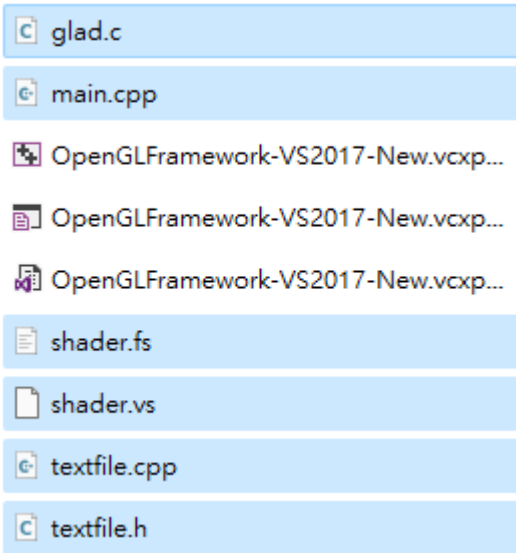
How to run this source code

- Create a visual studio empty project
  File>New>Project…(Ctrl+Shift+N)



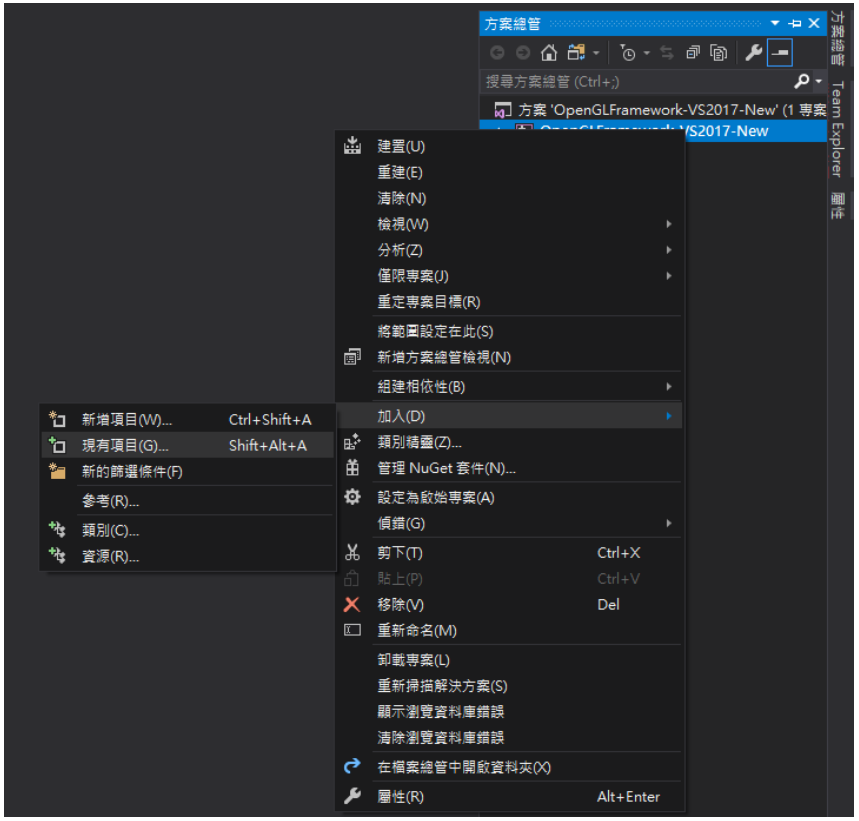
How to run this source code

- Copy the source code (*.c, *.cpp, *.h, shader files) from the sample code to the **project folder**



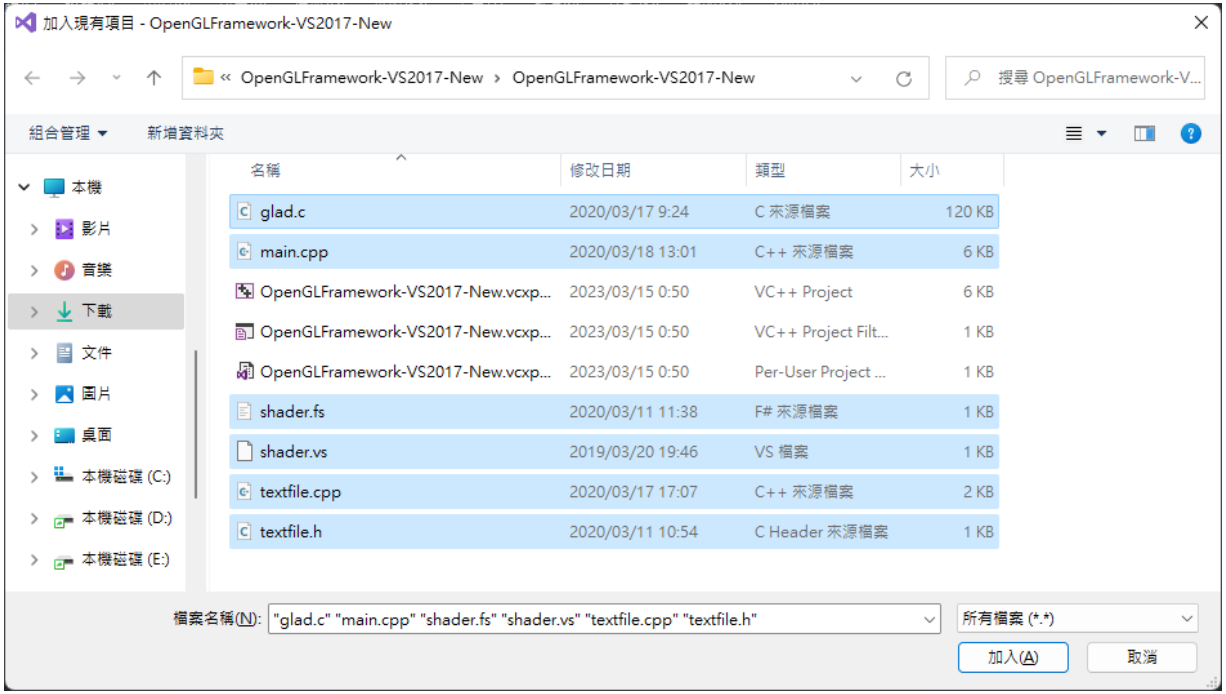
How to run this source code

- Right-click the project name on “Solution Explorer” panel and select “Add>Existing Item…” (Shift + Alt + A)



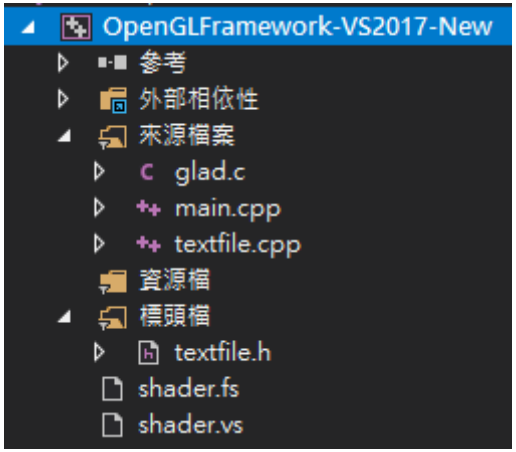
How to run this source code

- Add the files that have just been moved into the **project folder**



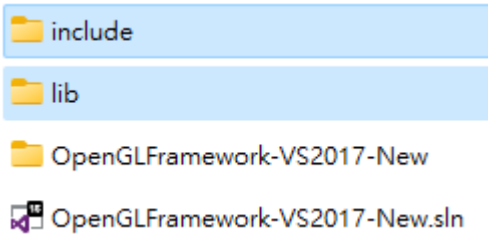
How to run this source code

- Make sure the files are added correctly



How to run this source code

- Create “include” and “lib” folders in the **solution folder**
- Copy the glad header files (glad/glad.h, KHR/khrplatform.h) to the “include” folder
- Copy the glfw binary (glfw3.lib) to the “lib” folder and header files (GLFW/glfw3.h, GLFW/glfw3native.h) to the “include” folder



How to run this source code

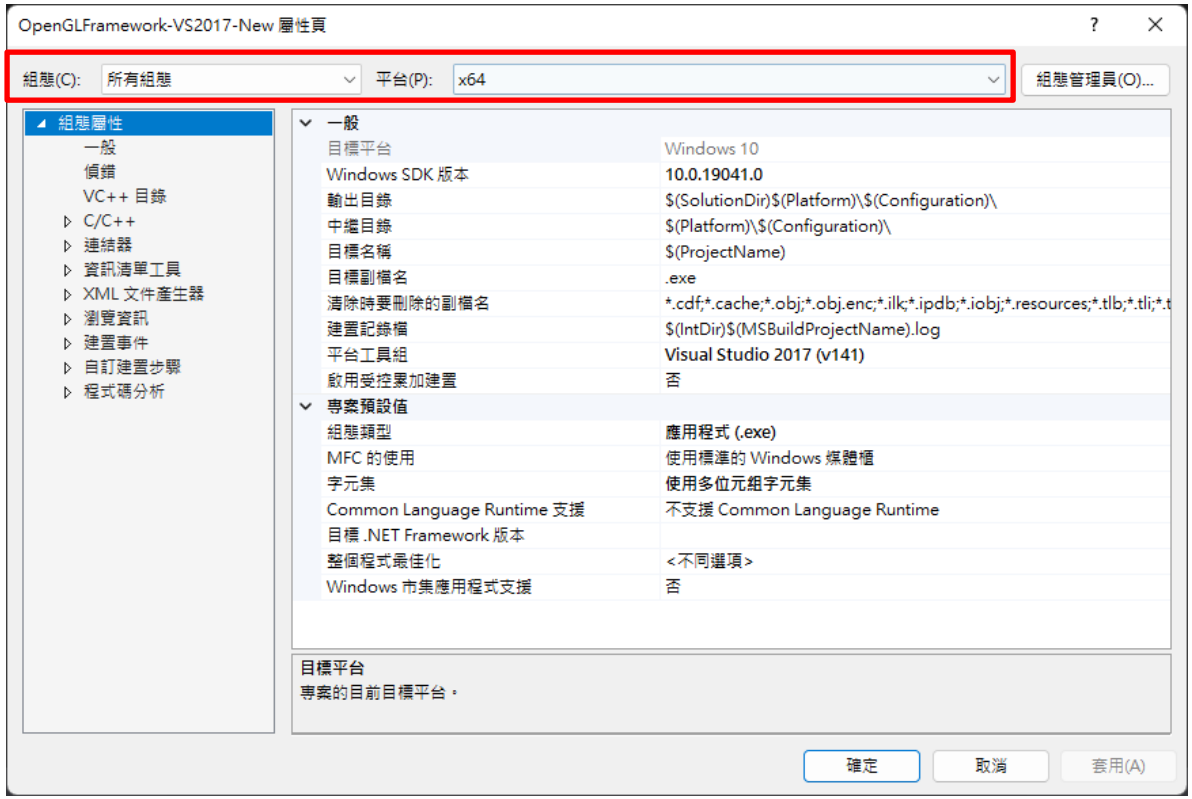
- Confirm that the files are in the correct location

```
C:.
|   OpenGLFramework-VS2017-New.sln
|
+---include
|   +---glad
|   |       glad.h
|   |
|   +---GLFW
|   |       glfw3.h
|   |       glfw3native.h
|   |
|   \---KHR
|           khrplatform.h
|
+---lib
|       glfw3.lib
|
\---OpenGLFramework-VS2017-New
        glad.c
        main.cpp
        OpenGLFramework-VS2017-New.vcxproj
        OpenGLFramework-VS2017-New.vcxproj.filters
        OpenGLFramework-VS2017-New.vcxproj.user
        shader.fs
        shader.vs
        textfile.cpp
        textfile.h
```

you can use “tree /F” command in cmd to get this information

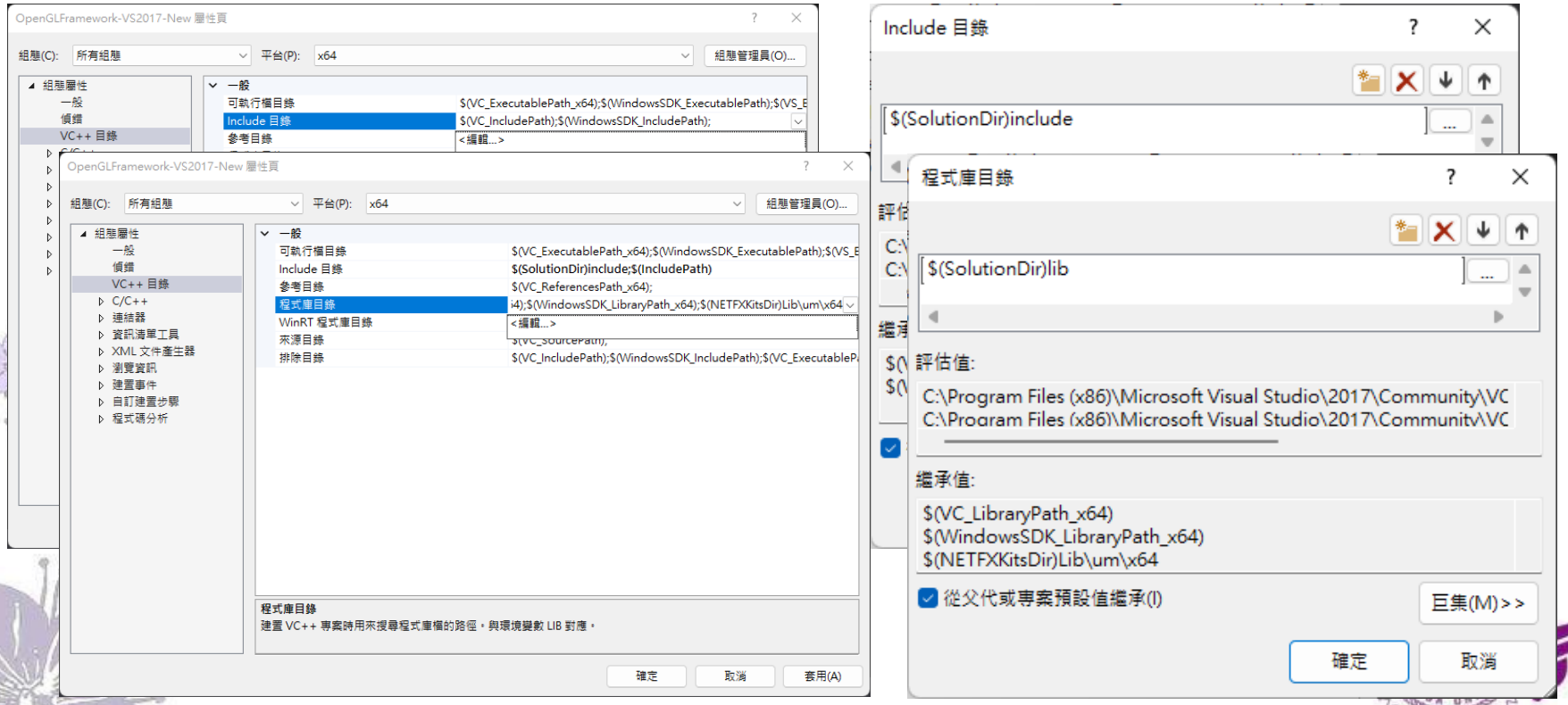
How to run this source code

- Open the project property page (Project(P) > Properties(P)) and change the configuration and platform like the picture below

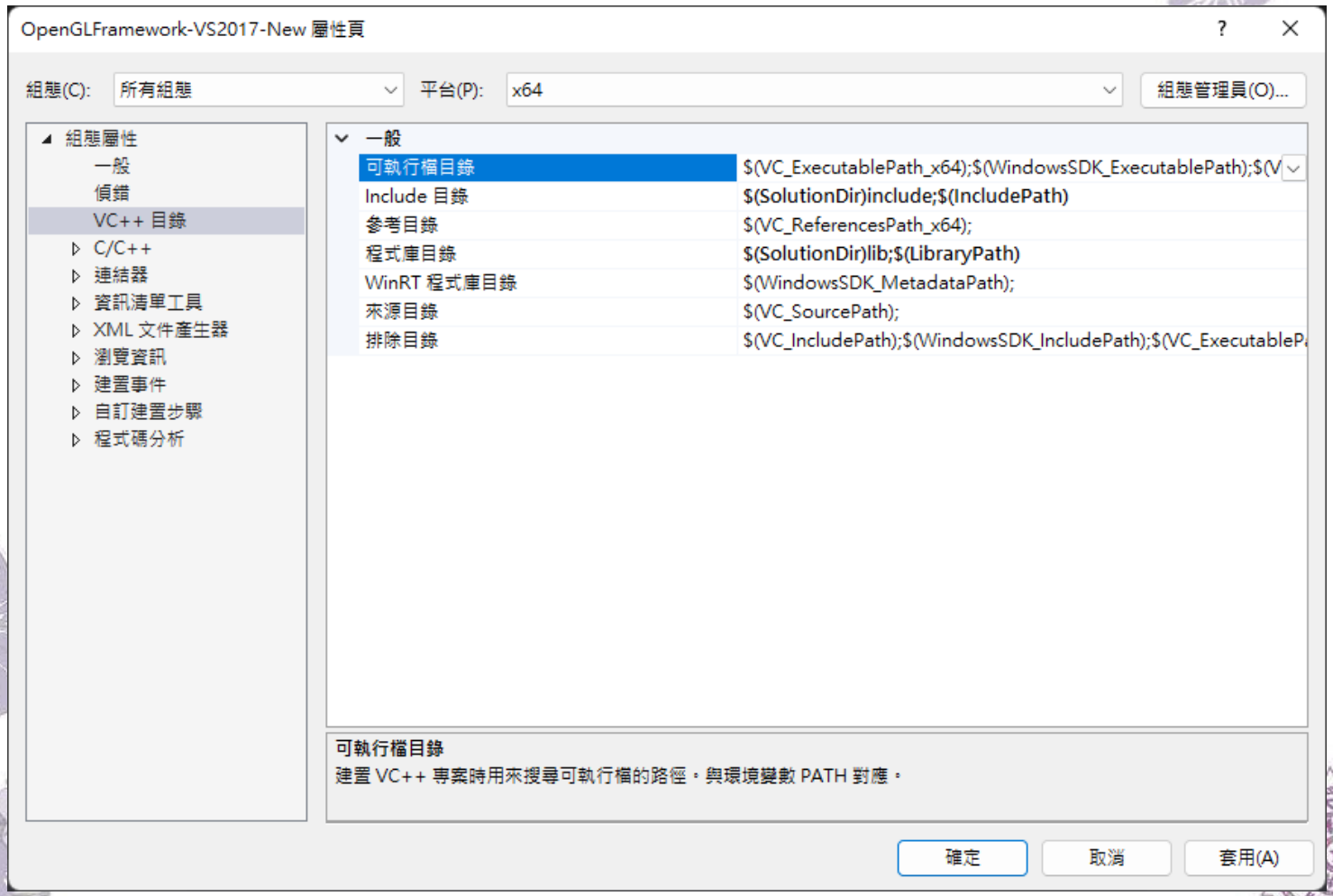


How to run this source code

- Check out the “VC++ Directories” and add “$(SolutionDir)include” to the “Include Directories” and “$(SolutionDir)lib” to the “Library Directories”

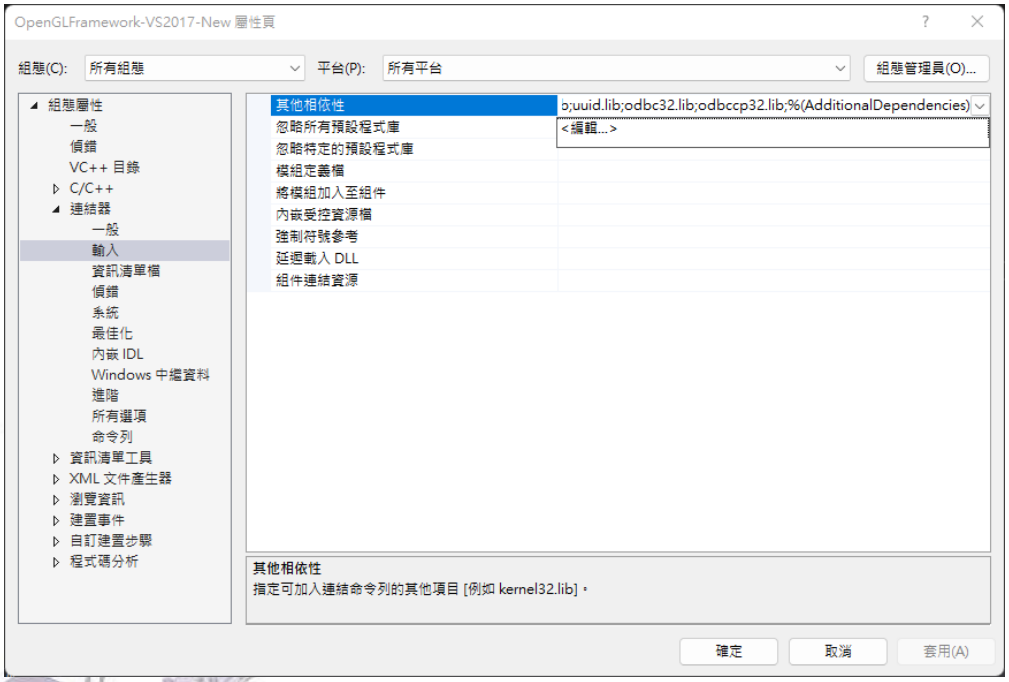


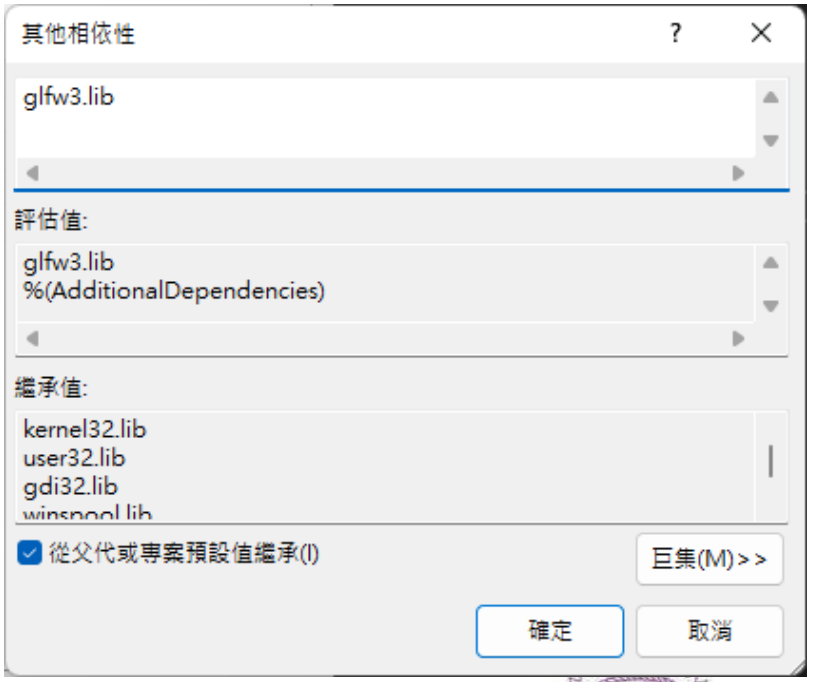
How to run this source code



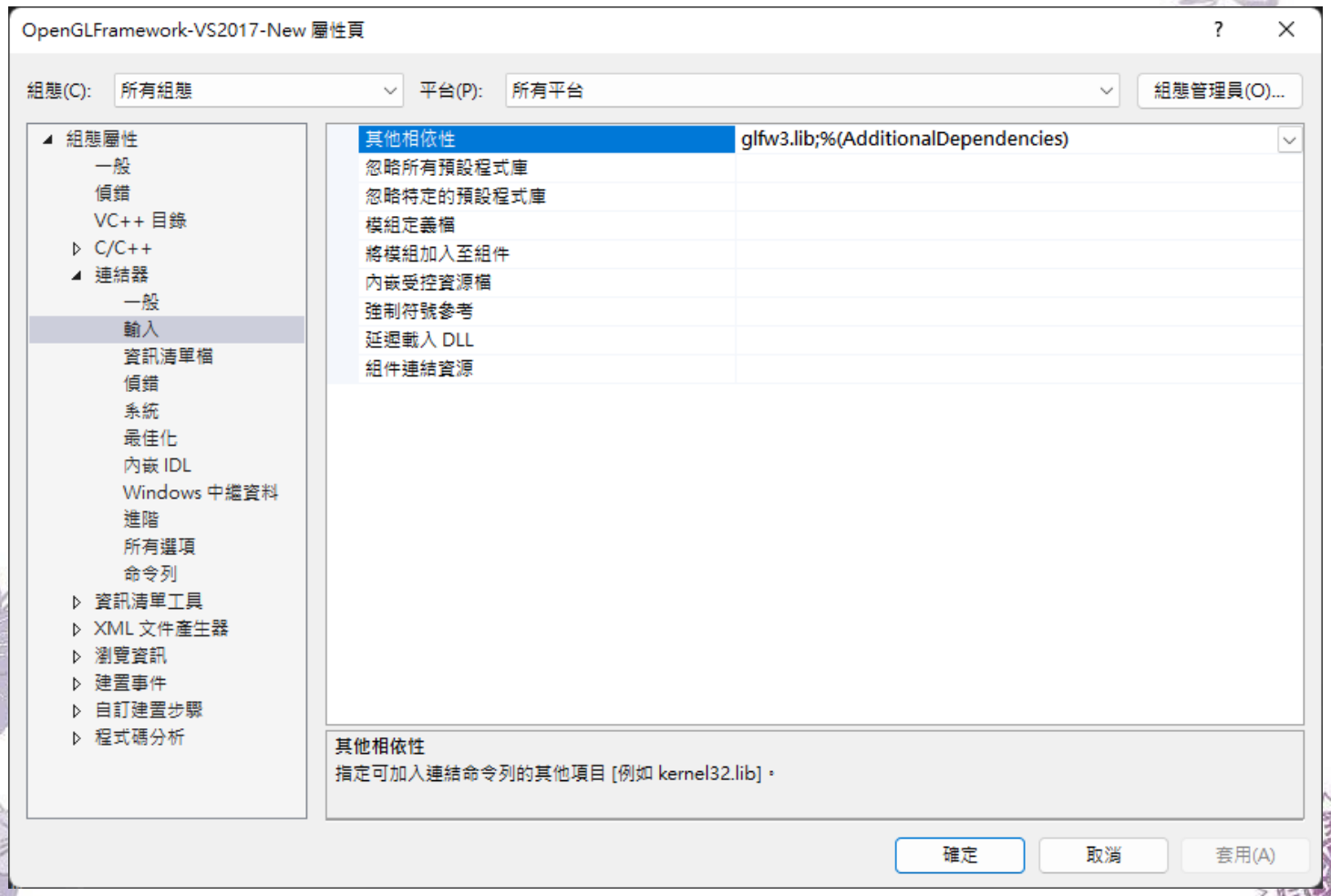
How to run this source code

- Check out the “Linker > Input > Additional Dependencies” and add glfw3.lib



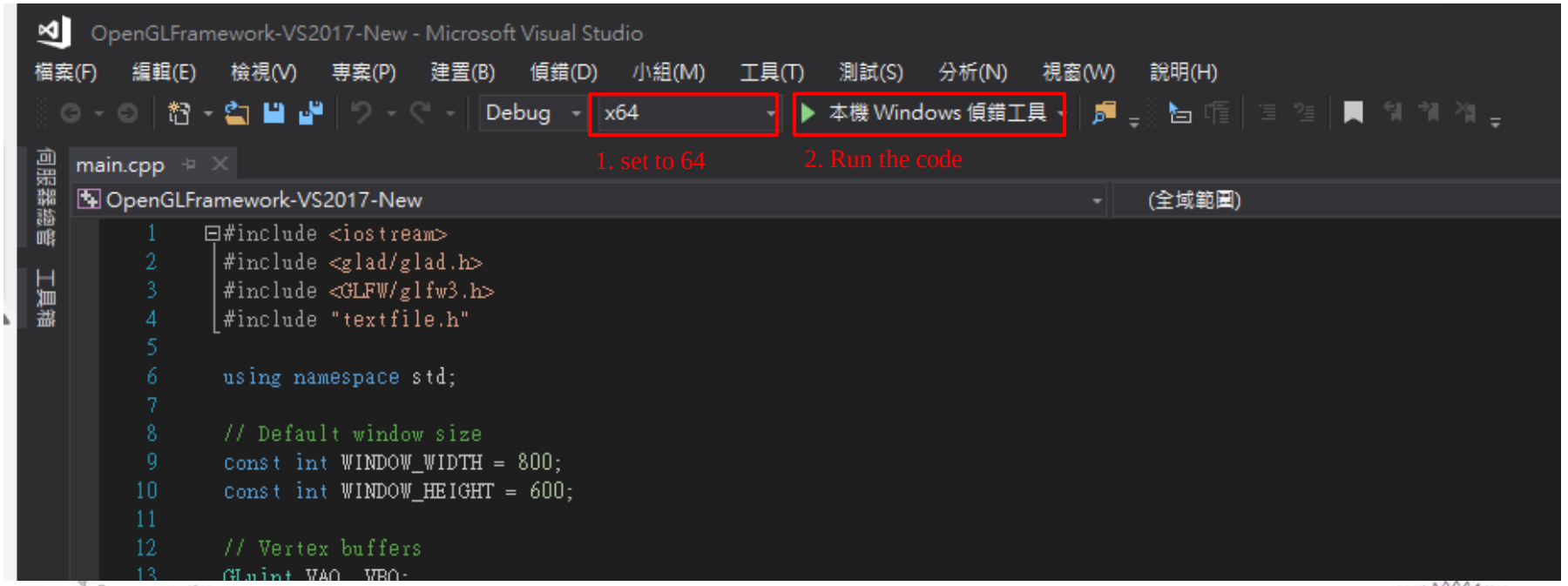


How to run this source code



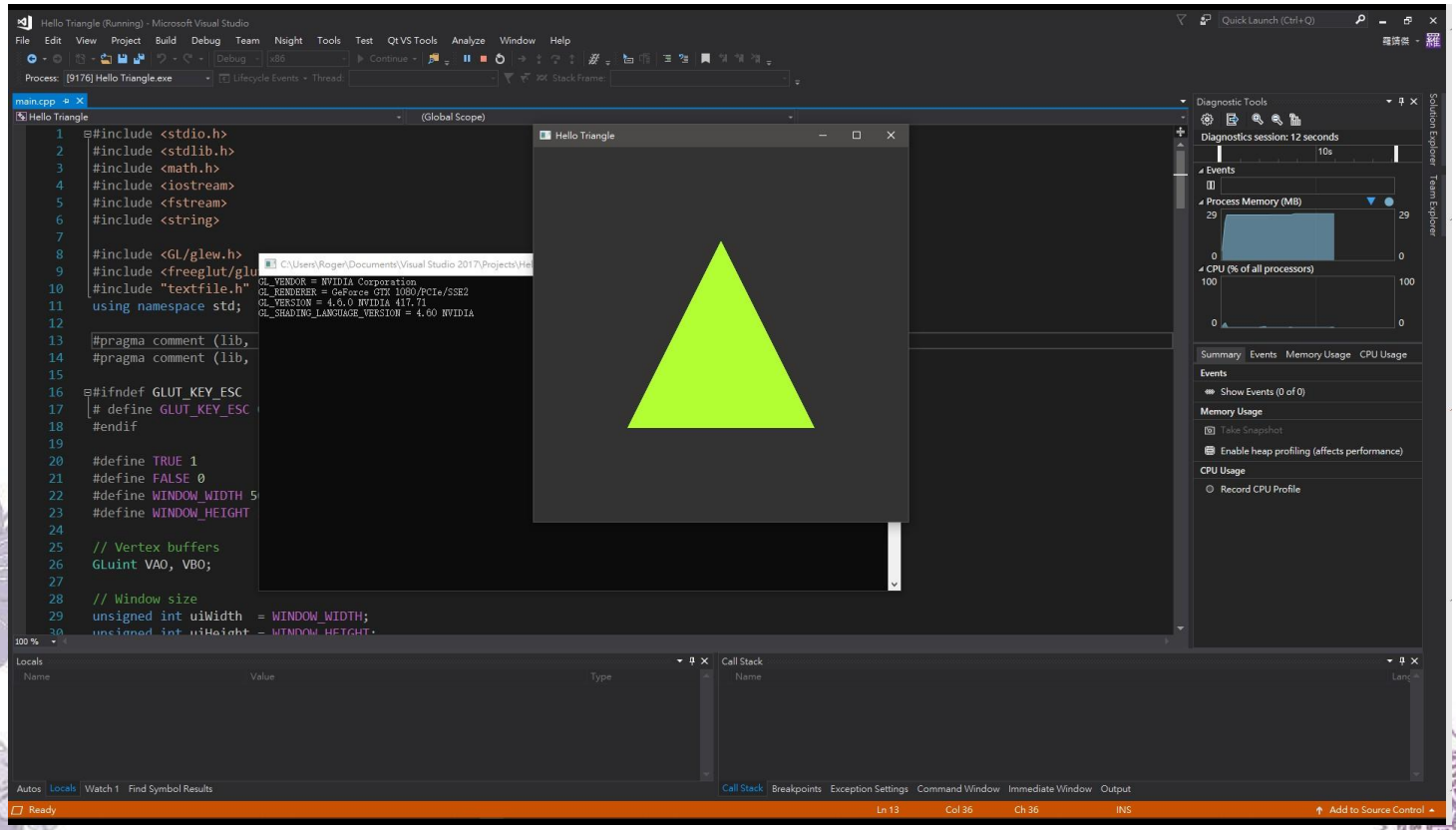
How to run this source code

- Check the platform setting and run the code



How to run this source code

- Success



Notice

- Make sure the third-party libraries and source code you downloaded are the latest version (or consider using our provided ones)
- Make sure you have the correct settings of project properties for the x64 platform and execute the program on the x64 platform
  - Include path, Library path, Linker input … etc.
- Check that the directory structure of the solution is exactly the same as page 10 of the slide