

# OpenGL HW3

Computer Graphics  
May 08, 2019  
CGV Lab, NTHUCS



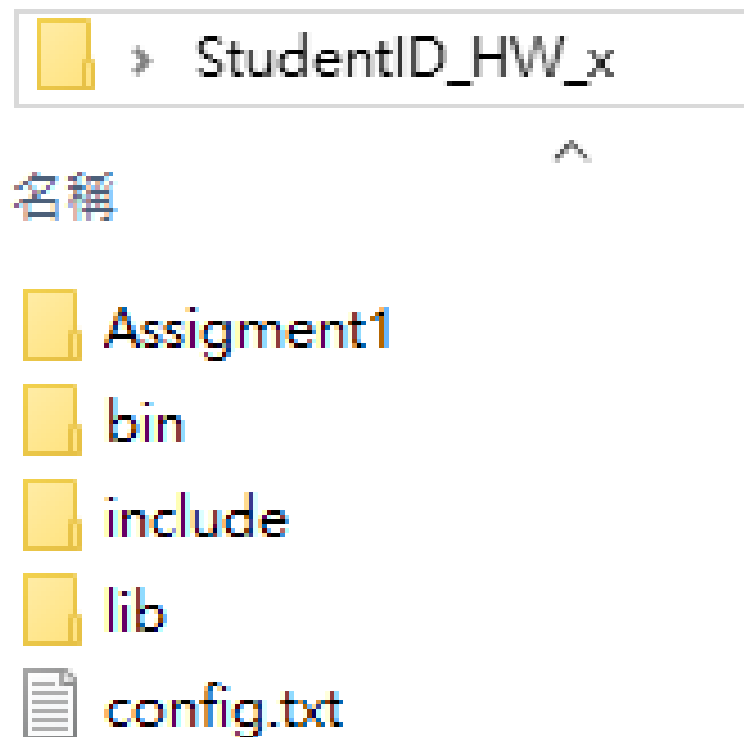
# Outline

- How to submit your homework
- Report
- Goal
- Grading principle



# How to submit your homework

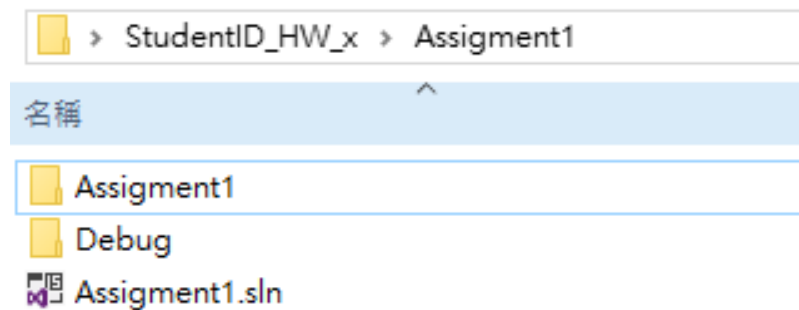
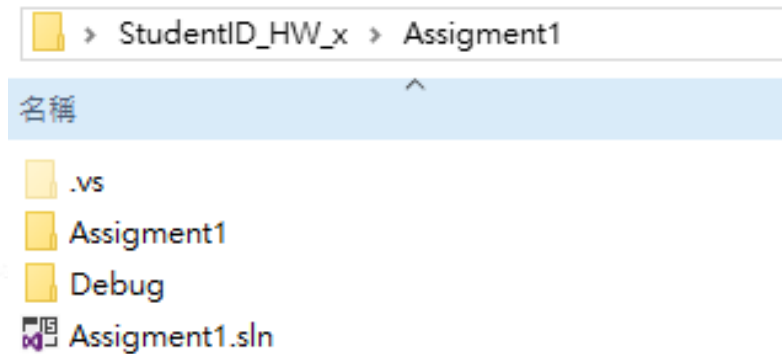
- Check your folder structure
- Folder name: StudentID\_HW\_x



# How to submit your homework

In “StudentID\_HW\_x\Assignment3”

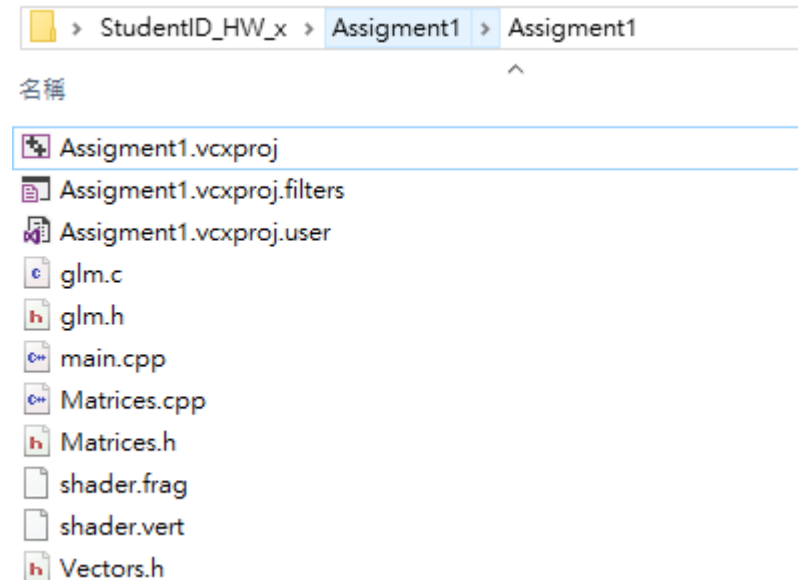
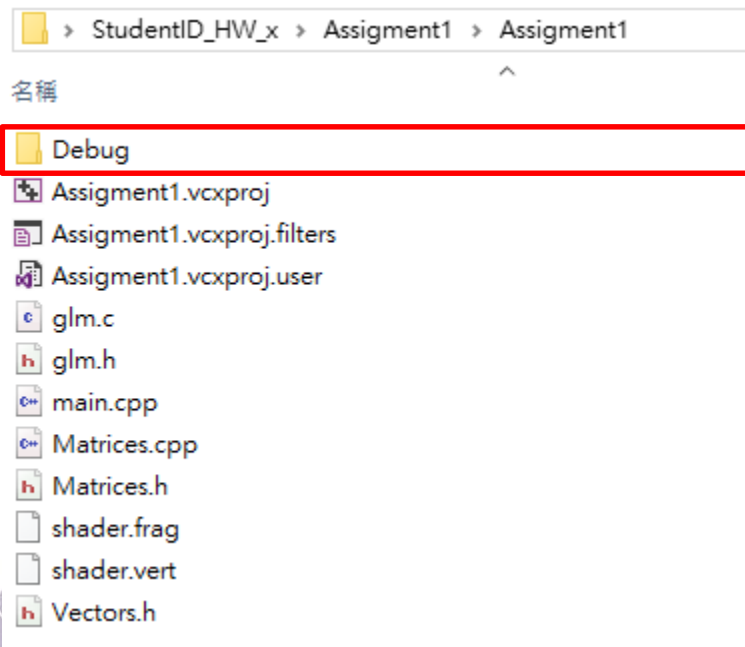
- **Delete** “.vs”(hidden folder)



# How to submit your homework

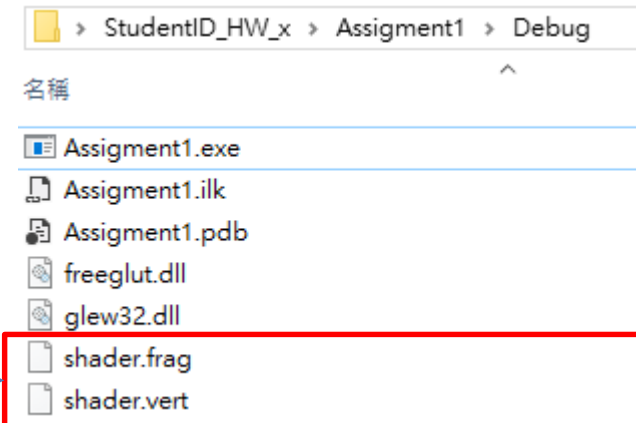
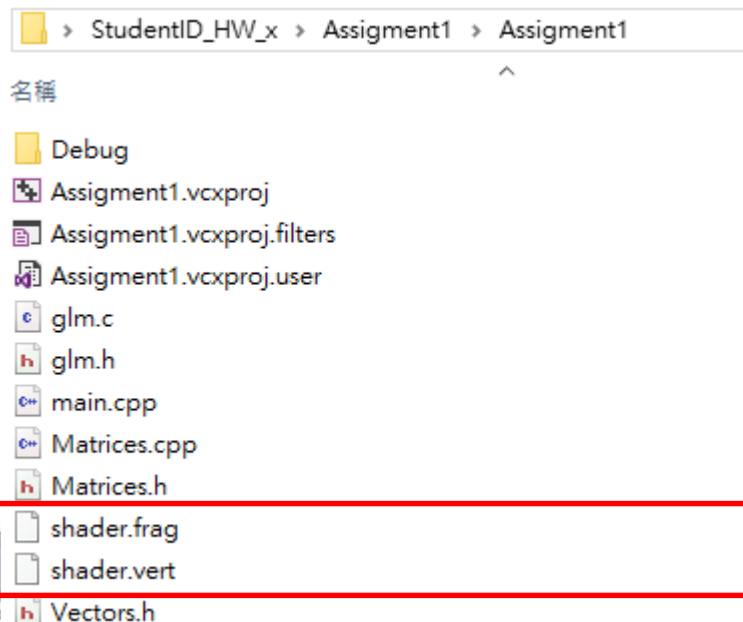
In “StudentID\_HW\_x\Assignment3\Assignment3”  
**delete** “Release” and “Debug” folders

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# How to submit your homework.

- In “StudentID\_HW\_x\Assignment3\Assignment3”
- Copy your **shader** to “StudentID\_HW\_x\Assignment3\Debug (Release)”.
- Make sure your execution file in “Debug(Release)” can run.



# How to submit your homework.

- Delete the \*.pdb, \*.ipdb, \*.iobj and \*.ilk files in “Debug(Release)”

StudentID_HW_x > Assignment2 > Debug		
名稱	^	修
 Assignment2.exe		20
 Assignment2.ilk		20
 Assignment2.pdb		20
 freeglut.dll		20
 glew32.dll		20



# How to submit your homework.

- Zip the “StudentID\_HW\_x” folder into “StudentID\_HW\_x.zip”.
- Please make sure your zip file **DOES NOT** contain the “ColorModels” folder.
- Please make sure your zip file size about 1MB.



StudentID\_HW\_x.zip

檔案類型: 壓縮的 (zipped) 資料夾 (.zip)

開啟檔案:  Windows 檔案總管

位置: C:\Users\lll\Desktop

大小: 1.14 MB (1,203,389 位元組)

磁碟大小: 1.14 MB (1,204,224 位元組)





# How to submit your homework

- Upload the “StudentID\_HW\_x.zip” to iLMS
- Name your iLMS assignment page title
- “HW2\_yourStudentID\_name”.



# Goal

- Draw per-pixel lighting and vertex lighting in different viewport .
- Directional light : Ambient, Diffuse, Specular .
- Point light : Ambient, Diffuse, Specular .
- Spot light : Ambient, Diffuse, Specular .
- Spot light can adjust brightness and cutoff.



# Keyboard & Mouse

- **Z/X** change models.
- Key **R** : rotate model.
- Key **T** : translate model.
- Key **H** : show information.
- **Change per-pixel lighting mode**
  - Key **Q** : Directional light
  - Key **W** : Point light
  - Key **E** : Spot light
- **Change vertex lighting mode**
  - Key **A** : Directional light
  - Key **S** : Point light
  - Key **D** : Spot light
- **Toggle lighting parameter**
  - Key **Y** : Ambient
  - Key **U** : Diffuse
  - Key **I** : Specular



# Keyboard & Mouse

## Directional light

- Slide the mouse to change the position of lighting source on z-plane. (change value of x and y)

## Point light

- Slide the mouse to change the position of lighting source on z-plane. (change value of x and y)

## Spot light

- Left-Click the mouse to increase the EXP .
- Right-Click the mouse to decrease the EXP
- Scroll the mouse to modify the Cut-off angle .
- Slide the mouse to change the position of lighting source on z-plane (change value of x and y) .



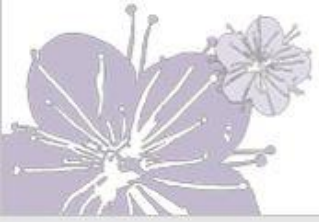
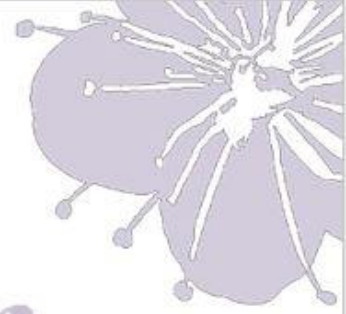
# Goal

CG HW3



# Report

- Some screen shot.
- Description of your program control instructions.
- Other special things you have done.



# Grading principle

- Total score: 100
- Draw per-pixel lighting and vertex lighting in different viewport.(20%)
- Directional light.(20%)
- Point light.(20%)
- Spot light.(15%)
- Spot light can adjust brightness and cutoff.(15%)
- Report (10%)

