

Introduction to Graphics Programming and its Applications

繪圖程式設計與應用

Assignment 2

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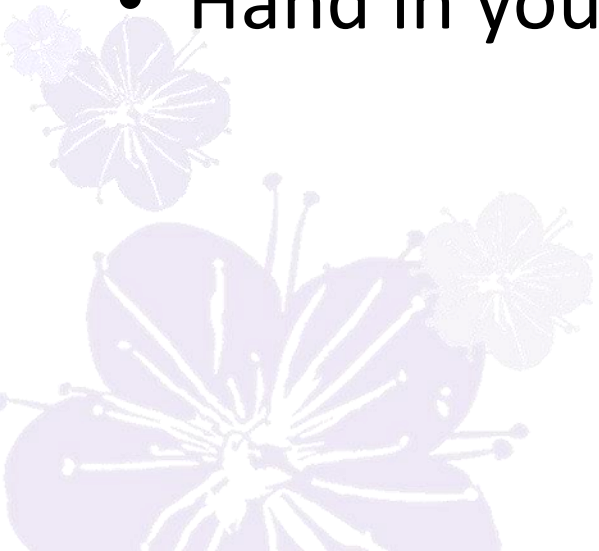
National Tsing Hua University

CS4505



Assignment 2

- Announce date: 2017/5/1
- **Due date: 2017/5/15 23:59**
- Hand in your project and executable to **FTP**
- Hand in your report to **iLMS**



Source Code Format

- 學號_AS2.zip

- Source

- Visual studio / Xcode project

- Executable

- .exe

- dependency lib (.dll ...etc)

- data (.obj , .png ...etc)



Report Format

- Name your report 學號_AS2_Report.pdf
- Required content:
 - 2 screenshot of your window with scene Functions in your program/how to use, which IDE and its version do you use, etc.
 - Only 5%, writing a lot won't get you more!



Assignment 2

- Use FTP to upload your executables & input files
- FTP (no downloading, no deletion)
- Server: cgv.cs.nthu.edu.tw
- Account: gpa2017
- Pass: 2017gpa
- Use your student id to create a folder (104062517_AS2 for example) and put your files in it
- To upload a new version, create a new one with _v2, for example: 104062517_AS2_v2



Assignment 2

- Load and display *textured scene*, controlled by a *trackball*
- You can use *any* scene you like
- You can hardcode scene model's relative path and transformation for your convenience



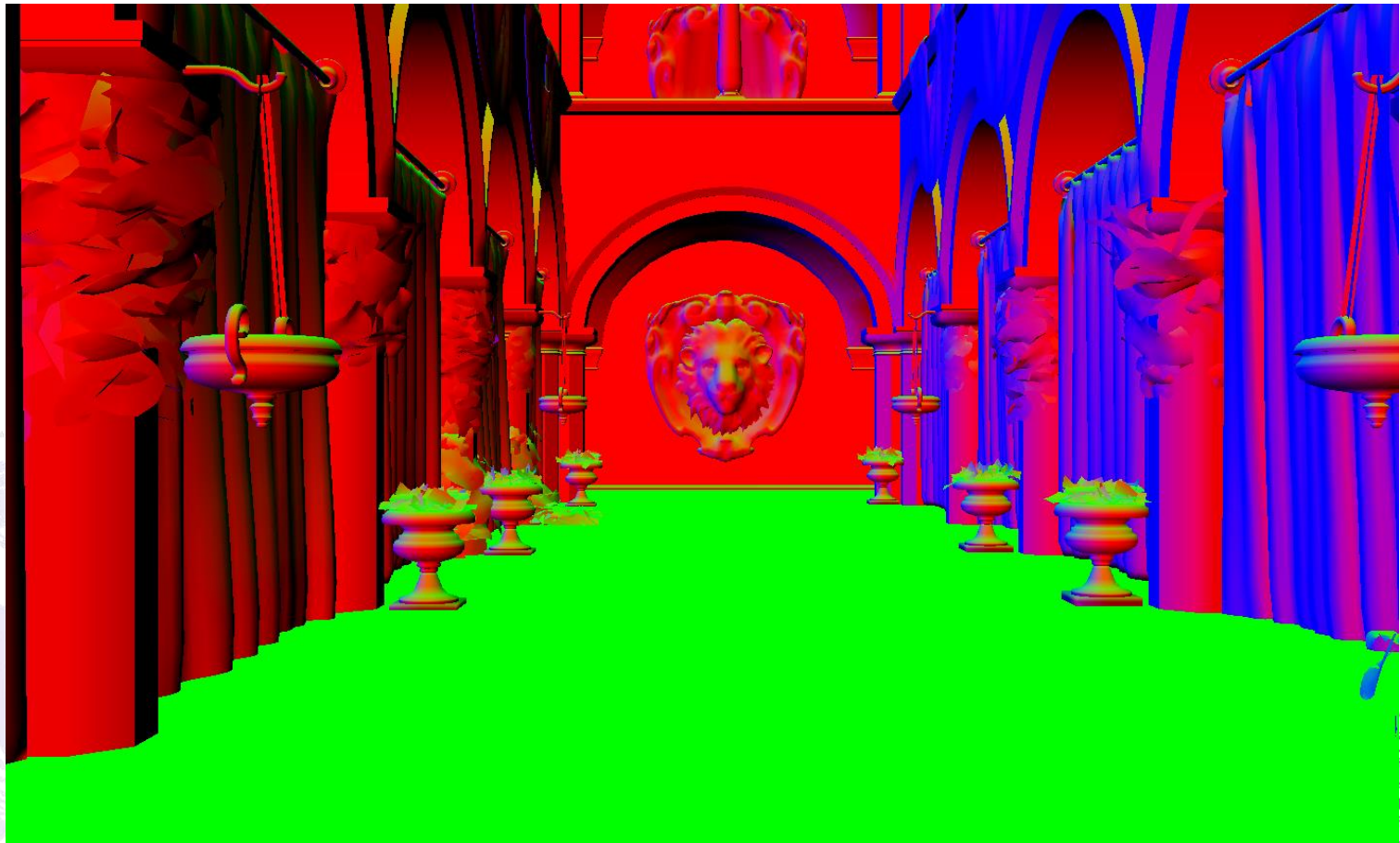
Textured Scene

- You can find some here:
- <http://graphics.cs.williams.edu/data/meshes.xml>
- These scenes will get you full score in this part:
 - Crytek Sponza
 - Dabrovic Sponza
 - Sibenik Cathedral
 - Power Plant
 - Rungholt
 - Lost Empire
 - San Miguel



Textured Scene

- Output normal as color



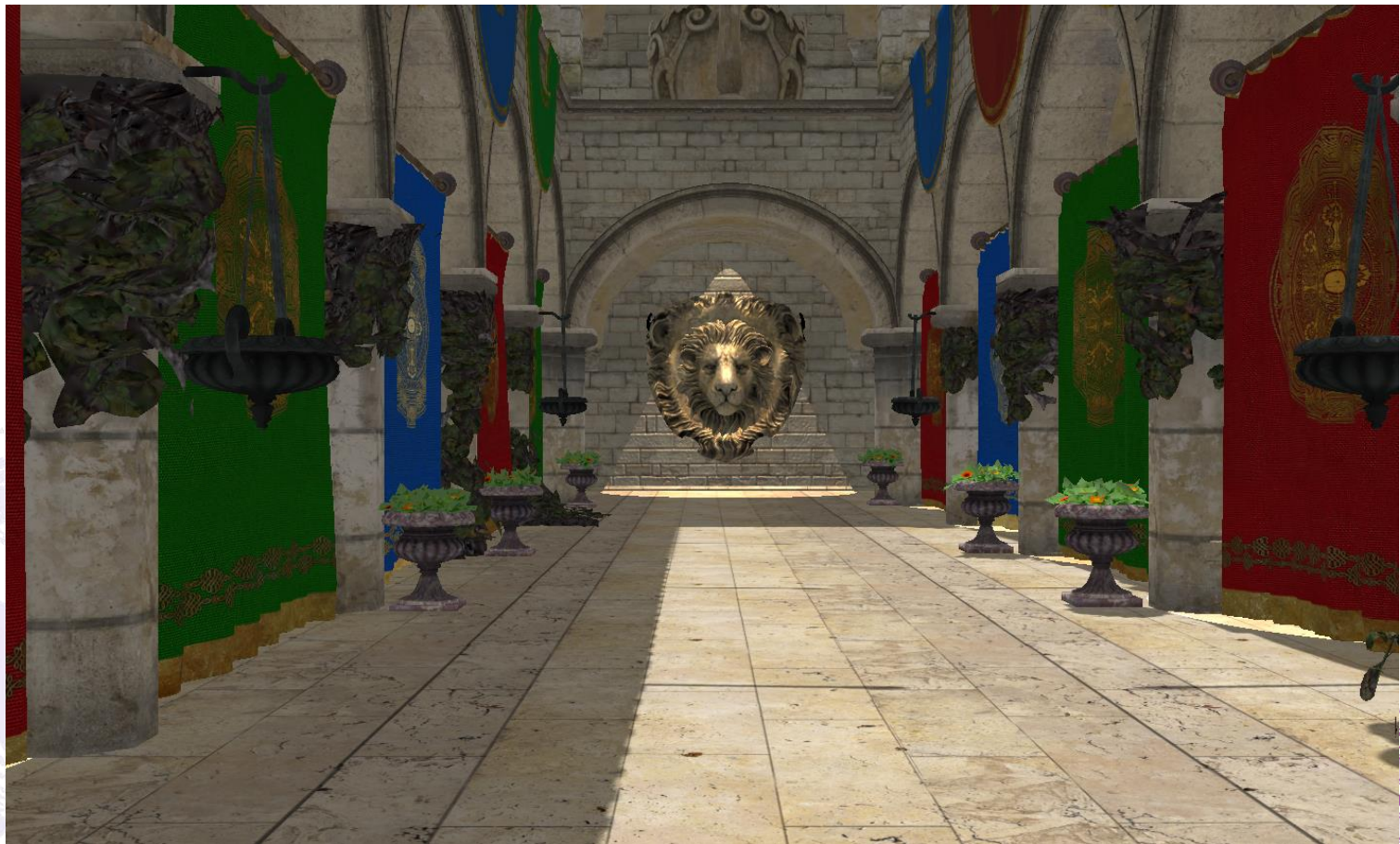
Textured Scene

- Diffuse mapped



Textured Scene

- Shaded (advanced technic required)



Textured Scene

- Rungholt/house.obj



Textured Scene

- Rungholt/rungholt.obj



Trackball

- You need to implement a keyboard & mouse ***trackball***
- W/A/S/D to move eye position ***aligned to eye space***
 - ***For example, W: left of the current look direction, NOT -x axis***
- Z/X to move eye position up or down
- Drag mouse to change look direction



Assignment 2

- You get **-10 point** if you use **console input**. No `scanf()`! Please use GLUT menu, keyboard or mouse event instead
- You got **0 points** if you do these:
 - Doesn't use OpenGL **shader pipeline**
 - **Fully copy source code** of the other students
 - Your provided **executable doesn't run**(you can use your laptop to re-demo if this happens)
 - Your program **doesn't use OpenGL**



Evaluation

Item	Score
Scene geometry is correctly rendered (You should at least output normal if you cannot render texture correctly)	30%
Textured scene is correctly rendered	30%
Trackball	30%
Assignment report in PDF	5%
Subjective score by teacher and TA	5%

Bonus

Load two scene (use keyboard to switch)	10%
Skybox	10%



thank
you!

Question

