Lab5 report

Ray Wei

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This is a screenshot of what I have created in this lab

图形用户界面

描述已自动生成

Detailed information is included in the demo video.

<https://www.youtube.com/watch?v=m5cU0e6r5Uk>

this is the link to demo video. Please use vscode to open this folder and install live server to properly open web page. Please refer to the readme file.

I have created three basic geometries: square, sphere, and cylinder. Besides, I implemented lighting using the Phong shading algorithm. Besides, I try to load an external 3d model into this scene and load the texture to cover the 3d model. The external 3d model (teapot) is self-rotating. I also have implemented hierarchical transformations. Awsd keys will control the movement of the people in this scene.

I will post some code in this lab report.

文本

描述已自动生成

Fragment shader used to calculate lighting and color. 文本

描述已自动生成vertex shader used to draw 3d model

文本

描述已自动生成

External model loader, I use this code to load the teapot.

文本

描述已自动生成projection matrix , view matrix is implemented here, camera movement is also implemented here.