Project C: Windsurfing, Submarine and Fishing Rod

Name: Yipeng Pan

NetID: YPK6670

Instruction:

There is a windsurfing board, a submarine, a fishing rod and big sphere slowly moving on the screen. Two light sources are applied, one is a head light moving with the camera and the other one is a fixed light located at the top of the origin.

User Guide:

Users can use the selector on the screen to switch between Gouraud/Phong shading and Phong/Blinn-Phong lighting. Besides, they can switch on/off the two light sources. Users use arrow keys to rotate the camera, and press W/A/S/D keys to move the camera and zoom in/out.

Moreover, users can press the digit1-6 keys to move the fixed light in the positive/negative direction of X/Y/Z axis.

In additional, users can input the R-G-B value of ambient, diffuse color of the sphere and click change button to change the color of the sphere, and input the R-G-B value of specular light to change the color of the light from the fixed light source.
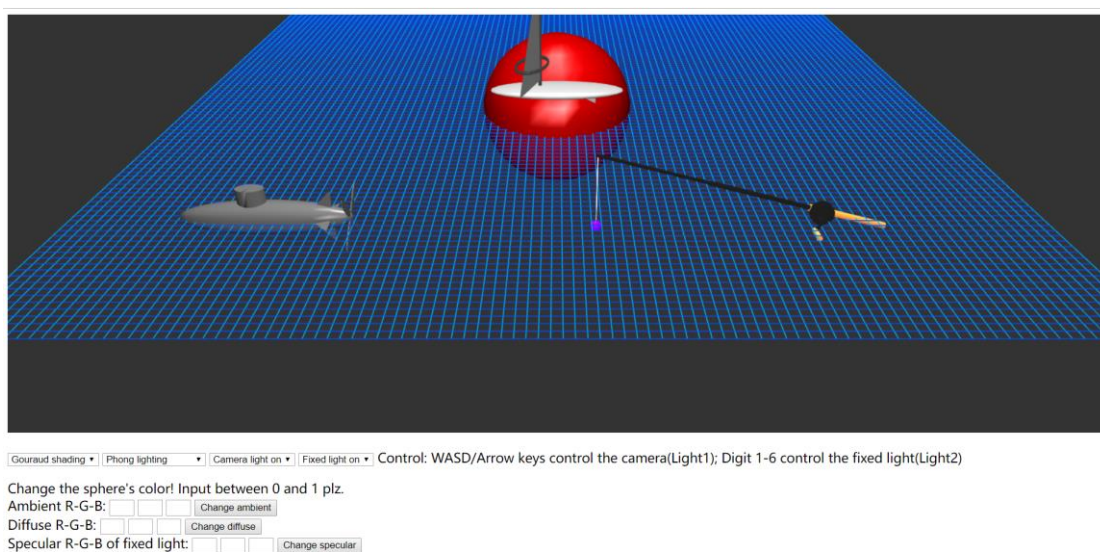
Pictures:
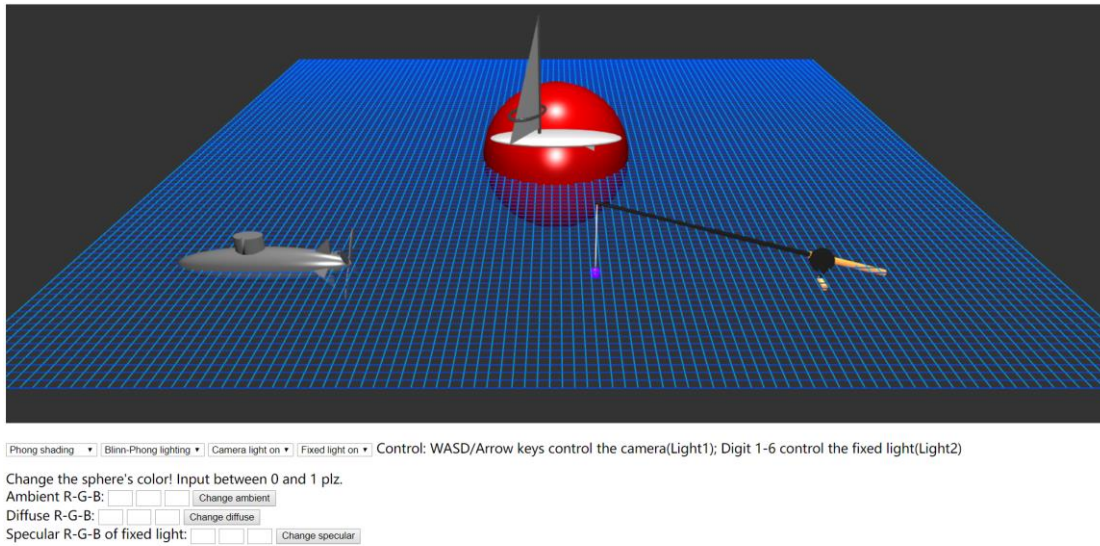

Figure 1Default scene

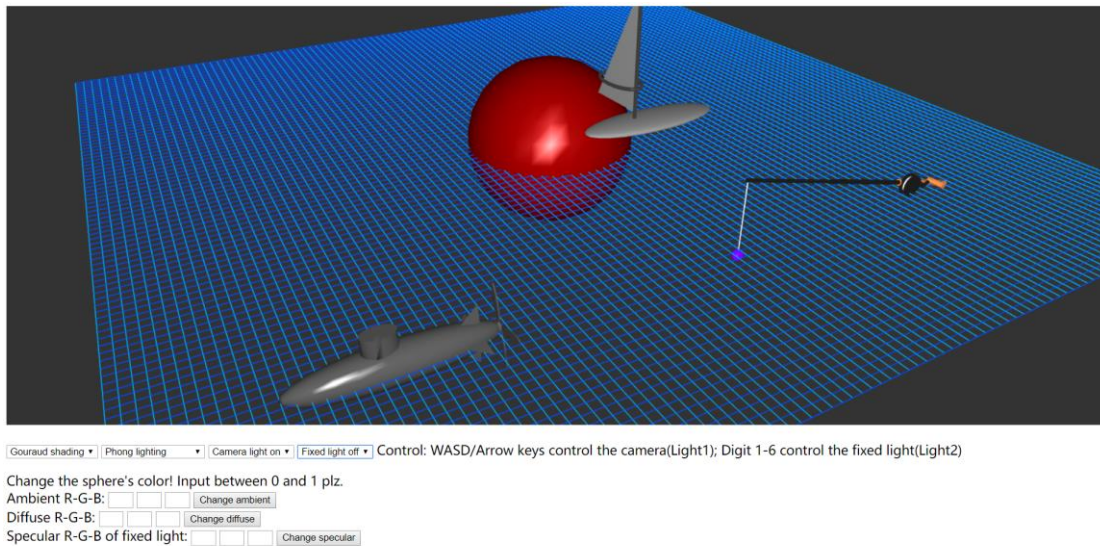Figure 2 Switch to Phong Shading and Blinn-Phong Lighting

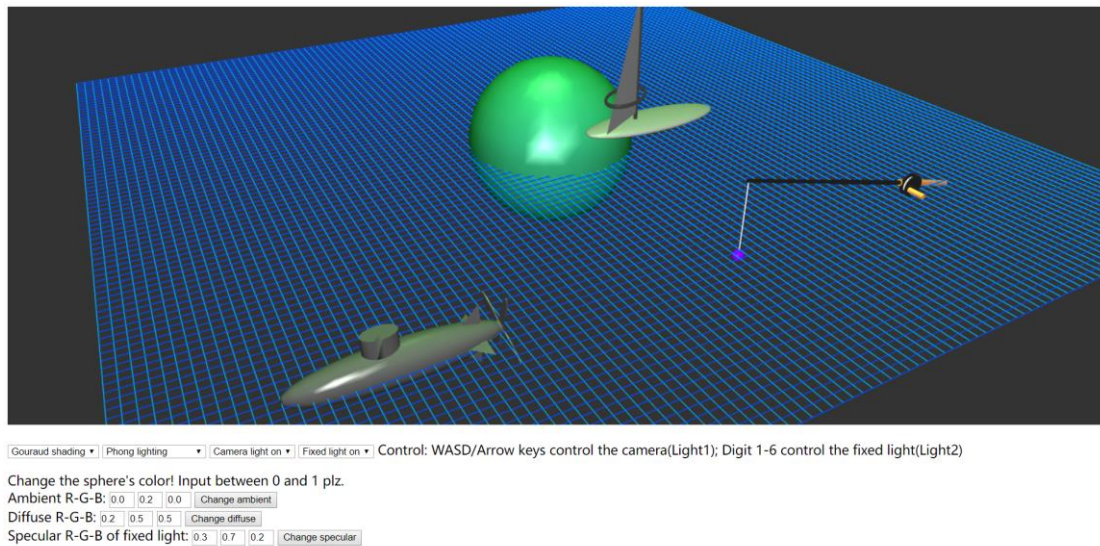Figure 3 Move and Rotate the camera, switch off the fixed light.

Figure 4 Change the ambient, diffuse color of the sphere and change the specular light of the fixed light.

Scene Graph: