

# Daily Assignment 16

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- Take **two** pictures of objects with different diffuse and specular reflection properties,
- And generate surfaces having similar feeling with each picture using "Phong illumination demo"
  - <http://multivis.net/lecture/phong.html>
  - You can choose any object type to visualize each surface
  - It would be hard to simulate a real surface using Phong model. It's not your fault, it's probably from the limitation of the model. But try it anyway!
- Zip the pictures of real objects & captured images of "Phong illumination demo" webpage
  - 1-real.xxx, 1-phong.xxx, 2-real.xxx, 2-phong.xxx
- See example images in the next slides

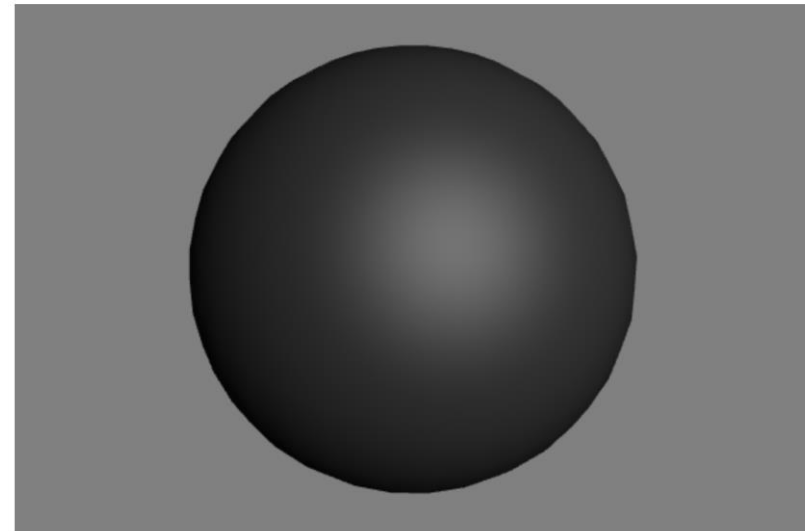
# Solution

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- There is no “correct” answer to this assignment
- Instead, I’ll show you some good assignment submissions



Edit the shader code below and click on the button to see the result:



Phong Shading  Sphere  normal mode

Ambient reflection coefficient ( $k_a$ ): 0.55

Ambient color:

Diffuse reflection coefficient ( $k_d$ ): 0.53

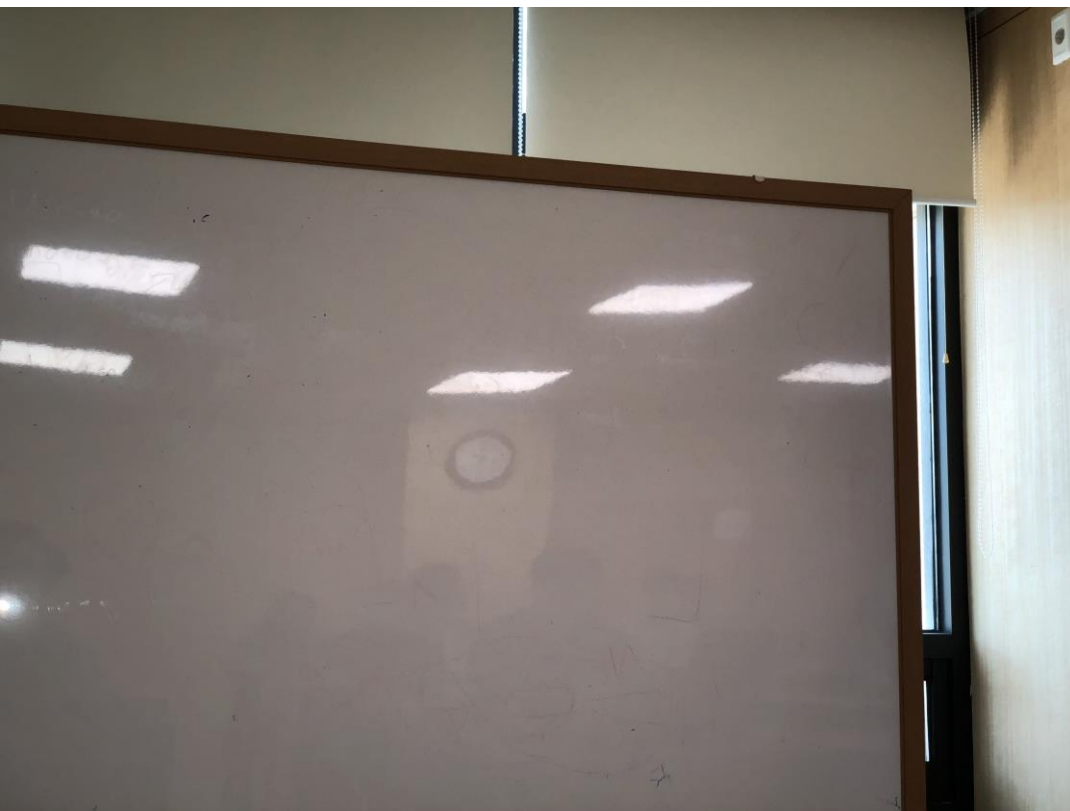
Diffuse Color:

Specular reflection coefficient ( $k_s$ ): 0.23

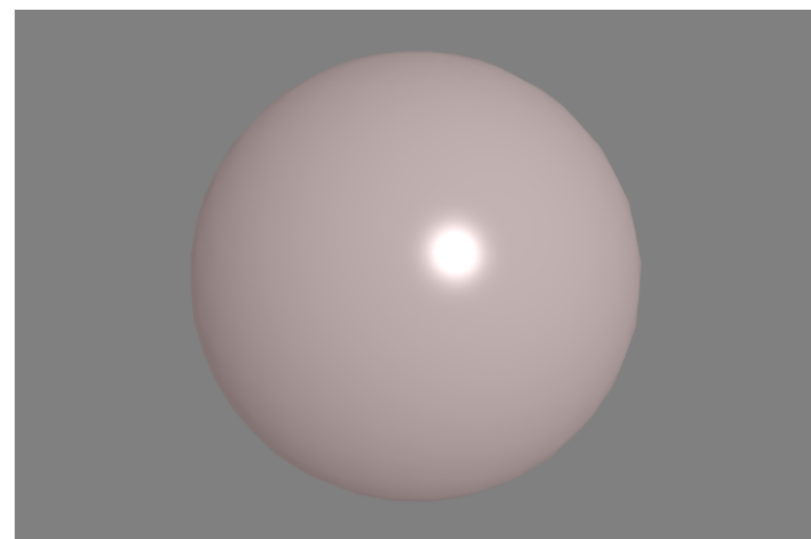
Specular Color:

Shininess: 3

Background Color:



Edit the shader code below and click on the button to see the result:



Phong Shading  Sphere  normal mode

Ambient reflection coefficient ( $k_a$ ): 0.52

Ambient color:

Diffuse reflection coefficient ( $k_d$ ): 0.64

Diffuse Color:

Specular reflection coefficient ( $k_s$ ): 0.58

Specular Color:

Shininess: 44

Background Color:

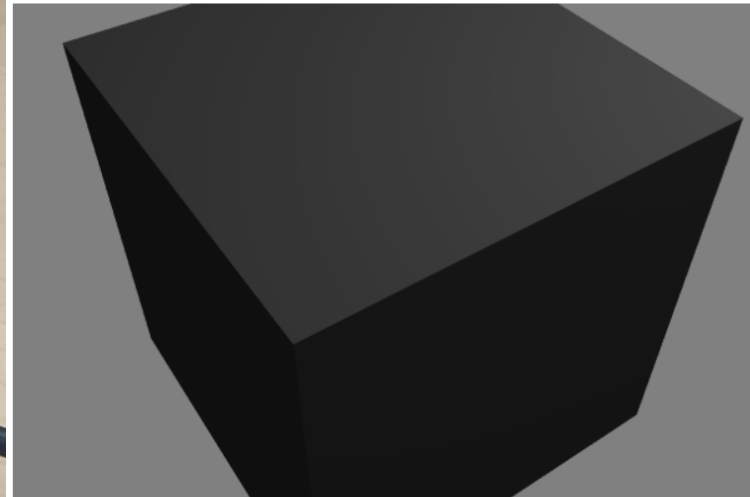


WebGL - Phong Shading x

multivis.net/lecture/phong.html

## Phong Shading (WebGL)

Edit the shader code below and click on the button to see the result:



Phong Shading ▾ Cube ▾ normal mode ▾

Ambient reflection coefficient ( $k_a$ ): 0.2  Ambient color:

Diffuse reflection coefficient ( $k_d$ ): 1  Diffuse Color:  X: 1

Specular reflection coefficient ( $k_s$ ): 0  Specular Color:  Y: 1

Shininess: 20  Background Color:  Z: -1

Based on a [WebGL applet](#) by [Prof. Thorsten Thormählen](#). Modified by [Johannes Kehrer](#) for educational purposes.