REPORT

Abhinav Kamath(IMT201001)

T . Tarun Reddy(IMT2019088)

Yashovardhan Reddy Komma(IMT2019097)

1. What are your observations of the distance attenuation terms used for lighting on the sphere and teapot/urn models?

Ans : But, the basic logic behind this term is to come up with a function which is inversely proportional to the distance of a point from the light source. As the distance would increase the output would reduce. One other point to keep in mind, is that the attenuation term must be between 0 and 1.

2. What are your observations about the change in the shading model on the two meshes?

Ans: In gourad shading since don't interpolate the normals for each of the points, the specular part will not appear smooth, which means the faces will still be visible(also called flat shading). In Phong method of shading the surface will appear smooth . This is a defining difference between the two.

3. What are your observations of the individual components of reflection in the Blinn-Phong model for each of the mesh models you have used?

Ans: Reflections become elliptical when the surface is viewed from a steep angle. We can observe that even though it's a good approximation of lighting, its specular reflection breaks down in certain conditions for example when the shininess property is less it results in a rough specular area.

Instructions and Key Bindings

Use the Number keys to select or deselect an Object

- 3 -> To select Urn
- 4 -> To select Sphere

Once an Object has been selected the following actions can be performed.

- Move mode-> mode m
  - Use the arrow Keys to translate
  - Use "a"/"d" to move along z axis
- Click and Drag the mouse around to rotate the objects

- Press "s" to change the shading mode between Phong and Gourad
- Press "i" to turn on illumination mode
    - Use 1/0 to turn on/off the lights
    - Use x/X keys to translate light along the X axis
    - Use y/Y keys to translate light along the Y axis
    - Use "z" "Z" to translate light along the Z axis