How to make:

- In the terminal, run “cmake ..” in the ‘build’ directory, then “make -j” to get an executable called ‘imgmaker’.
- For some reason, sometimes this will not work unless I repeat these steps again. If ‘make -j’ fails, running ‘cmake ..’ and ‘make -j’ again will make it work.

We will use the snowman scene. This example image uses one spotlight pointing diagonally down at the snowman, and multiple multicolored point lights at the

base of the snowman.

Effects of different parameters:

- Directional light - In this example the directional light is facing

(0,-5,-3). A directional light has the same light direction no matter where you are. As we can see, each sphere of the snowman has the same shadowing and specular locations as a result.

- Point light - In this example the point light is at (0,5,3). Light radiates from a point light, so the direction to the light is different depending on then location in the world. We can see the shading is slightly different the higher up in spheres we go.

- Spotlight - In this example, the spotlight is at (0,5,3) and pointed in the

(0,-5,-3) direction. A spotlight is like a point light, except it only lights up towards one direction, forming a ‘cone’ of light. We can see that

effect here

- n - Determines the size/spread of the specular. 200 vs 50 n

- ka - amount of ambience. If we don’t use any lights we can see clearly how this affects the image. 0.1 vs 0.9 ka
- kd - amount of diffuse, how much of the lights is reflected. 0.1 vs 0.9 kd
- ks - brightness of the specular. 0.1 vs 0.9 ks