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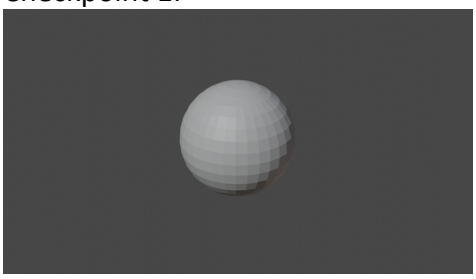
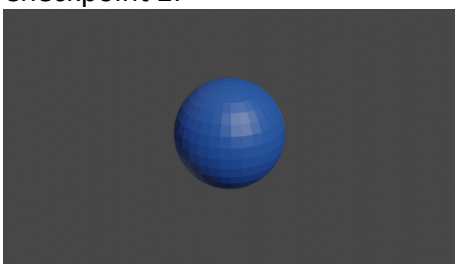
November 14, 2022

Blender Activity 1

Checkpoint 1:



Checkpoint 2:



Checkpoint 3:

Checkpoint 4: The image from checkpoint 3 is a lot more “blurry and grainy’ compared to checkpoint 2 due to the reduced resolution

Checkpoint 5:

Checkpoint 6: The image from checkpoint 5 is a lot more ”brighter” compared to checkpoint 2 due to the increase (by 5) in gamma value.

Reflection Questions:

1. How does light interact differently with different objects in real life? Give 3 examples
    - Light can be emitted through fire, reflected on a mirror, and pass through clear water

2. Why do objects appear to have different colors to our eyes?
    - Light travels through different wavelengths and frequencies, creating colors that are interpreted through our eyes

3. What’s the advantage of using YUV color space
    - It more accurately tends to the color perception of humans, reducing the effects of image compression artifacts

4. How are colors added differently for lights compared to paint? What does R+G+B equal to in each case?
    - Light affects everything touched by it, the amount of light passing through changes the color, while with paint, it’s just adding more of a specific type of R, G, or B paint to get the desired color. RGB stands for the colors used to get every other color, (red, green, blue)

5. Why are green screens green?
    - It is because in cameras there are more green color sensors than blue or red, so it’s easier to detect and replace green than the other colors

6. Why is tone mapping needed for HDR images?
    - Tone mapping makes HDR images seem more full of detail

7. What is the relationship between the wavelength of the light and the color of the light?
    - The light spectrum moves from nonvisible (ultraviolet) to visible as the wavelength increases and frequency decreases. Violet is the first one visible, as the wavelength increases, different colors like red become visible.