

Computer Graphics

CSCI – 4229/5229

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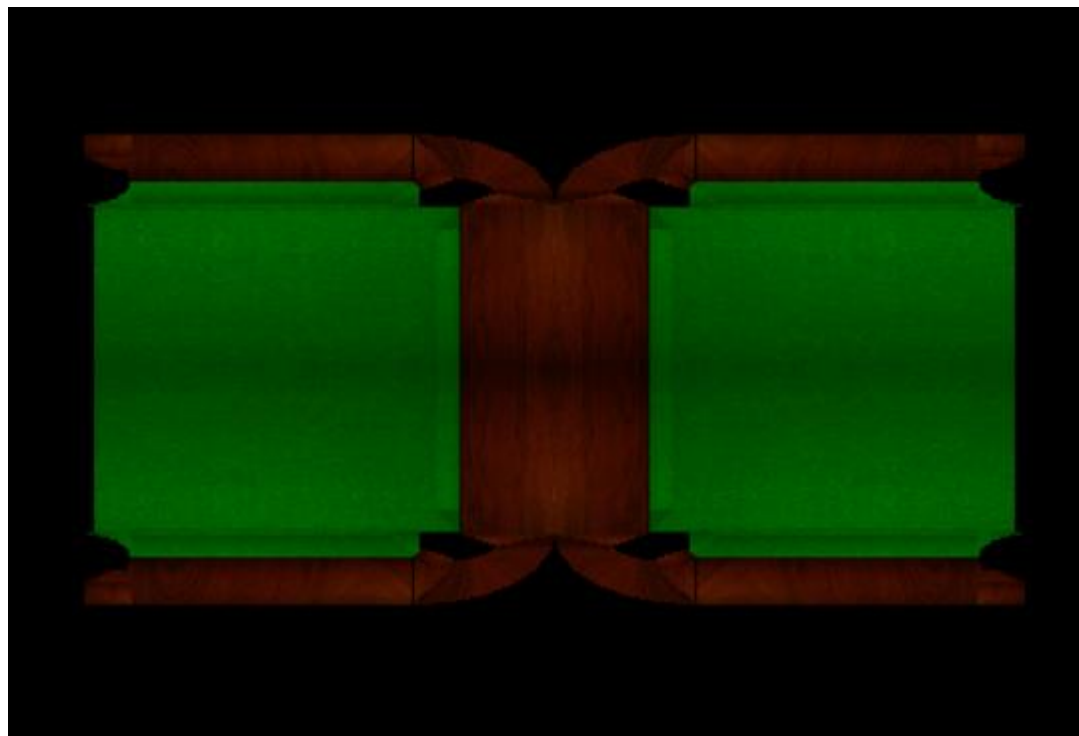




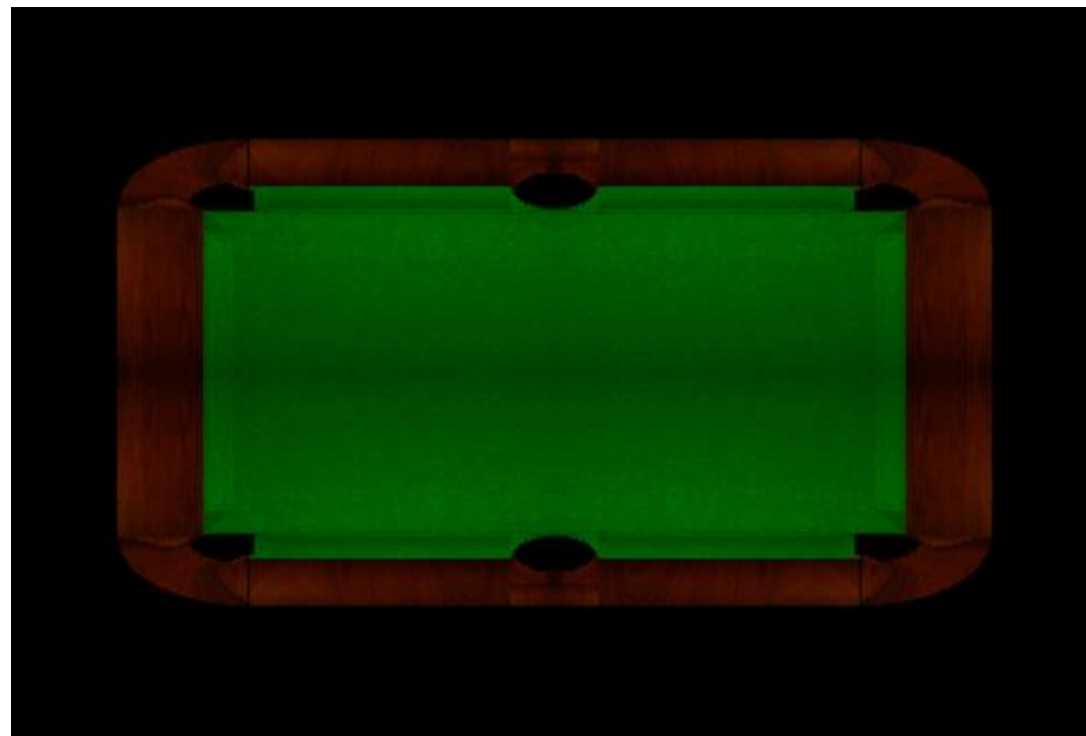
Reflection

- Draw the top right quarter part of the object on the positive X-Y plane.
- You could avoid translating the parts around.

Without Translation

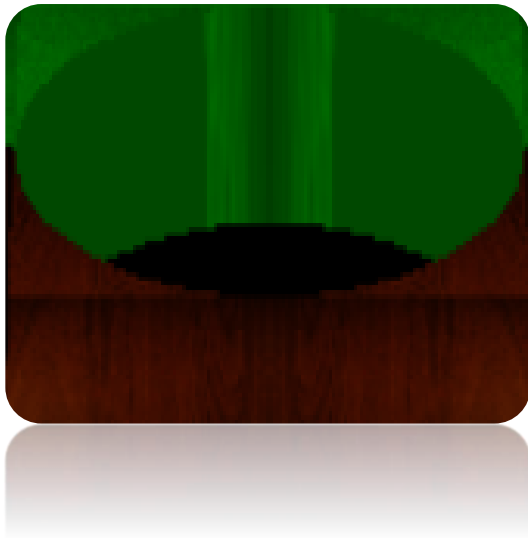


With Translation

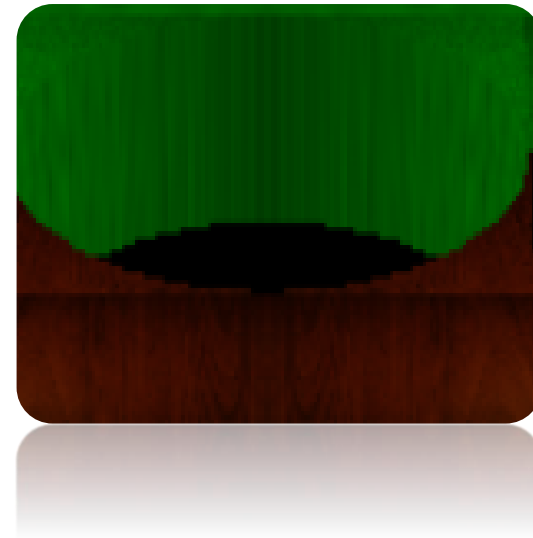


Dot Zero

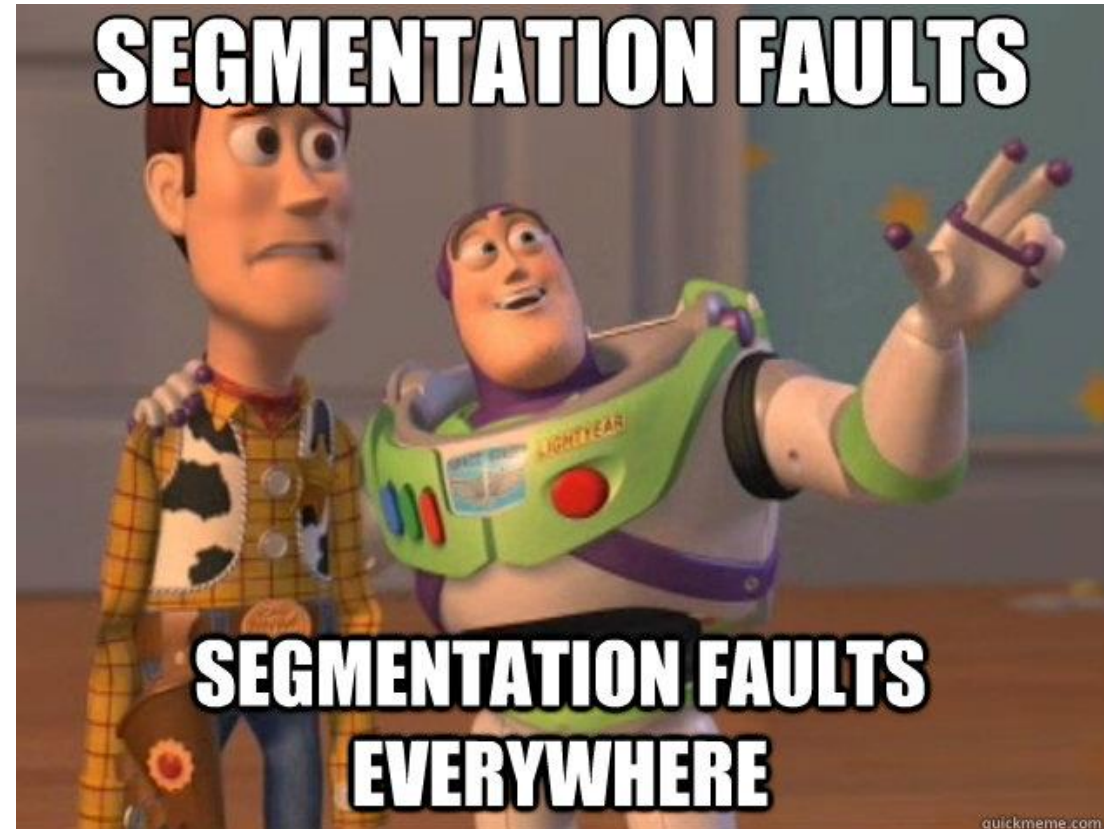
Divided by 90



Divided by 90.0



Segmentation Fault



Parametric Equation



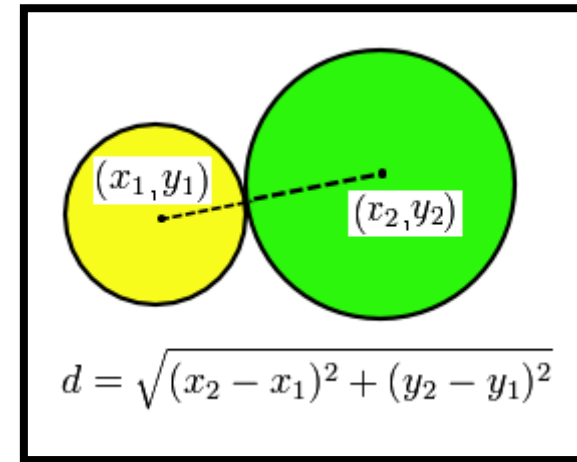
Find an equation for a line passing through $(1,3,2)$ and $(-5,0,4)$

A hand-drawn diagram on a white background. A line is drawn with an arrow pointing to the right. Two points are marked on the line: the first point is labeled $t=0$ and $(1,3,2)$; the second point is labeled $t=1$ and $(-5,0,4)$. A red arrow points from the first point to the second point, representing the direction vector. Below this arrow, the vector $\langle -6, -3, 2 \rangle$ is written in red. To the right of the line, a set of parametric equations is written in a large curly brace:

$$\begin{cases} x(t) = 1 - 6t \\ y(t) = 3 - 3t \\ z(t) = 2 + 2t \end{cases}$$

$$\vec{r}(t) = \langle 1, 3, 2 \rangle + t \langle -6, -3, 2 \rangle$$

Collision Detection



Boundary Check & Rebound

