CS 450 Project #6
Shaders

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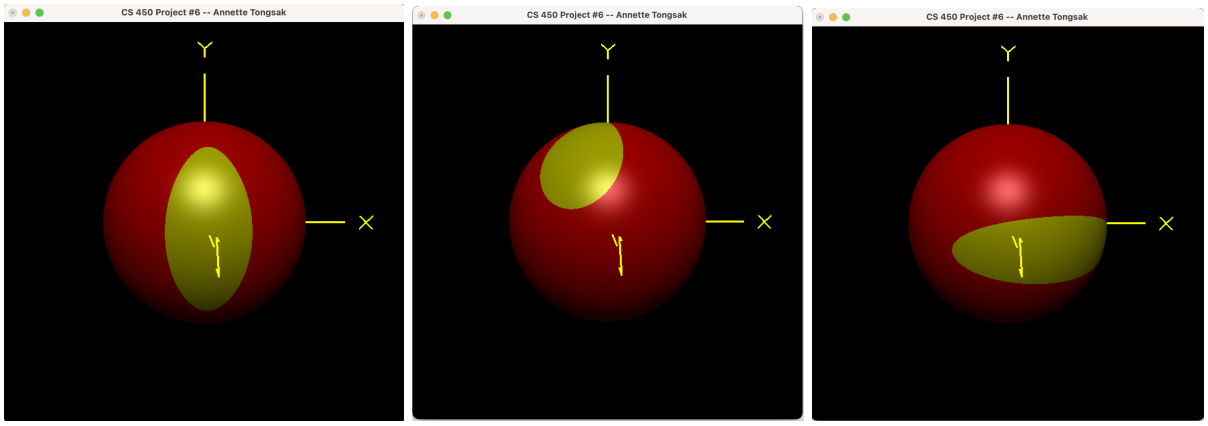

Video link

To create this display, I worked in this order:

1) Started out with the head start code - effectively enabling per-fragment lighting
    a) pattern.vert, pattern.frag, sample.cpp
2) Edited the sample rectangle shader to draw an ellipse
3) Keytimed the ellipse center variables uSc and uTc
    a) This involved keytiming the variables in sample.cpp, passing them into pattern.frag, and then replacing uS0 and uT0 with uSc and uTc
4) Used equations to change uRs and uRt values over time
    a) This involved passing the variables into pattern.frag, where they are used to manipulate the radius of the ellipse
5) Implemented keyboard functionality to turn animation effects on and off

Keytime Values

uSc	NowSc.Init(); NowSc.AddTimeValue(0, 0.25); NowSc.AddTimeValue(2, 0.35); NowSc.AddTimeValue(4, 0.45); NowSc.AddTimeValue(6, 0.5); NowSc.AddTimeValue(8, 0.55); NowSc.AddTimeValue(10, 0.65);
uTc	NowTc.Init(); NowTc.AddTimeValue(0, 0.25); NowTc.AddTimeValue(2, 0.5); NowTc.AddTimeValue(4, 0.75); NowTc.AddTimeValue(8, 0.5);

	NowTc.AddTimeValue(10, 0.25);

I believe that my animation is doing what it's set up to do because the radius of the ellipse changes over time when TimePatternOn is true and the center of the ellipse changes when KeytimePatternOn is true. When these ints are both false, only a static ellipse on the sphere is seen; when they're both true, a moving, warping ellipse is seen.